

FEDERATED STATES OF MICRONESIA'S



The Next 20 Years:

**ACHIEVING ECONOMIC
GROWTH & SELF-RELIANCE**

**Vol I: Policies and Strategies
for Development**

Table of Contents

Volume I Policies and Strategies for Development

Table of Contents	ii
Terms and Abbreviations	iii
Foreword	iv
1. The Macroeconomic Framework	1
2. Private Sector Development	27
3. Agriculture	55
4. Fisheries	103
5. Tourism	159
6. Environment	211
7. Health	297
8. Education	379
9. Gender	437

Volume II Strategic Planning Matrices and Appendices

Appendix A Strategic Planning Methodology	1
Appendix B Sector Planning Matrices	13
1. Private Sector	13
2. Agriculture	29
3. Fisheries	39
4. Tourism	59
5. Environment	83
6. Health	115
7. Education	127
8. Gender	141
Appendix C Statistical Tables	159
1. Gross Domestic Product	159
2. Tourist and Visitor Arrivals	164
3. Employment by Industry	167
4. Commercial Banking Survey	178
5. Consumer Price Index	179
6. Balance of Payment and External Debt	186
7. General Government Finances	189

Terms and Abbreviations

ADB	Asian Development Bank
AusAID	Australian Assistance for International Development
CFA	Compact of Free Association
c.i.f.	Price of traded goods inclusive of cost, insurance, and freight
COM	College of Micronesia
CPUC	Chuuk Public Utility Corporation
CSG	Core Stake Holder Group
DOE	Department of Education
DTC&I	Department of Transportation, Communications and Infrastructure
EEZ	Exclusive Economic Zone
EPIC	Economic Policy Implementation Council
FAA	US Federal Aviation Administration
FIAS	Foreign Investment Advisory Service
FFA	Forum Fisheries Agency
FMI	Fisheries and Maritime Institute
f.o.b.	Free on board price (traded goods)
FPA	Fiscal Procedures Agreement
FSM	Federated States of Micronesia
FY	Fiscal Year: October 1 – September 30
GDP	Gross Domestic Product
IDP	Infrastructure Development Plan
IMF	International Monetary Fund
IPIC	Infrastructure Planning Implementation Committees
MOU	Memorandum of Understanding
NDE	National Division of Education
NGO	Non-Government Organization
NSC	National Steering Committee
PFTAC	Pacific Financial Technical Assistance Center
PMU	Program Management Unit
PPA	Pohnpei Ports Authority
PSIP	Public Sector Infrastructure Program
PTA	Parent Teachers Association
PUC	Pohnpei Utilities Corporation
SDP	Strategic Development Plan
SEPA	State Environmental Protection Agency
SGS	Sustained Growth Strategy
USAID	US Agency for International Development
USDA	US Department of Agriculture
US DOI	US Department of Interior
UNDP	United Nations Development Programme
VAT	Value-Added Tax
WTO	World Tourism Organization
YSPA	Yap State Ports Authority
YSPSC	Yap State Public Service Corporation

Foreword

Work on the Strategic Development Plan (SDP) started late in 2003, as the FSM entered a new phase of its development with the implementation of the amended Compact. While the new fiscal procedures required the FSM to transmit a Strategic Development Plan to the U.S. to provide the framework on which to base the annual requests for the Compact sector grants, the FSM more importantly required a process to identify its development strategy for the new era.

In 2003, the FSM convened the 3rd FSM Economic Summit. The Summit was attended by four hundred participants representing the four FSM states, the traditional leadership, private sector, National and State governments, non-government organizations, churches, women's and youth groups, government officials, as well as representatives of foreign governments and donor institutions. The theme of the Summit was, *The Next 20 Years: Achieving Economic Growth & Self-Reliance*. The objectives of the Summit were several:

- To achieve consensus on an overall strategy consistent with the theme of achieving economic growth and self-reliance,
- To build awareness of the economic structure of the amended Compact provisions and the likely impact on the FSM economy, and
- To improve implementation and monitoring of the outcome of the planning process.

The Summit can be said to have successfully achieved the first two, while commitment and determination will be required in the detailed planning process to ensure successful implementation and monitoring. The Summit participants were presented with two sets of materials: draft sector chapters, and sector planning matrices. Both were debated in committee and the matrices were adopted by the Summit. This material has now been consolidated, included in the SDP, and adopted by our Congress.

The Summit provided the opportunity for the leadership to consider the progress attained during the first 17 years of the Compact. While implementation of the Compact was successful and saw the emergence of a stable democracy, economic growth was disappointing. The leadership concurred that the FSM could attain a better result during the 20-year period of the amended Compact, and adopted a "Sustained Growth Strategy". While it was recognized that the strategy would entail sacrifice and commitment, it was felt that only through adopting a more aggressive reform agenda could the FSM provide the type of environment that our citizens could hope to find gainful economic opportunities at home, and avoid the need to migrate to neighboring territories.

The SDP comes in three volumes. Volume I is the major component of the Plan and presents an overview of the FSM economy, discussion on the macroeconomic framework in light of the Sustained Growth Strategy, and the need for fiscal adjustment in the medium and long term. Volume I also presents discussion on the policies and development strategies for each sector of the economy. Volume II contains the sector planning matrices adopted at the Summit together with a statistical appendix. These first two volumes are complementary and should be used in cross-reference with each other. Volume III is the Infrastructure Development Plan (IDP) and is an integral component of the overall planning framework for the FSM.

I would like to take this opportunity to thank the many donors and individuals who have supported and made the preparation of the Strategic Development Plan possible. Both the Asian Development Bank and the U.S. Department of Interior provided valuable funding to support the development of resource material for the Summit and subsequently the Plan. I would also thank the many citizens of the FSM who participated in the Summit and for their valuable contribution that helped formulate the policies and strategies contained in this document. I thank the individuals of the Department of Economic Affairs responsible for the many hours of hard work required to produce this document. I am confident the SDP will provide a sound basis for the development of our nation as it embarks on the next phase of our development.

Joseph J. Urusemal
President

1 The Macroeconomic Framework

1 This chapter is concerned with describing the evolution of the FSM Sustained Growth Strategy (SGS), and the fiscal challenges facing the nation resulting from the need to implement the provisions of the amended Compact. Discussion starts through detailing the FSM's negotiating strategy for the amended Compact and in outlining the principal objectives that the FSM sought to secure—macroeconomic stability and sustainable development. These objectives are compared with what the FSM and U.S. finally agreed, and which are embodied in the terms and conditions of the amended Compact.

2 During March of 2004 the FSM convened the 3rd Economic Summit. A major outcome of the Summit was recognition of the weak performance in attaining the goals of the original Compact, and a desire that the nation should do better during the coming 20-year period of the amended Compact. In particular, a core group of executive leaders endorsed a strategy that would accelerate growth above the poor rates attained during the original Compact period, and which is described in Chapter 1. While originally called the FSM's high growth strategy, it later and more appropriately became known as the Sustained Growth Strategy (SGS). The principal objective of the strategy is to attain a rate of economic growth that would generate sufficient jobs for the citizens of the FSM seeking gainful employment, and to avoid the large out migration that has occurred since the mid 1990s.

3 Proponents of the SGS understood that adoption of the SGS would not come without cost, and that it could require implementation of economic reforms and sacrifice. Without this commitment they realized that a low growth or even dismal outcome might result, where the majority of Micronesians would be forced to migrate and look for opportunities overseas. The chapter provides a simulation of three alternative scenarios and the likely outcome based on varying degrees of reform and commitment.

4 The chapter continues with a discussion of the implications of the implementation of the amended Compact in the medium term and the required adjustment in fiscal policy that will be needed. A section is devoted to tax reform as a means of avoiding substantial across the board expenditure cuts, and three different Plans for tax policy are presented. Tax reform will also be required in the longer-term as the nation seeks to replace declining Compact grants through greater domestic resource mobilization. The impact of the adoption of the Sustained Growth Strategy on tax yield, and consequences in failure to successfully implement the program are indicated. In the final section a set of policies is identified that will support attainment of macroeconomic stability and the FSM's long-run development goals.

1.1 FSM Compact Negotiating Strategy

5 At the commencement of the Compact negotiations in late 1999, the FSM presented its proposal for future Compact assistance. The proposal was developed from a set of principles identified in the 1st and 2nd Economic Summits to support economic stability, growth, development, and ultimate self-reliance. The strategy was macroeconomic in nature, such that the total level of grant assistance would be chosen to support macroeconomic stability, rather than derived from simply adding up the sum of identified sectoral needs. Given an agreed level of funding the strategy proposed that the use of the annual Compact grants would be to support the provision of basic social services in educational and health, and in infrastructure. This strategy is represented diagrammatically in Figure 1, and may be summarized as follows:

1. ***Stability and Security***—to maintain economic assistance at levels that supported macroeconomic stability. Achievement of this objective required levels of funding close to prevailing levels to avoid the large periodic step-downs in funding that were a characteristic of the first 15-year funding package. These five-yearly funding cuts proved to be highly disruptive to government operations specifically and, particularly through discouraging investment to the economy in general. The important principle of macroeconomic stability was to be further supported by continued participation in federal programs at prevailing levels.
2. ***Improved Enabling Environment for Economic Growth***—the second objective would be achieved through the continued FSM commitment to economic reform and the provision of an enabling environment to support open, outward-oriented and private sector led development. In addition to the FSM's improved policies and practices in support of economic development, US provision of a sufficient grant stream to fund capital projects would also be a key element to provide the infrastructure necessary for a growing economy.
3. ***Improved Education and Health Status***—the third objective concerned the use of the annual Compact grants to support the provision of basic services in education and health. Recognizing that the delivery of education and health services was weak, the strategy emphasized the need for greater efficiency and effectiveness through performance monitoring and improved management.
4. ***Assured Self-Reliance and Sustainability***—this objective would be achieved through the establishment of a Trust Fund that would, after a period of time, replace the annually appropriated transfers from the US. While providing the US with a known time when further transfers

would no longer be required (“exit strategy”), it would more importantly ensure a sustainable and independent economy for the FSM.

6 The implications of the strategy was a request for funding at the level prevailing in FY03 of \$84 million over a period of 20 years. The strategy in-



Figure 1 FSM Compact Negotiation Strategy and Principles

cluded provision for contributions to a Trust Fund, such that the yield of the Fund would be sufficient in year 21 to replace the annual Compact grants, but without erosion of the real value of the fund (this condition became known as the terminal condition). The initial response of the U.S. was an offer of \$61 million without inflation adjustment, and with a \$13 million contribution to a Trust Fund over a period of 15-year period. While this counter offer is now history and of limited importance, the analysis of the economic impact made at the time is instructive and identifies many of the adjustment problems that the FSM is now having to face and will need to respond to over the full period of the amended Compact 20-year period.

7 Figure 2 provides a comparison of the anticipated impact of the original FSM amended Compact proposal and the initial U.S. counter offer¹. The trajectory of the FSM proposal indicates a flat increasing trend of GDP per capita from a level of \$1,827 in FY03 to \$1,975 in FY24; this is an 8 percent increase over the whole period, or a 0.4 percent increase per annum. By world standards this was not an ambitious target and certainly below the sustained growth strategy endorsed at the 3rd Summit. However, given the resource scarcity, remote nature, and general development constraints facing the FSM, it was felt prudent to target a low GDP per capita growth rate for the negotiations. The target

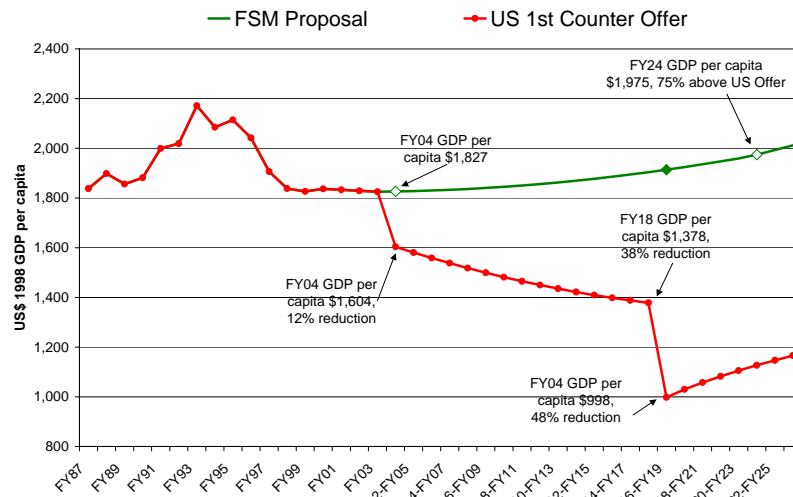


Figure 2 Real Per Capita GDP Growth and Impact of the FSM and US Original Compact Proposals (FY1998 prices)

¹ The impact of the Compact negotiations were analyzed through the use of a simplified macroeconomic model developed by EMPAT known as the “analyzer”.

growth in per capita incomes was in fact slightly lower than the 0.6 percent attainment during Compact I.

8 Although the FSM proposal for funding could not have been considered excessive, it was simply a continuation of the status quo; the original U.S. counter offer would have had a disastrous impact on the FSM economy. The projected drop in funding in FY04 from \$84 to \$61 million would have precipitated a decline in GDP per capita in excess of that experience in FY97 at the time of the second step-down. However, that was not the end of the story, real incomes or GDP per capita would have contracted thereafter by an average annual rate of -1.1 percent. The decline in the economy during the amended Compact period was the result of two basic flaws in the original U.S. proposal; (i) the lack of inflation adjustment, and (ii) an inadequate rate of investment in infrastructure that would have constrained the rate of private sector growth. While the level of the annual grants during the 15 year period would have had an adverse impact on the economy, the inadequate level of contribution and build up of funds in the Trust Fund, would resulted in a corpus level way short of that required to fulfill the “terminal condition”, that is to replace the annual grants without any reduction in funding. Post Compact the Trust Fund dependant economy would have seen real incomes falling even lower to less than \$1,000 per capita.

9 An analysis of the original U.S. offer for Compact funding is instructive since it brings out the purpose of the objectives of the FSM strategy. It is clear that the U.S. offer would have failed to meet the first objective to maintain economic stability and security. The large step-downs at the beginning and end of the amended Compact period and stagnation in funding during the 15-year period, would have resulted in a declining economy precipitating a perpetual fiscal crisis as funding levels declined. The second object to provide a basis for improved economic growth would have been violated by the lack of inflation adjustment and consequent decline in real levels of funding. The inadequate provision for public infrastructure would have led to deterioration in the quality of the capital stock, and undermined the potential of the private sector to take up the lead role in the economy. Finally, the third objective to develop an assured self-reliant and sustainable economy through the establishment of the Trust Fund would have been violated and failed to provide an “exit” strategy for the U.S.

1.2 The Economic Provisions of the Amended Compact

10 Fortunately the U.S. substantially revised the initial offer, and the final negotiated outcome accepted by both parties went further toward, while still falling short of, meeting the FSM negotiating objectives and requirements. Table 1 below indicates the aggregate structure of the annual Compact grants and the U.S. contribution to the Compact Trust Fund. Each year over a 20-year pe-

Table 1 U.S. Annual Compact Grants and Contributions to the Trust Fund

	Annual Grants	Trust Fund Contribution	Total Contribution
FY04	76.0	16.0	92.0
FY05	76.0	16.0	92.0
FY06	76.0	16.0	92.0
FY07	75.2	16.8	92.0
FY08	74.4	17.6	92.0
FY09	73.6	18.4	92.0
FY10	72.8	19.2	92.0
FY11	72.0	20.0	92.0
FY12	71.2	20.8	92.0
FY13	70.4	21.6	92.0
FY14	69.6	22.4	92.0
FY15	68.8	23.2	92.0
FY16	68.0	24.0	92.0
FY17	67.2	24.8	92.0
FY18	66.4	25.6	92.0
FY19	65.6	26.4	92.0
FY20	64.8	27.2	92.0
FY21	64.0	28.0	92.0
FY22	63.2	28.8	92.0
FY23	62.4	29.6	92.0

riod the U.S. will contribute to the FSM \$92 million partially inflation adjusted. The inflation adjustment factor remains as in the original Compact at 2/3rds of the annual U.S. GDP deflator, subject to a possible increase of the inflation adjustment after ten years, under certain conditions. The annual sector grants start a level of \$76 million in FY04 and are to be annually reduced by a \$0.8 million decrement from FY07 onwards. The difference between the total contribution and the annual sector grant levels will be deposited in a Trust Fund to accumulate over the 20-year Compact period. At the end of the 20 years the Trust Fund will provide a stream of benefits intended to replace the annual sector grant transfers (the US GAO has questioned whether scheduled US contributions to the Trust Fund are adequate to produce this result).

11 In comparison to its original proposal the FSM was unable to obtain full indexation of the annual Compact grants, but did achieve an extension of the period of the amended Compact from 15 to 20 years. However, the U.S. imposed an annual decrement on the amount of sector grants to generate additional resources for the Trust Fund. There remain, however two serious weaknesses concerning the operation of the Trust Fund that the FSM will need to address once the Fund becomes operational. The first concerns the Trust Fund subsidi-

ary agreement, which violates the principle to maintain the real corpus of the Fund. The agreement protects not the real value, but the nominal value, and simulations have indicated that consequently the corpus of the Trust Fund has a tendency to “crash” or decline precipitously after periods of fluctuating or sustained adverse yields. Secondly, while the value of the contributions to the Fund was based on historical market interest and equity yields sufficient to meet the terminal condition, the Corpus is clearly vulnerable if historical trends are not replicated. Finally, the FSM managed to maintain access to U.S. Federal Programs, except that education sector programs were “cashed out” in order to allow the FSM to design projects more suited to its needs. While this change was substantial, it does not adversely affect the macroeconomic impact of the total Compact package.

12 Figure 3 draws the comparison between the original FSM proposal and the final negotiated outcome. While the FSM did not achieve the full value of its proposal, the estimated impact on the economy does not indicate a significantly different outcome between the two, assuming the success of the Sustained Growth Strategy. It can be argued that the FSM achieved the three macroeconomic principals it set out to achieve at the beginning of the negotiations. While the projected growth path dips in FY04 due to the drop in funding from \$84 to \$76 million, the two trajectories do not diverge significantly. Despite the weakness in the Trust Fund arrangements, the projected yields should be close to suf-

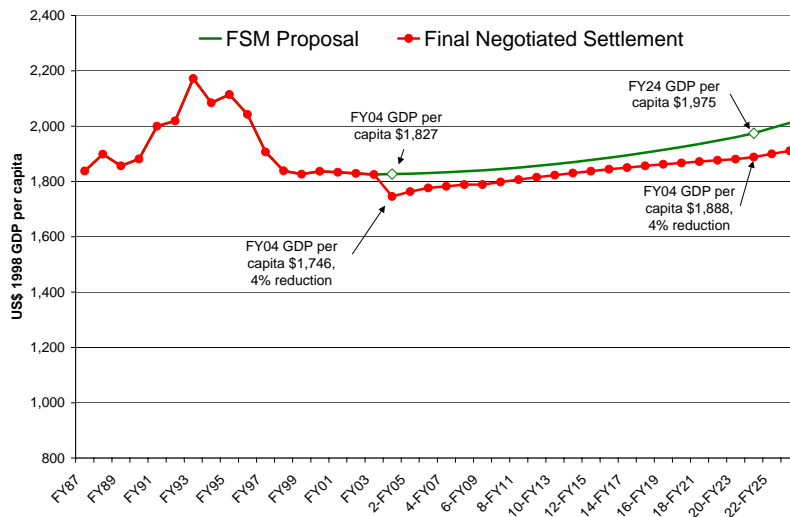


Figure 3 Real Per Capita GDP Growth and Comparison of the Impact of the Original FSM Proposal and Final Negotiated Settlement (FY1998 prices)

ficient to replace the annual Compact grants, if historical market performance is replicated over the next 20 years. However, while the FSM came within close range of achieving the major objectives of the negotiations, a flaw in the agreement resulting from the sectoral structure of the annual grants, has resulted in a macroeconomic and fiscal adjustment, significantly greater than had been anticipated. This topic is taken up in detail in section 1.4 below.

1.3 The Third FSM Summit and Evolution of the FSM Sustained Growth Strategy

1.3.1 The Third FSM Economic Summit

13 The 3rd FSM Economic Summit² was held in Palikir, Pohnpei, from March 29-April 2, 2004. Over four hundred participants attended representing the four FSM states, the traditional leadership, private sector, National and State governments, non-government organizations, churches, women's and youth groups, government officials, as well as representatives of foreign governments and donor institutions. The theme of the Summit was, *The Next 20 Years: Achieving Economic Growth & Self-Reliance*. The Summit was successful in achieving its two immediate objectives to:

- build awareness of the economic structure of the amended Compact provisions and the likely impact on the economy.
- achieve consensus on an overall strategy consistent with the theme of achieving economic growth and self-reliance.

14 The third objective, to improve monitoring mechanisms to enhance implementation of the economic strategy and its underlying strategic goals and policies, will be addressed through government actions at the state and national levels.

15 The President of the FSM, His Excellency Joseph J. Urusemal, opened the Summit and indicated that now was the right time for the nation to gather to plan bold new actions to meet the challenge of achieving a higher growth rate despite declining Compact funds. The Summit was presented with three economic scenarios that the FSM might experience over the next 20-year period of Compact support. While noting that the FSM might face a truly “dismal” scenario if the country's leadership failed to make needed economic adjustments to offset the drag on economic activity resulting from the structure of the Compact assistance, the discussion focused on “moderate growth” and “sustained growth”³ scenarios.

² See 3rd FSM Economic Summit Communiqué, and Select Committee resolution.

³ Referred to during the Summit at the “high growth” scenario.

16 The breaking of an air transportation bottleneck was presented as a vital key to achieving high growth from the leading sectors of tourism, fisheries and agriculture. The synergies of in-bound tourism and outbound sashimi-grade tuna exports were discussed.

17 At the outset of the Summit the President created a Select Committee, comprised of the EPIC members and the co-chairmen of the Summit Convening Committee. That Select Committee endorsed the sustained growth strategy and gave its support to implementing reforms required to achieve sustained growth based on tourism, fisheries and agriculture. The Select Committee proposed a resolution that was subsequently presented and adopted by the Summit at large:

***WHEREAS** the structure of the amended Compact economic package entails declining annual grants that require the FSM to make tough choices between alternative economic strategies and policies that will result in different outcomes in terms of income and likely out-migration rates of Micronesians;*

***WHEREAS** in the absence of significant reform efforts, a dismal scenario would likely prevail in which economic activity would decline, incomes would stagnate and large numbers of Micronesians would surely choose to migrate from their homeland;*

***WHEREAS** to attain a baseline growth scenario wherein incomes would rise modestly, as they did during the original Compact period, significant reform measures would need to be implemented, including revenue reform to ensure protection of essential public services and public investment;*

***WHEREAS** such a revenue reform would entail a three-pronged approach to: (i) improve collection of existing taxes; (ii) design a revenue-neutral shift to a modern tax system appropriate to the FSM's economic strategy; and (iii) introduction of a unified tax administration and implementation of the new tax system within 2-3 years;*

***WHEREAS** to achieve the high growth scenario, where incomes will be rising and Micronesians will no longer be forced to out-migrate to earn a living, still further reform efforts and a higher level of public infrastructure investment will be required;*

***WHEREAS** achieving the high growth scenario requires a solution to the existing air transportation bottleneck, which constrains rapid growth in the tourism, fisheries, and agriculture sectors;*

***WHEREAS** the EMPAT project has come to an end after eight years, during which several Micronesian economists have received training and have achieved a high professional standard and all of the governments have received support for their economic reform efforts.*

NOW THEREFORE, BE IT RESOLVED that:

1. *The Select Committee endorses the high-growth strategy and recommends that the 3rd FSM Economic Summit supports the strategy, noting that environmental and cultural protection measures must be integrated into such strategy;*
2. *The Select Committee requests the President of the FSM to seek the agreement of our major donor partners to convene a Consultative Group of Donors meeting at an early date so that our Strategic Development Plan and our high growth strategy can be presented for their review and support;*
3. *The Select Committee further recommends that the President of the FSM request that the World Bank or other International Financial Institutions provide a pre-loan technical assistance team comprised of experts in aviation, airports, tourism, fisheries, environment, and economics, and that the FSM seek to create a team along the lines of the EMPAT model with international economists and Micronesian counterparts in order to support the ongoing economic strategy and reform efforts of the nation.*
4. *The Select Committee supports other reforms required to achieve high growth based on tourism, fisheries and agriculture, including:*
 - a. *Increasing investment in infrastructure, especially in airports, electricity, roads and health facilities;*
 - b. *Raising revenue sufficiently to provide the funds; (i) the FSM will need to invest in infrastructure, and (ii) to compensate for declining Compact funds;*
 - c. *Revising rules and laws with respect to investment and other matters to make the FSM an attractive place for investors;*
 - d. *Carrying out other measures needed to achieve high growth including (i) rules and regulations to facilitate the employment of foreign technicians and managers needed for rapid growth, (ii) to ensure also that over several years it is primarily Micronesians who benefit from high growth, (iii) to strengthen education to train people in skills needed for growing tourism, fisheries and agriculture sectors, and (iv) other measures.*

1.3.2 A Six-Part Strategy for Transition and Accelerated Growth

18 The Select Committee resolution identified an approach to developing the “Sustained Growth Strategy” or SGS, the initial component being preparation of the nation’s Strategic Development Plan (SDP). With the Plan complete,

the stage is set to move forward with a request to the FSM's donor partners to convene a “Consultative Group of Donors Meeting” or CGM. The SDP will be tabled and the FSM will indicate its resolution and commitment to adopt the measures necessary to attain the objectives of the Sustained Growth Strategy. The initial phase will be a request to the donor community to assist in developing a program of reform measures and policies. While the strategies necessary to implement the SGS will need to be the focus of technical assistance, the following Six-Part strategy outlines the critical components that will need to be included:

- 1 Macroeconomic Stability**
 - 1.1 Maintaining fiscal stability and responsibility through the initial transition period of the amended compact,
 - 1.2 Maintaining essential public services and protecting the public investment program, and
 - 1.3 Tax reform in support of the growth strategy.
- 2 Good Governance: Improving Effectiveness and Efficiency of Government**
 - 2.1 Protecting essential services through the transition,
 - 2.2 Improving public sector management,
 - 2.3 Enhancing accountability, and
 - 2.4 Ensuring the rule of law and safeguarding property rights,
- 3 Developing an Outward-Oriented, Private Sector-Led Economy**
 - 3.1 Competition policy: improving the regulatory regime,
 - 3.2 Promoting domestic and foreign investment,
 - 3.3 Enhancing entrepreneurial skills and opportunities, and
 - 3.4 Reducing inefficiencies of the public enterprise sector.
- 4 Investing in Human Resource Development**
 - 4.1 Protecting health expenditure levels and improving health outcomes,
 - 4.2 Health financing for the future,
 - 4.3 Protecting education expenditures and improving education outcomes, and
 - 4.4 Linking higher education and skills development to the needs of a growing economy.
- 5 Investing in Infrastructure**
 - 5.1 Protecting investment levels through the transition,
 - 5.2 Learning from the past and targeting critical needs within the growth strategy, and
 - 5.3 Long-term financing of economic infrastructure
- 6 Long-Term Sustainability**

- 6.1 Environmental concerns integrated into the growth strategy,
- 6.2 Social and cultural factors protected during the growth strategy,
and
- 6.3 Inter-generational equity supported by the compact trust fund.

1.3.3 Growth Scenarios

19 In this section the three scenarios presented at the Summit are discussed with the aid of an economic model⁴. Behind each scenario is an assumed policy environment and commitment to reform, which supports private sector entrepreneurship. Economic growth proceeds through the development and export of the principal sectors of agriculture, fisheries and tourism. Private sector investment plays a key function in supporting the growth of these activities. Figure 4 provides a graphical representation of economic growth per capita under the three scenarios: dismal, medium and sustained growth. The dismal scenario is indeed just that. The economy dips in FY04 during the first year of the amended Compact as the economy responds to declining levels of grant assistance, and due to the lack of public sector investment. Low levels of public sector investment result from administrative problems in implementation of the infrastructure grant. In FY05, it is assumed that the FSM has been able to fulfill the grant award conditions, overcome absorptive capacity constraints, and implement the grant on the ground. As a result the economy strengthens but under the dismal scenario living standards stagnate and never regain the levels prevailing at the end of Compact I. Under the medium scenario living standards are projected to improve, surpassing Compact I levels, but not by any significant margin. The medium growth scenario corresponds to that presented to the U.S. during the Compact negotiations. The Sustained growth scenario on the other hand is the only option that provides a significant increase in GDP per capita.

⁴ The three scenarios are described utilizing a Computable General Equilibrium (CGE) model developed by EMPAT. This model is more comprehensive than the analyzer and captures many of the complex economic linkages in the FSM economy.

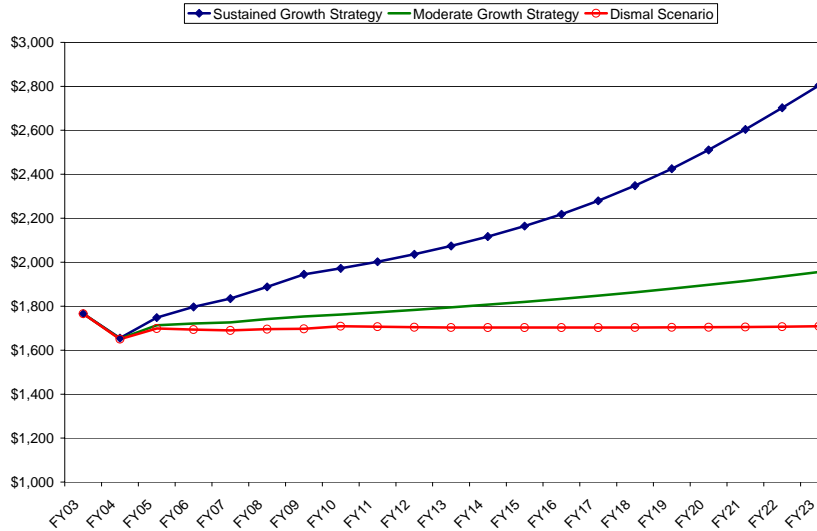


Figure 4 Alternative Growth Scenarios, GDP per capita, \$s 1998 prices

20 Discussion will now proceed to examine the assumptions behind the different growth scenarios, and the type of effort required to achieve the results. Under the sustained growth scenario, it is assumed that the FSM actively implements the strategy adopted at the 3rd Summit, and pursues a rigorous reform agenda. Improving the environment for the private sector takes center stage, and implementation of a regulatory regime that encourages private entrepreneurship is adopted. Foreign investment is streamlined and a transparent liberalized regime implemented. Public enterprise reform is pursued and the myriad of existing non-performing enterprises are liquidated, corporatized or privatized. This sends a strong signal to the private sector they are welcome in the FSM. Access to land is improved through better management and administration, and through legislation that supports long-term leasehold and mortgage leases. Secured transactions legislation is implemented, and the commercial banking system now finds itself in a position to actively lend to an expanding private sector. Other critical pieces of legislation that affect the private sector are implemented: bankruptcy law and a modern but simple commercial code, etc. Support services to develop Micronesian business skills and entrepreneurship are put in place.

21 Reform of the public sector supports improvements to the private sector regulatory environment. Tax reform is a central component of the sustained growth strategy as the FSM changes the culture of tax administration to an incentivized modern system. The tax regime is modernized based on a system that

encourages effective tax collection in a non-distorting way consistent with the objectives of an outward orientated development strategy. Greater domestic resource mobilization and revenue effort is required to support the sustained growth strategy. The public service is also modernized and “right” sized to provide efficient and effective services to the nation that supports the private sector.

22 Figure 5 provides a picture of the GDP annual growth path of the FSM economy under the sustained growth scenario. As a result of the policies described above, the FSM economy is launched onto a higher growth trajectory. Consistent with the discussion presented under the sector SDP chapters for agriculture, fisheries and tourism, exports of agriculture expand at 7 percent per annum during the period, or from \$3.2 million in FY03 to \$12.0 million in FY23. While the growth rate is a significant departure from past achievement, the total expansion in exports is not great. In particular, Koror and Pohnpei states are projected to participate in increased agricultural production. In the Fisheries sector, with the adoption of a proactive reform agenda, privatization and reform of the foreign investment regime, the sector is projected to double during the first six years of the amended Compact period, FY03-FY09. Consistent with the fisheries SDP sector chapter, further potential exists and the sector is projected to double over the following 14 years between FY10-FY23.

23 The tourism sector is the most dominant growth sector under the sustained growth strategy. Overall the sector is projected to grow from the low

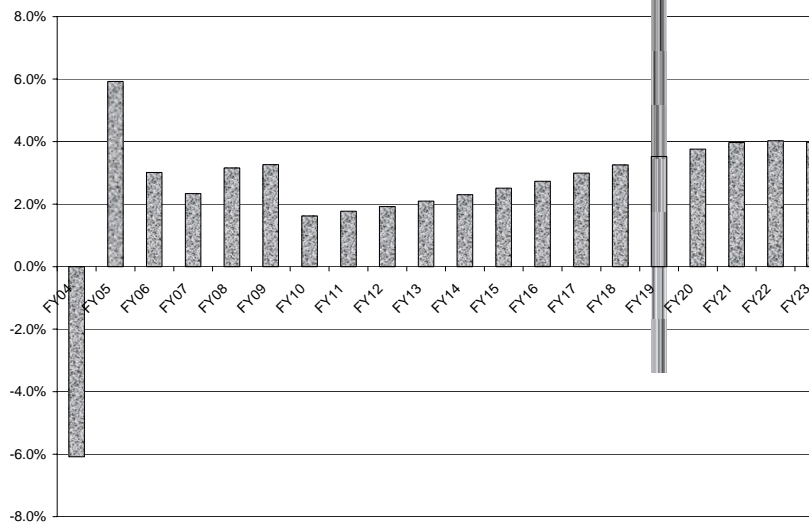


Figure 5 The sustained growth scenario, real annual GDP growth, FY03-FY23 (1998 prices)

base of 21,000 visitor arrivals in FY03, to attain 110,000 by the end of the amended Compact period in FY23. This represents an annual increase of 9 percent. While this again is a significant departure from historical experience, it represents a feasible 20-year target, when viewed in the context of competing tourism destinations in neighboring Micronesian islands. In order to support the rate of private sector expansion embedded in the agriculture, fisheries, and tourism sectors, private investment must also grow from the prevailing levels, representing about 7 percent of GDP, to a projected level of 17 percent. Domestic resource mobilization or saving is unlikely to generate the required volume and a significant increase in foreign investment would be needed. This is consistent with the policy commitment inherent in the sustained growth strategy.

24 Figure 5 presented the annual rate of GDP growth, and after an initial negative decline in FY04 resulting from reduced Compact flows and slow start in the use of the infrastructure grant, the economy picks up. During the first 5 years between FY05 and FY09, the growth pattern reflects a variety of counter prevailing factors. The affect of the need to phase out the use of the capacity building sector grant to fund government operations, either through tax reform or cuts in public expenditures, forces contraction. However, this is counterbalanced by the positive impact of an assumed rapid growth in the fisheries sector as the Governments of the FSM implement a liberalize regime that encourages foreign investment. After an initial spurt in fisheries, economic growth assumes a lower but sustained trajectory. This is augmented by growth in tourism, which over time begins to have a substantial impact on economic activity, as the sustained growth rates are translated into higher numbers. Overall economic growth is held back during the first part of the amended Compact, but as the benefits of the sustained growth strategy take hold, the economy is projected to experience a growth of 4 percent by the end of the 20 years. This represents an annual average rate of 2.6 percent over the whole period.

25 Figure 6 presents an overview of the moderate growth variant. This scenario also assumes that the FSM adopts a reform agenda but with less commitment, and at a less aggressive rate compared with the sustained growth strategy. While the foreign investment regime is improved and encourages new private investment, reform of public enterprises remains weak. Improvements are made to the private sector regulatory environment but take time to implement. Tax reform is adopted to support the transition and implementation of the amended Compact, and financial stability is secured. As a result of a weakly implemented reform program the private sector shows signs of growth, but not at its full potential. Agriculture is projected to grow at 2.5 percent, but fisheries growth is largely stalled as important public enterprise reforms are not implemented. The tourism sector responds to the improved environment and visitor arrivals double over the 20-year period to 41,000. Private sector investment increases as a share of GDP from 7 percent in FY03 to 9 percent by FY23. After the initial adjustment in FY04 and FY05 to the conditions of the amended

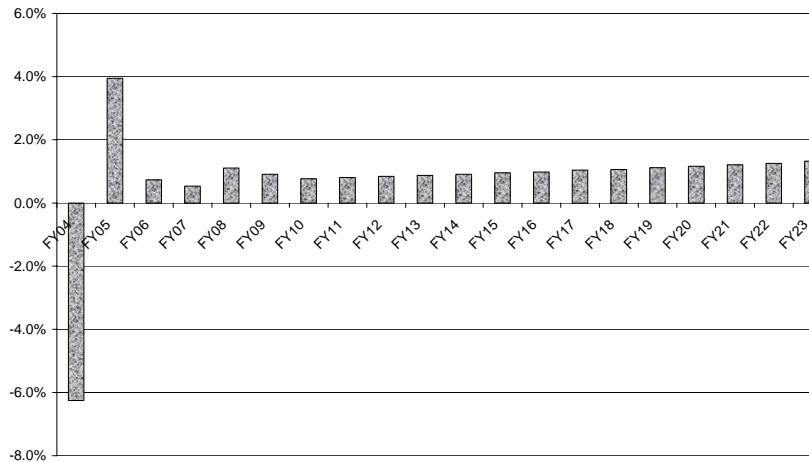


Figure 6 The medium growth scenario, real annual GDP growth, FY03-
FY23 (1998 prices)

Compact, GDP growth settles down to an average annual growth rate of 0.7 per cent attaining 1.3 percent by FY23.

26 Figure 7 indicates the results of the dismal scenario. The dismal scenario is essentially a status quo projection. It assumes that the policy regime remains largely unaltered, and the FSM remains inward looking. There is no tax reform and efficiency on the delivery of public services remains largely unaltered. The transition to the amended Compact is arduous and in the absence of tax reform is achieved through difficult reductions in expenditures that threaten financial stability. Based on a very modest increase in visitor arrivals from 21,000 in FY03 to 30,000 in FY23, the average annual growth of GDP is projected at 0.1 percent over the period. The results of this scenario are indeed dismal.

27 The projections and trajectories of the three growth scenarios presented above are estimates of what the course of the FSM's economic development could look like over the amended Compact period. They are based on assumptions about the policy regime and reforms that are required to generate the rate of development projected that is consistent with international experience. The projections are based on different rates of growth of exports of the agriculture, fisheries and tourism sectors and required level of supporting private sector investment. Importantly the trajectories indicate the rate of growth in these variables that are required to attain the rate of GDP or economic growth projected.

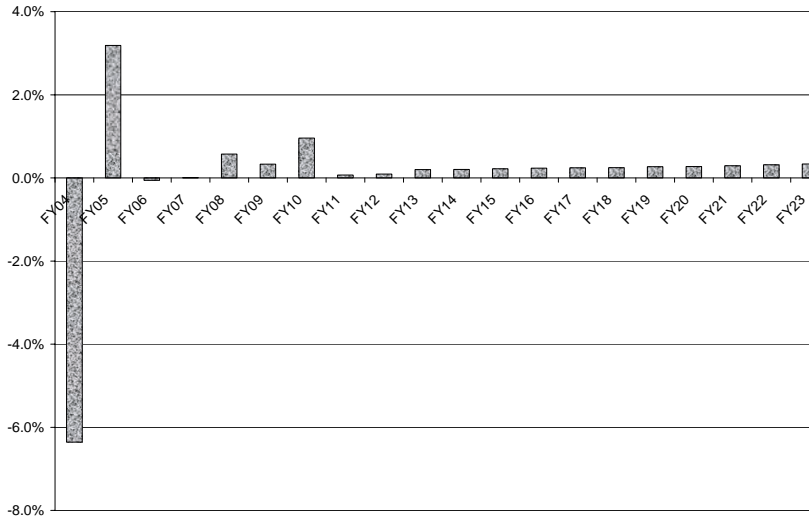


Figure 7 The dismal scenario, real annual GDP growth, FY03-FY23 (1998 prices)

28 Clearly, only the sustained growth strategy will provide an increasing level of welfare and economic growth that will be sufficient to fulfill the aspirations of the FSM's growing population, and avert the large out migration that was experienced during the latter part of Compact I. While the medium scenario results in a very modest rate of growth, it will be insufficient to generate the supply of jobs that is required to provide attractive opportunities for young Micronesians to remain in the FSM. Under the dismal scenario the size of the population in the FSM is actually likely to decline below existing levels.

1.4 Medium Term Fiscal Adjustment

29 As the FSM enters a new phase of its development with the implementation of the amended Compact, the nation is faced with substantial fiscal adjustment challenges in the medium and long-term. At the outset of the amended Compact period the new sectoral grant structure and its related expenditure category constraints will require significant budgetary restructuring. The effect will be to place pressure on recurrent operations expenditures that in the past were funded from Compact current account (unrestricted) funds but that must in future either be cut or funded from local revenues. In the longer-term the lack of full indexation of the annual Compact sector grants and the annual decrement of \$800,000 will require continuous fiscal adjustment.

30 The fiscal adjustment required to adapt to the new realities of the amended Compact can be achieved through a mix of expenditure cuts and reve-

nue increases. The nature of the sectoral grants—funding virtually all of education and health costs and requiring substantial public infrastructure investment—means that any expenditure cutting must be done on a very narrow portion of recurrent public expenditures. Quite clearly, a major part of fiscal adjustment will need to come from revenue increases in order to avoid seriously jeopardizing the delivery of Government services. In the long-term the decline in the real value of Compact funding also implies the need for continuous fiscal adjustment, with continued need for revenue growth, though if the nation’s “Sustained Growth Strategy” is achieved, such revenue growth may be achieved by growing the tax base rather than requiring higher and higher tax rates.

1.4.1 Fiscal Structure and the Magnitude of the Adjustment

31 The structure of the FSM state and national government budgets is presented in Table 2 below. The table indicates the importance of Compact and other US funding in the fiscal structure of the FSM governments, and highlights the relatively small contribution from domestic revenues. Chuuk State appears as the government that is most reliant on external sources of funds, with domestic sources as only 14 percent of total funding needs. Pohnpei and Yap are considerably less reliant, yet even they only generate 24 and 22 percent of funding needs from domestic sources. The fiscal structure of the national government differs substantially, especially after reverting to the 50 percent revenue-sharing minimum on national taxes, and in light of the sizable value of the non-shared fishing revenues.

32 There are three major components of the adjustment that each Government in the FSM will be required to make:

- (i) the 5-year phase out of the non-conforming use of the capacity building grant to fund general government operations;
- (ii) the requirement to increase the use of the infrastructure grant to 30 percent of total Compact sector grants in FY06 and thereafter; and

Table 2 Fiscal expenditures and sources of funding FY2005 by government (\$'million)

	FY05 Expenditures Funded by:				Total revenues % of Total	Domestic revenues % of Total
	Compact grants	SEG	Federal programs	Domestic revenues		
Chuuk	29.31	4.09	1.23	5.53	40.17	14%
Kosrae	8.41	1.15	1.67	2.42	13.63	18%
Pohnpei	19.52	3.22	2.03	7.81	32.58	24%
Yap	12.18	2.25	0.89	4.38	19.70	22%
National	6.57	0.65	3.68	21.79	32.70	67%
FSM	76.00	11.36	9.51	41.92	138.78	30%

Note 1 As presented to the FY05 JEMCO meeting
 2 SEG-Special Education Grant

- (iii) the need to immediately eliminate the (ineligible) funding of public works departments and operations from the infrastructure grant.

33 At the start of the amended Compact in FY04 the FSM found itself with inadequate domestic resources to finance those areas of public expenditures not eligible for Compact funding. While the FSM to this date has never concurred with the US interpretation of “non-conforming” costs under the capacity-building grant, there were extensive bilateral discussions, which resulted in a policy decision that permitted the FSM to use the capacity building grant to fund the “non-conforming” activities over a 5-year phase out. In order to comply with this decision the FSM was required to submit to the US a phase-out schedule, reducing the level of “non-conforming” activities by 20 percent per annum. The phase-out schedule agreed by each Government of the FSM is provided below in Table 3, and indicates the maximum allowable funding of non-conforming government operations in each year. The rate of phase-out varies from state to state; Pohnpei selected to reduce expenditures equally over a four-year period, Chuuk and Yap committed to a three-year phase-out, and Kosrae back loaded over the last two years. The national government ceased funding its budget from the capacity building grant subsequent to the reversal of the state favorable 70-30 revenue share, to the constitutional minimum of 50-50 from FY05 onwards.

34 During the FY05 JEMCO budget discussions in Honolulu, US Members of JEMCO drafted a resolution requiring the FSM to achieve utilization of the infrastructure grant at a level not less than 30 percent of total Compact grants by FY06. The use of the infrastructure grant to fund operations of public works department operations is likely inconsistent with the terms of the Fiscal Procedures Agreement; however, some portion of those expenditures may be eligible if properly presented (and billed) as maintenance costs or as allowable project implementation costs.

35 Table 4 indicates the magnitude of the amended Compact adjustment required from each Government in the FSM, from the three different sources, and shows that the total 5-year adjustment is less than the sum of the three component adjustments. The phase out of the capacity building grant releases Com-

Table 3 Public sector capacity building grant phase-out schedule (\$'million)

	FY05 (request)	FY06 (ceiling)	FY07 (ceiling)	FY08 (ceiling)	FY09 (ceiling)
Chuuk	2.74	2.65	1.77	0.88	0
Kosrae	0.91	0.91	0.91	0.46	0
Pohnpei	1.31	0.99	0.66	0.33	0
Yap	1.35	1.35	0.90	0.45	0
National FSM	6.31	5.89	4.23	2.12	0
Required	8.49	6.37	4.25	2.12	0

compact sector grant funds that can be used to meet the infrastructure 30 percent goal. The table also indicates the adjustment required as a percent of the non-Compact funded “expenditure base.” This base is the sum of existing expenditures funded from local revenues and the cost of those Compact funded activities that are considered non-conforming. The adjustment indicates that the expenditure cutting required would need to be a very significant percentage of the affected activities in the state governments, while the adjustment facing the national government is minor. It is precisely because the adjustment required in the affected departments in the state governments is very large that the appropriate fiscal adjustment response should focus heavily on increased revenue effort. Adjustment through expenditure cutting alone would entail severe disruption in the delivery of government services, extensive job losses, and likely closing of key departments and divisions.

1.4.2 Government-by-Government Adjustment

36 **Chuuk State** Table 5 indicates the estimated size of Compact grants and the phasing of the adjustment required in Chuuk State. Chuuk receives 38.6 percent of the annual gross level of \$76 million of Compact grants in FY04 prices. In FY07 the annual decrement of \$0.8 for the FSM kicks in, of which \$0.31 million is Chuuk's share. Estimating for the inflation adjustment based on current levels of the implicit US GDP deflator, the table indicates that the expected level of Compact grants in current prices is expected to hold its nominal value despite the annual decrement. The level of usage of the infrastructure grant in Chuuk state exceeded the 30 percent requirement in the FY05 budget request to JEMCO, and the only major source of adjustment is thus the

Table 4 Magnitude of the transition by source and government (\$'million)

	Transition Requirements			5-year Adjustment ¹	Adjustment % ²
	Capacity building phase out	Increase in infrastructure to meet 30%	Public works operations funded from infrastructure		
Chuuk	2.74	0	0	1.99	-26%
Kosrae	0.91	0.38	0.49	1.40	-37%
Pohnpei	1.31	3.03	0	1.76	-18%
Yap	1.35	1.93	0.75	0.86	-16%
National	0	1.39	0	0.39	-2%
FSM	6.31	6.73	1.25	6.41	-13%

- Note 1 5-year adjustment does not equal to sum of transition adjustments since funds released from CB phase-out and partial inflation adjustment offsets required increase in infrastructure.
- 2 Equals 5-year adjustment as % of FY05 expenditures funded from domestic revenues plus 5-year adjustment—referred below to the affected expenditure base.

Table 5 Compact adjustment in Chuuk State by type, FY05-FY09 (\$'million)

Chuuk ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	29.31	29.31	29.31	29.31	29.31
less decrement			-0.31	-0.62	-0.93
plus inflation adjustment		0.78	1.20	1.62	2.04
Compact grants inflation adjusted	29.31	30.10	30.21	30.32	30.42
Capacity Building Phase-Out		-0.09	-0.88	-0.88	-0.88
Resources required to meet Infrastructure @ 30%					
Public works maintenance phase-out					
Funds released from inf. adj. and CB phase-out					
Budget savings ³		0.09	0.66		
Annual adjustment			-0.22	-0.88	-0.88
Cumulative Adjustment			-0.22	-1.11	-1.99

Note 1 FY05 = actual grant approved by JEMCO

2 Share of Compact funds = 38.6%

3 Underestimation of revenues \$0.75m

reduction in the use of the Capacity Building grant to fund general government operations. Chuuk has pledged to reduce this grant starting in FY06, but distributing the major impact in equal amounts over the years FY07-FY09. The cumulative adjustment required, after technical correction for \$0.75 million of revenue underestimation in the FY05 budget, is \$1.99 million by the end FY09, which would require a 26 percent cut of the affected expenditure base in the absence of any revenue increase.

37 **Kosrae State** Table 6 shows that the adjustment challenge for Kosrae is more complex, and difficult. In FY05 Kosrae is required to reduce its usage of the infrastructure grant to fund public works operations by approximately \$0.5 million. Given the small size of the state, this is a large adjustment and it is immediately binding. In FY05 the use of the infrastructure grant was slightly less than the 30 percent requirement, and thus the adjustment required in FY06 is relatively small at \$0.22 million. Kosrae has chosen to back-load the phase-out of the use of the capacity grant to fund general operations to FY08 and FY09. However, since some of the required reduction of \$0.45 million in FY08 can be used to offset the infrastructure requirement, the overall adjustment in that year is limited to \$0.25 million. In FY09 the state will need to make the full adjustment of \$0.46 million. The adjustment timeline for Kosrae is a rising amount in the first two years, a pause in FY07, and then a final increase during the last two years. Overall Kosrae will be required to make the most difficult adjustment of all the FSM states. Restoring fiscal balance would require a 37 percent cut of the affected expenditure base in the absence of any revenue increase.

Table 6 Compact adjustment in Kosrae State by type, FY05-FY09 (\$'million)

Kosrae ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	8.41	8.41	8.41	8.41	8.41
less decrement			-0.09	-0.18	-0.27
plus inflation adjustment		0.22	0.35	0.47	0.58
Compact grants inflation adjusted	8.41	8.63	8.66	8.69	8.72
Capacity Building Phase-Out				-0.45	-0.46
Resources required to meet Infrastructure @ 30%		-0.22			
Public works maintenance phase-out	-0.49				
Funds released from inf. adj. and CB phase-out			0.02	0.20	
Annual adjustment	-0.49	-0.22	0.02	-0.25	-0.46
Cumulative Adjustment	-0.49	-0.72	-0.69	-0.94	-1.40

- Note 1 FY05 = actual grant approved by JEMCO
 2 Share of Compact funds = 11.1%
 3 Underestimation of revenues \$0.75m

38 **Pohnpei State** Table 7 indicates a totally different adjustment challenge. Pohnpei has a relatively small capacity building grant adjustment, which it opted to phase-out in equal installments over the FY06-FY09 period. However, Pohnpei requires a large \$3.0 million adjustment to meet the 30 percent infrastructure requirement in FY06. Part of this increase can be met through the increase in funds received from the inflation adjustment, and part from more efficient planning and avoidance of overestimation of budget requirements (Pohnpei has large “carry-over” balances of Compact funds, reflected in the \$.75 million budget savings in the table). In the subsequent years, the phase-out of the capacity building grant can be used to offset the infrastructure requirement, such that there is a minimal annual adjustment. In the case of Pohnpei the Com-

Table 7 Compact adjustment in Pohnpei State by type, FY05-FY09 (\$'million)

Pohnpei ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	19.52	19.52	19.52	19.52	19.52
less decrement			-0.21	-0.41	-0.62
plus inflation adjustment		0.52	0.80	1.08	1.36
Compact grants inflation adjusted	19.52	20.05	20.12	20.19	20.26
Capacity Building Phase-Out		-0.33	-0.33	-0.33	-0.33
Resources required to meet Infrastructure @ 30%		-2.34			
Public works maintenance phase-out					
Funds released from inf. adj. and CB phase-out			0.38	0.38	0.38
Budget savings ³		0.75			
Annual adjustment	-1.92	0.05	0.05	0.05	0.05
Cumulative Adjustment	-1.92	-1.86	-1.81	-1.81	-1.76

- Note 1 FY05 = actual grant approved by JEMCO
 2 Share of Compact funds = 25.7%
 3 Over budgeting \$0.75m

compact adjustment is a one-time event, but all of the adjustment is required by the outset of FY06. The magnitude of the adjustment overall is such that achieving structural balance would require an 18 percent cut of the affected expenditure base in the absence of any revenue increase.

39 **Yap State** Table 8 shows that Yap's case is similar to that of Pohnpei, but in addition there is an immediate adjustment to eliminate public works operations from the infrastructure grant. It appears that funding levels for public works in the FY05 budget were not a feature of the original Compact budgets, and that adjustment can be made through restoration of earlier expenditure levels—thus savings of \$0.5 million have been assumed in the table. Yap's use of the infrastructure grant in FY05 is similar to that of Pohnpei at 14 percent of total state use of Compact grants. Increasing the level to the 30 percent requirement will necessitate a significant adjustment in FY06, although savings can be realized from more efficient budgeting and avoidance of overestimation of requirements. In subsequent years the phase-out of the use of the capacity building grant can be offset against the infrastructure requirement without incurring any significant net additional adjustment. Over the 5-year period Yap will be required to make a significant adjustment in FY06, which in fact overshoots

Table 8 Compact adjustment in Yap State by type, FY05-FY09 (\$'million)

Yap ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	12.18	12.18	12.18	12.18	12.18
less decrement			-0.13	-0.26	-0.38
plus inflation adjustment		0.33	0.50	0.67	0.85
Compact grants inflation adjusted	12.18	12.51	12.56	12.60	12.64
Capacity Building Phase-Out			-0.45	-0.45	-0.45
Resources required to meet Infrastructure @ 30%		-1.70			
Public works maintenance phase-out	-0.75				
Funds released from inf. adj. and CB phase-out			0.48	0.48	0.48
Budget savings ³	0.50	1.00			
Annual adjustment	-0.25	-0.70	0.03	0.03	0.03
Cumulative Adjustment	-0.25	-0.95	-0.92	-0.89	-0.86

Note 1 FY05 = actual grant approved by JEMCO
 2 Share of Compact funds = 16%
 3 Over budgeting \$1.75m

the final requirement estimated for FY09. Achieving structural balance for Yap without revenue increases would require a 16 percent cut of the affected expenditure base.

40 **National Government** Table 9 shows that the only adjustment required is to meet the 30 percent infrastructure requirement. The national government has traditionally allocated little funding to infrastructure (except

Table 9 Compact adjustment for the National Government by type, FY05-FY09 (\$million)

National ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	6.57	6.57	6.57	6.57	6.57
less decrement			-0.07	-0.14	-0.21
plus inflation adjustment		0.18	0.27	0.36	0.46
Compact grants inflation adjusted	6.57	6.75	6.77	6.80	6.82
Capacity Building Phase-Out					
Resources required to meet Infrastructure @ 30%		-1.27			
Public works maintenance phase-out					
Funds released from inf. adj. and CB phase-out			0.08	0.02	0.02
Budget savings ³		0.75			
Annual adjustment		-0.52	0.08	0.02	0.02
Cumulative Adjustment		-0.52	-0.44	-0.42	-0.39

- Note 1 FY05 = actual grant approved by JEMCO
 2 Share of Compact funds = 8.7%
 3 Underestimation of revenues \$0.75m

through Congressional projects) as most of these expenditures are incurred at the state level. However, since the 30 percent requirement will need to be met by each government, the national government will need to increase its outlays on infrastructure projects selected from the Infrastructure Development Plan. Overall the national government will need to make a once-off adjustment in FY06, but as in the case of Chuuk more accurate revenue forecasting indicates that on trend at least an additional \$0.75 million in revenues will be available. Thus achieving fiscal balance would require only a 2 percent cut of the affected expenditure base.

1.5 Tax Reform

41 The preceding section outlined the magnitude and phasing of the fiscal adjustment the FSM state governments must undertake. The discussion indicated that revenue effort must play a central role in the overall fiscal adjustment effort. The adjustment required is so immediate for Pohnpei and Yap, and so extensive for Chuuk and Kosrae, that fiscal balance cannot readily be achieved through expenditure cutting alone, as was the case of the response to the second-step down of the original Compact. In the long-term enhanced revenue effort will be required as the real value of Compact flows decline and as the nation attempts to implement the Sustained Growth Strategy. The FSM needs to reform tax administration and adopt a modern tax regime that will support economic development through the amended Compact period. This is the basis for the ongoing work of the President's Tax Reform Task Force.

1.5.1 Major Principles of Tax Reform

1. The implementation of a new modern nation wide tax regime that provides a powerful means to increase revenue effort in an economically

efficient way that supports the development of the nation and shares the burden of taxation in an equitable way; and

2. A tax system designed to provide sufficient flexibility such that each government in the federation can operate an independent fiscal policy.

1.6 Macroeconomic Policy

42 To conclude this chapter the following set of macroeconomic policies will be adopted:

1. The FSM will take measures to develop and implement the Sustained Growth Strategy (SGS) recommended by the 3rd FSM Economic Summit:
 - a. Upon adoption of this Plan by the Congress of the FSM the President will request the donor community to convene a Consultative Group of donors meeting.
 - b. At the CG meeting a request will be made to the donor community for technical assistance to prepare a reform program consistent with the objectives of the SGS.
 - c. A Mini-Summit will be convened where the SGS will be presented to the FSM for adoption.
2. The FSM will maintain macroeconomic stability through adoption of fiscally responsible policies:
 - a. Implementation of the amended Compact and fiscal adjustment in the medium term will be undertaken through a well-coordinated program of tax reform and expenditure reduction.
 - b. Public expenditures will be targeted at a level to support the needs of the FSM economy in an efficient and effective manner that is consistent with medium term fiscal balance.
 - c. Tax reform will be implemented and based on two principles: (i) tax administration strengthening to establish a modern and efficient administration with a culture conducive to effective revenue collection, and (ii) a tax regime based on modern taxes that will support the development of the nation and implementation of the SGS.
 - d. The FSM will implement a medium term expenditure framework (MTEF) based on sustainable revenue projections.
3. The FSM will maintain a prudential external debt policy based on concessional external borrowing and consistent with the nation's capacity to service debt from local revenues.

2 Private Sector Development

2.1 Private Sector Review

1 This chapter begins with a review of the performance of the private sector in the FSM during the original Compact period from FY1987-2003 with a special focus on the recent period since the 2nd FSM Economic Summit in 1999. Section 3.1.2 outlines the key inter-relationships between macroeconomic management and private sector development. Section 3.1.3 describes characteristics of the factor markets for labor, land and finance in the FSM while also highlighting particular constraints to accelerated private sector growth in the future in the face of declining Compact transfers. Section 3.1.4 describes the environment faced by domestic and foreign investors and the status of the entrepreneurial skill base within the FSM. Section 3.1.5 addresses the impact of trade and tax policies on the private sector's potential for outward-oriented growth. Section 3.2 provides a description of the recommended strategic goals to promote private sector development. Section 3.2 also looks forward to assess the constraints that need to be overcome in order for the FSM to achieve its vision of having a growing, private sector-led economy. Section 3.3 provides the core elements of the strategic planning matrix were the subject of extensive review and modification during the upcoming 3rd FSM Economic Summit.

2.1.1 Description of the Private Sector and Recent Performance

2 Similar to the economies of other Pacific Island nations, the FSM has seen a shift from subsistence production to market-oriented production. Since the outset of foreign influence there has been an influx of traders, planters, whalers, fishermen, and others to take advantage of commercial opportunities. Commercial opportunities have changed dramatically over time. While foreign involvement prevailed initially, the market economy is increasingly driven by Micronesian entrepreneurs and formal sector workers.

3 Since the outset of the Compact of Free Association (Compact) in FY1987, the FSM economy benefited from a large infusion of cash transfers channeled through the national and state governments. The nature of these transfers and the incentives faced by the legislators responsible for appropriating the use of Compact funds—together with limited domestic revenues—had a profound impact on the course of private sector development over the period FY1987-2003. On the positive side, the Compact enabled the income levels of Micronesians to rise and resulted in expansion of the formal economy. On the negative side, the structure and terms of the Compact economic assistance package favored a state-led development strategy that, at least through the first decade of assistance, did not provide an economic environment supportive of outward-oriented and internationally competitive private sector development.

4 The higher income levels supported by Compact funding resulted in substantial changes. Participation of individuals and families in subsistence production declined, while participation in the formal economy increased. Increasing taste and preference for imported foods and other goods resulted in increased consumption of imported goods. These imports were, of course, financed from the cash transfers available to the economy through the Compact, most significantly through growing rising wages of an increasingly large government workforce.

5 The commercial response to increased domestic demand was impressive. The private sector was able to grow at a moderate rate over the whole Compact period despite declines in the real value of Compact funding.

6 Table 1 shows that over the whole period from FY1987-2003, the private sector grew at an average real (inflation-adjusted) rate of 2.9 percent annually. This growth occurred despite the fact that the contribution of government to GDP (essentially wages) was declining over the same period by -0.6 percent annually. The table also shows that the private sector growth was concentrated during the early period from FY1987-1995, indicating a reliance on the expansive fiscal policy funded out of the more generous Compact transfers available to the five governments during that period. Notably, the private sector growth during the most recent period, FY1999-2003, recovered and is again outpacing growth of the government sector.

7 Figure 1 shows the growth performance of the economy as a whole and of the private sector and government annually over the Compact period to-date. Again, the outstanding performance during the early period is evident. Similarly the severe impact of the fiscal adjustment required by the FSM at the time of the second Compact stepdown is also clearly shown. Private sector activity declined five consecutive years from FY1994-1999. As noted in Chapter 1, the FSM governments ramped up expenditures excessively and failed, with only one state excepted, to reserve funds to smooth the adjustment to the Compact's front-loaded funding structure. While the private sector was able to grow over the whole period, the susceptibility to fiscal shock is clearly shown by the poor per-

Table 1 Real Growth Rates by Sector and Compact Period

	Compact Period To-Date FY1987-2003	Early Compact Period FY1987-95	Adjustment Period FY1995-99	Recent Compact Period FY1999-2003
Private Sector	2.9	6.5	-4.6	3.6
Public Enterprises	6.0	15.1	-9.2	4.9
Government	-0.6	1.4	-7.4	2.6
Non-Government Organizations	5.1	2.6	6.2	9.0
All	1.6	3.9	-3.9	2.6

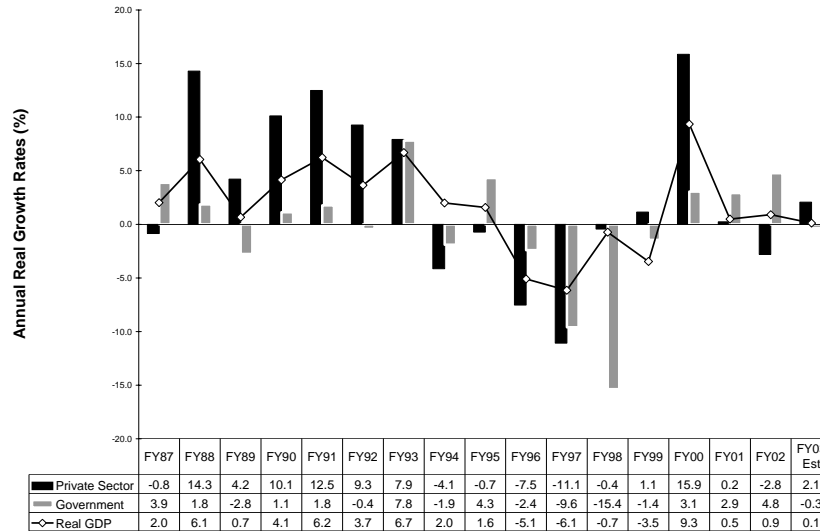


Figure 1 Real Growth Rates

formance during the period from FY1994-1999.

8 Private sector growth was a result of two factors. First, there was a shift of some non-market production to market production in the monetized economy; such transformation is, to a significant degree, a once-off transition wherein activities previously not recorded in the national accounts are now captured. The second category of growth resulted from actual, albeit modest, improvements in the environment for private activity. The growth was predominantly in the production of non-traded goods and services. In the future, growth of the private sector will need to be driven by increases in production in those activities producing competitively traded goods and services. The policy implications of targeting such outward-oriented growth are outlined.

9 The need to grow the productive sectors is compelling. As of 1996 private sector activity was so dominated by non-traded activity that the output from the priority sectors of agriculture, fisheries and tourism amounted to just 5 percent of total GDP. Thus the challenge of growing the private sector—which is just under one-third of the economy—at a rate sufficient to produce jobs and entrepreneurial opportunities is daunting, indeed. Given the fact that the structure of amended Compact assistance will result in declining real transfers over the next 20 years, the FSM cannot rely on an expanding government to support growth.

10 The role of the government in the economy of the FSM has been and continues to be large even relative to other small, Pacific Island nations. The government was the largest sector in the economy from FY1987-2000, supported by large Compact transfers directly to national and state governments. The private sector, which was 27 percent of GDP at the outset of the Compact, was 31 percent of GDP during FY2001-2003 (see Table 2). Government contribution to GDP declined from 39 percent to 28 percent over the same period. The table also shows significant difference across the four states. Notably, Yap made the most progress in reducing the importance of the government and increasing the role of the private sector.

a Policy Developments since the 2nd FSM Economic Summit

11 At the 2nd FSM Economic Summit in 1999 the participants endorsed an approach to promote private sector development strategy by following the five principles outlined below:

- Develop **competitive markets** through a sound macro-economic environment and efficient and competitive for the means of production: land, labor and finance and for product markets, especially exports;
- Develop **efficient transactions** or exchanges in these markets through awareness building and information dissemination on procedures, prices, clear and property rights, enforcement of contractual obligations, and systems for dispute resolution;
- Develop **effective public agencies and administration** to promote good governance in business, provide information and capacity building services, regulate as necessary while streamlining approval processes, minimize government involvement in commercial and service activity through effective public enterprise reform;

Table 2 Structural Change: Government and Private Sector Contribution to GDP

	Early Compact Period avg. FY1987-89		Recent Compact Period avg. FY2001-2003	
	Government	Private Sector	Government	Private Sector
Chuuk	38%	25%	29%	27%
Kosrae	44%	30%	33%	34%
Pohnpei	37%	29%	28%	31%
Yap	35%	23%	21%	37%
FSM	37%	27%	27%	31%

- Provide an **efficient and cost effective infrastructure** to support private sector development through the provision of efficient social services (health and education), and physical infrastructure;
- **Commitment to economic reforms** to build investor confidence.

12 The agreement on principles was augmented by the adoption of a private sector development policy matrix that specified: (i) policy elements, (ii) strategies, (iii) programs and activities, and (iv) responsibilities for implementation. The follow-up actions from the 2nd Summit were extensive in late 1999 and through 2000; in particular, the ADB fielded a Project-Preparatory Technical Assistance (PPTA) team to design the Private Sector Development (PSD) project and program loans. This loan was designed to follow immediately after the completion of the Public Sector Reform Program (PSRP), which focused more on fiscal austerity and public sector downsizing.

13 Consistent with the 2nd FSM Economic Summit outcomes and at the request of the national and state governments, there was a clear need to focus on private sector promotion. Thus the PPTA team utilized the 2nd Summit private sector policy matrix as the guiding document. Unfortunately, the PSD loans were delayed in approval from the targeted start-up in late 2000 to actual project inception in April 2003. A considerable amount of momentum was lost, and in the intervening period there was very little progress made in implementing reforms to promote private sector development.

14 An additional factor leading to general uncertainty with respect to the economic prospects for the nation was the end of guaranteed funding under the original Compact terms and conditions. In effect, the attention of the FSM leadership was focused on the lengthy Compact negotiations extending over a period from 1999-2003. The collective focus on policy reform implementation was diminished throughout that period. The start of the ADB-sponsored Private Sector Development Program in FY2003 is a good sign that reforms to improve the policy regime will be given renewed attention.

2.1.2 Macroeconomic Policy and the Private Sector in the FSM

15 The macroeconomic tools available to FSM policy makers to manage the economy and to adjust to domestic or external shocks are extremely limited. With the use of the US dollar as the official currency and with no domestic debt instruments with which to affect interest rates or monetary aggregates, macroeconomic management in the FSM is virtually limited to fiscal policy.

a The Primacy of Fiscal Policy

16 Not only is the burden of macroeconomic management largely restricted to fiscal policy, but, in practice, the burden of adjustment has been largely focused

on expenditure policy. The fiscal expansion of the early Compact period led to rapid growth of recurrent expenditures, in particular on wages. More recent fiscal adjustments required austerity and were affected predominantly through expenditure cutting, falling heavily on wages, as well.

17 During the original Compact period a large portion of FSM annual revenues fell outside of direct policy control. Compact receipts ranged between 53-65 percent of total annual revenues. These transfers were virtually guaranteed through the “full faith and credit of the US Government” under a Treaty obligation. An additional major source of revenue was from fishing access fee receipts, ranging from 8-13 percent of total annual revenues. These access fees varied largely with fish price and catch factors and are not readily subject to fiscal fine-tuning on an annual basis.

18 Revenue sources that were subject to direct policy control were taxes and non-tax revenues such as user fees and other charges. Tax revenues ranged from 7-20 percent of total annual revenues, increasing as a share of revenues over time with modest policy intervention and economic growth, as well as declining Compact transfers. Non-tax revenues aside from fishing access fees were never large and actually declined as government activities were corporatized. In FY2001-2003 this component of the revenue structure averaged 3% of total annual revenues.

19 Revenue measures have been few and far between, due to weak administration of a tax regime that is little changed from that which was inherited from the Trust Territory Administration at outset of self-government in 1979. Constitutionally inflexible revenue-sharing provisions between the national and state governments also limit the ability of policy makers to implement revenue policies. The nature of the amended Compact economic assistance provisions, declining in real terms over twenty years, implies that there will need to be considerable attention paid to the revenue component of fiscal policy. There are severe implications for private sector development with respect to the nature of revenue reforms that will be implemented over the medium-to-long-term. The strategic planning matrix for private sector development thus highlights the need to address economic efficiency concerns and avoid distortions.

20 Given the structure of the FSM economy and the heavy reliance of policy makers on expenditure policy to adjust to shocks, the impact of such shocks on the government translates directly into impacts on the private sector. In the case of a negative fiscal shock, government expenditure cuts on goods and services tends to bear the brunt of adjustment. In the past, positive fiscal shocks, although few, led to expenditure increases that were skewed toward wages. Perhaps more importantly, the effect of fiscal shocks on the private sector has been magnified where fiscal policy failed to make timely and transparent adjustments.

This has been most pronounced in two fiscal crises in the state of Chuuk and a brief review follows.

b The Impact of Financial Instability on the Private Sector

21 In the states other than Chuuk, when a fiscal adjustment was required, the private sector suffered the indirect, macroeconomic effect of reduced demand in the economy. In Chuuk, the private sector suffered that effect plus the direct effect of a failure of the allotment payments system and a build up of arrears for goods and services already provided. The crisis was compounded by the impact on the banking system. When Chuuk state government withheld employee allotments, the loan portfolio for the two commercial banks operating there was severely affected. Both banks ceased lending to government employees and to businesses that did a significant portion of their business with the government. In 1996, this led to a 70 percent reduction in outstanding loans. In 2000-2001, there was a reduction on the order of 50 percent of total loans. Thus government, by forcibly financing its deficits to maintain cash flow off the backs of employee wages (allotments) forced the private sector into a massive contraction. The recovery from the initial crisis took about three years and the recovery from the most recent crisis is still underway. Strategic goal 1 outlined below is particularly important for the Chuuk state economy given the recent history of instability.

c The Special Need for Efficient and Flexible Markets for Labor, Land and Finance

22 Given the reliance of policy makers on fiscal policy alone, together with the absence of sufficient fiscal reserves (or borrowing capacity) to enable the government to undertake counter-cyclical policies, the private sector can expect little insulation from inevitable shocks to the economy. Thus, even more than would be the case in many of its Pacific Island neighboring countries, the FSM requires substantial flexibility in its factor markets. In particular, without the ability to affect real wages through exchange rate policy, real wages, and even nominal wages need to be flexible in the FSM. Real wages in both the public and private sectors have generally moved in the expected direction—upward in times of economic expansion and downward during recession. However, the relative wage between the public and private sector has moved in the wrong direction as further discussed below. Furthermore, the important ratio of wages in the sectors producing traded goods and services versus wages in the non-traded sectors has almost surely not adjusted to improve the competitiveness of the FSM for the production of traded goods.

23 The financial market in the FSM is relatively market-oriented; however, there is an extreme degree of concentration in the commercial banking sector

and financial sector development has stagnated since the mid-1990s. The banking sector competitiveness issue is addressed in greater detail in chapter 1.

24 Looking forward, it is expected that the banking sector, which has a surplus of loanable funds, will increase lending as a result of two important factors. First, the completion of amended Compact negotiations puts an end to the high degree of uncertainty that constrained lending recently. Macroeconomic stability is well protected and the economy is unlikely to suffer any sustained or large-scale negative shock. The second important factor is that governments will not have the same level of funds available to provide grants for activities that would have otherwise created demand for business loans, and the government will neither be investing in commercial enterprises nor maintaining the level of subsidies earlier provided to public enterprises. This, too, should increase the effective demand for lending from the commercial banks and the FSM Development Bank.

25 The market for land in each state is entirely unrelated to markets in the other states. In all states the market for land is characterized by few transactions, limited market information and no formal mechanisms for public dissemination of market transaction data, and price demands from (often multiple) landowners. As a result of these conditions, together with prevailing cultural factors influencing the perceived value of land, it can be said that transactions are only partially influenced by economic market forces and the potential productive value of land. Distortions and rigidities in land market transactions will be difficult to reduce and change will undoubtedly be gradual. A focus on public education and information dissemination may result in accelerating progress.

2.1.3 Description of Factor Markets in the FSM: Issues and Constraints

a *The Labor Market—Distortions and the Need for Qualitative Improvements*

i Distortions

26 The labor market in the FSM is relatively free from regulatory distortions and institutional rigidities. There are currently no unions in the FSM and no indexation of wage rates (until FY1999 there was no consumer price index). The state and national governments set a “minimum wage” by law, but in all but Pohnpei, this binds only the Government as in each case the legislated minimum is set at the lowest pay level on the civil service pay scale. The private sector minimum wage for Pohnpei is \$1.35, but this rate appears to be non-binding as local employers are not vocal and tend to set entry level wages above that rate. There are two factors, however, that do distort the market for labor in the FSM.

27 The first distorting factor is the high level of public sector wages relative to private sector wages. This is a result of the manner in which Compact transfers

from the US have been appropriated by the national and state governments to fund a large and relatively well-paid government workforce. Just as the booming of the oil and natural gas extraction sector of the Netherlands led to a shift of labor and capital resources to the booming sector and led to widespread decline in competitiveness of the previously well developed manufacturing and services sectors in what has come to be known as the “Dutch Disease” effect. The FSM had a booming government sector from the outset of the Compact in FY1987 through the initial decade of assistance. Not surprisingly, talented workers were attracted to work in government and the wage pressures spilled over, making the FSM less competitive in the production of traded goods for domestic and external markets.

28 The relative wage distortion issue was addressed in the economic Summits with the policy objective of reducing the differential in real wages; however, the differential has actually increased over time. For the FSM as a whole, the average real public sector wage in constant 1998 prices fell from \$8,413 at the outset of the Compact (FY1987-90) to \$8,007 at present (FY2000-03). For the same two periods, average real private sector wages fell from \$4,253 to \$3,844. Thus the differential ratio of average public to private sector wages increased from 1.98:1 to 2.08:1. While the skill and experience base of the employees working in the two sectors are not directly comparable in aggregate, the differential clearly affects both wage demands and the allocation of trained workers.

29 The second labor market-distorting factor is the ease of migration to high wage locations, such as Guam, Commonwealth of the Northern Marianas, Hawaii, and mainland US. This ease of migration, ostensibly limited to migrants to secure employment or to take advantage of educational opportunities, is seen as a valuable right of FSM citizens negotiated as an important part of the original Compact and re-affirmed under the amended Compact.

30 There is no direct policy response proposed to eliminate this market distortion; however, there is a need to ensure that the FSM as a nation minimizes the negative impact of emigration on the FSM society and economy while maximizing the benefits from its special relationship with the United States. FSM will need to devise a human resource development strategy and develop related policies to gain the best advantage from the access of Micronesians to these labor markets. Remittances are not yet an important macroeconomic factor, but there is potential for remittances to grow and sustain FSM income levels even as amended Compact flows decline over time.

ii Improving Human Resource Development Linkages to Labor Market Requirements

31 Lack of skilled labor and staff in areas of potential comparative advantage for private sector production will limit the extent to which the private sector can

expand its activities. While government attracted much of the better-qualified labor pool when it was expanding, say through FY1996, competition with the private sector for labor resources has been negligible in the period since then. However, labor scarcity is likely still a constraint for private sector expansion due to a lack of (or inappropriateness of) vocational and training courses. There is no effective training for the agriculture sector. Training for tourism is more available, especially in Pohnpei; however, operators comment on the lack of high-quality, skill specific training of relevance for their tourism operations. For the fisheries sector, the National Government has invested heavily through the College of Micronesia-FSM to establish a Marine Training capacity, but results to-date remain disappointing.

32 In general there is limited and probably declining access to vocational and technical training in the FSM. Perhaps most importantly, there is need to improve the coordination and information flow between the private sector and the training institutions.

b Land in the FSM—the Challenge to Bring More Land into Productive Use

i Land Tenure System Constraints on Economic Use

33 Land is managed under a complex mix of modern and traditional systems. However, the majority of transactions in commercially important areas and for commercial ventures in other areas transpire with survey, titling and documentation completed under modern land management institutions. Chuuk is an exception, due to long-standing unresolved disputes between individuals and clan groups. Disputes also arise periodically in the other states and often take an inordinately long period of time to resolve.

34 Land matters are subject to state laws and not national law by the FSM Constitution. Improvements in mortgage laws, leasehold mortgages, and land management in general require actions within each state. The PSD project aims to improve all of these, but only Chuuk State has taken action to-date, by passing leasehold mortgage law but not yet promulgating regulations to implement the law.

35 The limited land area in the FSM, growing population, and increasing integration with the market economy is placing ever increasing pressure on the traditions of ownership, and needs for improved security of rights and land management. The evolution of ownership patterns toward individual titles, while varying by State, is advanced in the FSM compared to many Pacific countries. In Kosrae, Chuuk and Yap land rights may be legally sold to FSM citizens. In Pohnpei land can only be sold to Pohnpeians. The FSM Constitutions forbids the ownership of land by foreigners, but they are permitted to lease land. Multiple ownership of land still exists throughout the FSM—requiring the consensus

of families, clans and traditional leaders for leases and development. This may or may not present a constraint to development depending on the ability to achieve consensus. Specific problems are as outlined below:

- Limitations in systems to support individual titles: A concern is the suitability of systems needed to support evolving land tenure based on individual titles and rights. Effective institutions and systems are needed for land titling and registration, land purchase and leasing, mortgaging and increasing public understanding and awareness. Weak systems have resulted in: (i) constraints in accessing government and private land for productive and investment purposes; (ii) barriers to new business entry; (iii) obstacles to long-term, land or lease-secured lending; and (iv) distorted allocation and of land use patterns. The extent to which land can be leveraged and mortgaged is important for increasing productive activity and incomes. Land assets that become locked outside the modern market economy cannot be leveraged or redeployed for production. The overall effect is that many landowners are asset rich and income poor.
- Slow titling and registration: the FSM uses a compulsory, systematic adjudication and registration system aiming for a complete survey of FSM lands and registration of title. A number of factors contribute to a failure to meet survey and titling targets. Land registers are therefore incomplete, out-of-date, and in some cases in a state of deterioration.
- Inefficient land markets: As sales require and result in individual titles, the ability to understand and manage land use and transfer processes from owner and buyer perspectives is important. This includes how to arrange finance and lease land or to sell it for a fair price. Lack of information on prices paid and land values can confound owners and buyers. There is no public (or private) dissemination of land transaction information.
- Restrictions on leases: Restrictions on the length of leases may give insufficient time for investors to realize an adequate or competitive return on an investment. The lessors often do not understand the nature of leases and the different ways in which rents can be charged to ensure the intended use of the land, provide a fair income to the landlord, and security of tenure for the lessee. Lease conditions may not be in the best interests of either party.
- Limitations on the use of secured loans raising lending risks: Currently, only the FSM Development Bank, and housing authorities are permitted to directly secure loans through mortgages. Foreign commercial banks are not permitted to own land and therefore cannot arrange mortgage secured lending. The alternative, Deeds of Trust, are often poorly understood by borrowers and considered a second best by banks. This limits the options on loan foreclosures and therefore increases the risks from

poor loan management and default, and limits the access to commercial finance for development.

c *The Financial Sector—the Need to Improve the Risk and Cost of Lending to the Private Sector*

i Description of the Commercial Banking Sector and Reforms To-Date

36 The two commercial banks, the Bank of Guam and the Bank of the FSM, are regulated by the US Federal Deposit Insurance Corporation. This regulation carries with it the benefit of deposit guarantees up to \$100,000 per account, as well as a high degree of confidence in the banking system in general.

37 The FSM Banking Commission also provides oversight through both off-site and on-site supervision. Banking statistics are well managed and compliance in reporting is ensured by active oversight. The banking statistics are compiled and provided to the government on a monthly and quarterly basis. The Banking Survey (a summary of gathered statistics) is published quarterly in the newspaper, providing for considerable transparency.

38 The two commercial banks are well capitalized. The commercial banking system has adequate funds to expand lending, but there has been a decline in lending for both business and consumer loans.

39 The effects of the 2000-2001 Chuuk financial crisis were severe, but have been largely reversed through payments from the state. The practice of public sector employees repaying loans through payroll deductions (allotments) has been negatively impacted by Chuuk State's use of such amounts to finance deficits (in 1995-96 and again in 2001). Some bad loans persist as Chuuk and Pohnpei State governments both allowed employees to cancel allotment agreements for loans. While neither Bank faced a solvency threat, there has been an impact through reduced access to credit for a broad category of government employees, though the allotment practice is still utilized. The impact on balance sheets spilled over into reducing credit to enterprises.

40 The Bank of Guam is a branch of a US-based bank while the Bank of FSM has well-established correspondence bank relations that make foreign exchange transactions smooth and relatively well priced. Other services of relevance to the private sector, such as wire transfers, letters of credit and trade credits, are available, though at relatively high cost.

41 The Bank of the FSM is owned by the national and state governments (aggregate ownership of over 90%), however, with multi-government ownership and sound governance structures, it operates without significant interference and

on commercial principles. Efforts to sell government shares of the Bank of the FSM have not been active over past five years.

42 Since 1997 deposit and lending rates have been effectively determined by market forces, at least to the extent limited competition allows. The only remaining lending rate ceiling is a 24% per annum limit which is non-binding for commercial lenders. Real interest rates on deposits have been near zero or weakly positive. Rates on CDs have been in range of 2-3%. Interest rate spreads are moderately high and have increased marginally over past two years. Deposit rates generally track US markets, however loan rates are higher reflecting increased risk and limited competition. Perceived economy-wide risks may be reduced with the amended Compact provisions now secured and well understood by banking officials.

ii The Role of the FSM Development Bank

43 The FSM Development Bank has a sound record and, unlike many PDMC institutions, has been managed prudently for nearly two decades. Problem loans are concentrated in a portion of the portfolio that was directed (under Compact provisions for an Investment Development Fund) by Government officials and implemented by the Bank. Those loans occurred mostly in the early 1990s and are fully provisioned and separately accounted for on the balance sheet.

44 The FSM Development Bank provides credit to the commercial sector; however, it also has not been successful in extending credit to small enterprises or to the rural and outer island populations. The FSM Development Bank is encouraged to lend to small businesses and specific sectors from time to time; however, political interference is negligible. The Bank is the focus of one component of the ongoing ADB-financed PSD project.

2.1.4 Private Investment in the FSM

a The Policy Regime and Incentives Facing Investors

45 The potential for private sector development sufficient to support a growing economy during the amended Compact period will be reliant upon securing an improved environment for domestic and foreign investment in the FSM. As noted above, there is considerable variability across the four states on policy and infrastructure factors affecting investment decisions. An important consideration for domestic and foreign investors in deciding whether or not to undertake a potential investment is the regulatory environment and how this will affect the ability to realize an acceptable return. It can be said that the policy regime and the environment for investment has been slowly and consistently improving over time. A number of issues are outlined below:

- Business registration and corporate laws are clearly legislated and business registers are generally well administered.
- Land laws are at the state level and are clearly legislated. Delays in dispute resolution in land courts remain a concern.
- Prior to 2005, there was no formal bankruptcy law, although insolvencies of several (public and private) corporations were relatively well administered under court supervision.
- There is generally good respect for rule of law, though enforcement is limited by capacity constraints and funding. Citizens and enterprises have ready access to the courts and to legal counsel. Foreign individuals and corporations have guaranteed access to the National Court, which is considered more efficient and consistent in its handling of cases.
- The lack of regulations surrounding secured transactions and bankruptcy are disincentives for potential investors and borrowers. For subsistence producers and artisanal fishermen and others starting or expanding small commercial businesses, their ability to understand and follow regulations will affect their decision on whether to become involved in commercial activity. Unclear, protracted reviews or excessive regulation and control will discourage commercial activity and private sector development. Conversely, regulations are needed that control unsustainable and unscrupulous practices. A balance is needed that enables sound private sector development while controlling counterproductive activity in a way that does not result in excessive government and bureaucratic interference. The FSM and its States have a range of laws and regulations for commercial activity specified in the FSM and State Codes that were developed during the Trust Territory period or early in the Compact period. The recent emphasis on an economic strategy that centers on a private sector-led growth requires assessment of the adequacy and balance of the regulatory and enabling environment that affects private sector activity.
- Variable infrastructure and transport limitations undermine the potential for private sector growth. All business, domestic and foreign, needs access to basic economic infrastructure. Despite the considerable public investment throughout the FSM, the state of completion and durability of infrastructure is still variable. This includes the adequacy of roads, access to telecommunications, electricity, water and other utilities essential for most business operations, especially those requiring cost-effective movement of products to markets, cleaning, processing, refrigeration, and storage. In some cases, most notably in Chuuk State, thinly spread infrastructure investment has resulted in the lack of concentration needed to achieve the advantages of economies of scale from industry or business clusters. This is partly due to the lack of formalized land-use zones to

encourage easily serviced and efficient industry clusters (e.g. tourism, fisheries, small-scale manufacturing or processing) but also due to policies that have attempted to provide equal investment to as many islands as possible. While some infrastructure is inadequate in certain states (e.g. roads), the scale of other infrastructure, especially fish bases, is excessive in size and uneconomic. This situation has been compounded by the inefficient operation or subsidy dependency of State-owned or managed infrastructure (e.g. fish bases, etc.).

- Transport constraints and high fuel costs: Difficult problem facing potential investors include transport bottlenecks, especially airlines, high costs, low or inconsistent frequency, and poor handling (i.e. for sashimi export) reducing competitiveness in fisheries, tourism and agriculture. On the other hand, the services that are provided are in some cases underutilized, and the airlines claim that it is hard to justify additional flights. A clearer understanding of the airline situation is badly needed. High fuel and energy production costs further increase downstream production costs and reduce international competitiveness.
- There are no active price controls, though Pohnpei and Kosrae maintain price-monitoring mechanisms.
- Foreign investment laws were reformed as part of the reform program in 1997-98 to remove overlapping jurisdiction at the national and state levels. Implementation of the reformed laws through regulations reduced the intended effect and left a large degree of bureaucratic discretion and lengthy case-by-case reviews for many applicants. Yap is an exception, having implemented a simple business licensing system that treats domestic and foreign businesses alike, consistent with best practice among PDMCs. Apart from simple municipal level licensing, there are no restrictions on enterprises of any size.
- National monopoly rights are granted to the FSM Telecommunications Corp. and state-owned public utility corporations hold power distribution monopolies. There are no monopolies granted through import or export licensing schemes.
- Privatization has proceeded slowly. The only direct private participation in infrastructure services is the contract to provide sanitation removal and solid waste management in Pohnpei.

b Business Development Services and Entrepreneurship Training

46 There has been a wide array of business support and outreach programs. National and state institutions of direct relevance to business development include: The Department of Economic Affairs (FSM), FSM DB (credit), JTPA (FSM and State), T3 Program (FSM and State), COM (FSM and State), Com-

merce and Industry agencies (State), small business advisory and entrepreneur development centers (State), Agriculture agencies (FSM and State), Marine Resources (FSM and State), Visitors Bureaus (FSM and State). Private sector and non-government institutions that support business development include Chambers of Commerce (State), Commercial banks, Community Action Programs (State), PATS and the Micronesian Seminar. The type and nature of services, technical support, and training varies considerably among each of these institutions and agencies, but combined they represent a wide array of potential support. A project that has played a central role in promoting FSM business development in recent years is MEDC supported by UNDP/UNIDO. The project has provided technical assistance, institutional strengthening and direct business training and advisory services to the four States and established the overall direction for business support services. Future coordination among these programs will be important to improve the delivery and efficiency of funds use and build on lessons learned.

47 Entrepreneurial training was provided under UNDP sponsorship through the 1990s and this program was meant to be continued and extended under PSD project. The delay in initiating the PSD has resulted in a lack of clarity on next steps. There is a widely perceived need for skilled specialist staff to train counterparts and ensure participant training quality. Partnerships with the University of Guam-centered, US Commerce Department Business Development Centers has provided significant funding for staff and facilities. Outcomes of training to-date have not been demonstrated by significant growth in small enterprise output or employment and there has been limited success in improving access to credit for training graduates.

48 The University of Hawaii-based business development program has proposed a joint program with UNDP and state governments to target horizontal expansion, especially into export activities, of existing successful entrepreneurs. The approach is designed to address the observed fact that the failure rate of new enterprises is very high in the FSM, as elsewhere, and there is merit to working with entrepreneurs who have proven their capabilities in management, marketing and a wide range of skills required to grow their businesses (for the domestic market).

c Foreign Investment: Regulatory and Promotion Issues

49 All four states exhibit some degree of protective attitudes toward foreign investment. Past policies and regulations for foreign investment applications required lengthy, case-by-case review, and lacked transparency. This approach toward foreign investment arose from the prevailing desire to protect local jobs, business opportunities, incomes, and resources, but limits the attractiveness of the FSM as an investment location.

50 The feelings within communities toward protecting local interests and opportunities will not disappear easily. Quality investors, who are bringing their own capital, will not be attracted to an environment where they face an uneven playing field, or worse, a non-transparent risk of discretionary bureaucratic intervention. As government financing diminishes, the FSM must increasingly compete for serious foreign investors who are looking for the best business environments that will ensure an adequate and relatively low-risk return on their investments. The mutual benefits from quality investment, for the FSM and for the investor, must be recognized if the FSM is not to lose quality investors to more competitive and investor-friendly economies elsewhere in the Pacific region.

51 Foreign investment approvals occur with very limited frequency due to limited interest. Complaints about the length and complexity of the process have been reduced, but still exist.

2.1.5 Trade, Tariff and Tax Policy in the FSM

a The Need for an Outward-Oriented Foreign Trade Regime

52 One fortunate aspect of the FSM's reliance in the past on Compact transfers is that the tax system was not required to yield high revenue levels. Most other Pacific Island nations have much higher tax effort, measured by revenues as a share of GDP, and raised major portions of their taxes at the border through customs and duties. This led those countries to have tax systems which distorted economic incentives in favor of domestic production of non-traded goods or of traded goods behind high protective tariff barriers.

53 In the FSM average tariff collection as a share of imports (c.i.f.) is roughly 5%. Rates are set at 3, 5, 25 and 100% but distortions are minimal. The 25% rate is, in effect, applied to excise-type products (e.g. alcohol, tobacco, perfume). The 100% rate protects locally produced bar detergent but is irrelevant, since the higher rate is not applied to preferred substitutes (powder and liquid detergents). Thus dispersion is very narrow, in actual effect. There are no quantitative restrictions on imports or exports and no significant non-tariff barriers to trade in goods or services.

54 In the future, as the requirement that the tax effort increase, it is essential that the relative neutrality of the tax system not be lost. If the FSM were to ramp up existing import tax rates, the disincentives for internationally competitive production would increase.

b *Regional Trade Agreements and the Role of WTO Accession in Ensuring Policy Coherence*

55 The FSM is a party to regional trade agreements (PICTA and PACER) that, over the next ten years if the FSM Congress approves, will have the effect of forcing the FSM to adopt an outward-oriented, internationally competitive tax regime. Should the FSM decide to pursue accession to the World Trade Organization (WTO), it is likely its current tax regime would be seen as favorable and generally acceptable. While other Pacific nations will need to reduce their reliance on border taxes as a result of the regional agreements (and certainly for WTO accession), the FSM will likely just need to ensure that its reliance on border taxes stays at the current low level. There would be other benefits to private sector development in the FSM to have the FSM government commit itself to a broad range of economic management principles embodied in the membership agreements to the regional agreements and the WTO.

c *The Need for an Efficient and Effective Modern Tax Regime in the FSM*

56 As noted above, the FSM will surely have to increase total tax effort (revenues as a share of GDP) over the long-term. If the tax rates under the current system, which was initially designed to be a minor local revenue component of the Trust Territory Administration, were to be simply ramped up, the impact on private sector development would be disproportionately negative. While private sector actors will likely resist tax increases on principle, there will come a time, given the declining real value of Compact transfers, when it is clear to all parties that fiscal adjustment cannot only focus on expenditure-cutting. The distortions in the existing system are well-known to the private sector. The most obvious problem is with the Gross Revenue Tax (GRT), which has a cascading effect (taxes upon taxes). The GRT is also disdained as it taxes revenues of even unprofitable firms. This latter is made the worse by the perception that it is meant to be a tax on business (income) when in effect it operates as a simple sales tax. The import tax has distorting effects as well, although in a manner which is not so obvious to domestic producers. In the end, the existing distortions are relatively insignificant simply because the rates are so low. It is important that the distortions be addressed through system-wide reform with a focus on consistency with an outward-oriented, private sector-led economy.

2.2 Strategic Goals, Policies and Outcomes

2.2.1 Strategic Goal 1: Create a sound economic policy environment to support outward-oriented private sector-led growth.

a Analysis and Justification

57 The FSM has placed sound economic management at the top of its reform agenda since the 1st FSM Economic Summit in 1995. Progress has been made; however, the nature of the global economy, taken together with the new realities the FSM faces under the amended Compact calls for a re-doubling of effort to improve the economic policy environment in a coherent and comprehensive manner. Private sector development can only occur on the basis of investment and hiring decisions of domestic and foreign-owned enterprises. Incentives matter, thus this strategic goal is about improving incentives for the private sector.

58 Domestic investors and the banking institutions are now fully aware of the terms of the amended Compact and they will be looking to ensure that the degree of relative economic stability provided for by that 20-year package is consolidated through the adoption—and, most importantly, the implementation—of a sound economic strategy to support sustained economic growth.

59 The expected result of successfully achieving strategic goal 1 is improved economic incentives that will lead to increased investment and growing employment levels in the private sector. Existing and potential domestic investors will, presumably, be the first to respond to improvements. Experience has shown that foreign investors tend to require a significant period of policy reform “coherence” before they become sufficiently confident that improvement will be long-lasting. It may be the case that recent policy reform stagnation (and even some back-tracking) has made domestic investors somewhat skeptical that FSM policy makers will, in fact, follow a coherent economic strategy.

60 For the private sector to confidently invest and create new jobs, their perceptions about governance need to be effectively addressed. Through an improved public-private dialogue four positive outcomes can be achieved: (i) private sector perceptions can be comprehensively addressed; (ii) misperceptions and misinformation can be corrected; (iii) information on actual improvements and policy objectives can be shared; and (iv) emerging issues can be addressed collaboratively.

b Economic Policy Implications

61 Achievement of this strategic goal calls for attention to four policy areas:

- Maintain financial stability.
- Improve fiscal accountability, transparency and performance management systems.

- Establish an effective system to disseminate information and promote public-private sector dialogue.
- Adopt trade and tax policies consistent with improving the international competitiveness of FSM-based producers.

62 Policies related to the size, cost and scope of government activities could also be included under this strategic goal, but instead have been addressed separately under strategic goal 4 below.

c Critical Issues for Implementation

63 None of the identified policy areas are new; however, the leadership of the national and state governments must find a way to re-establish momentum for reform that has diminished since the reform period following the 1st FSM Economic Summit.

64 A suggested remedy to address this issue is the adoption of a succinct economic vision statement at the 3rd FSM Economic Summit and, more importantly, the establishment of a policy-monitoring matrix to demonstrate commitment and—over time—to demonstrate progress. While some of the policy monitoring will occur as a direct result of implementation of the fiscal procedures of the amended Compact, the FSM should consider a monitoring mechanism that is closer to home and that includes private sector and NGO participation on a periodic basis (perhaps semi-annually, in conjunction with regular leadership meetings).

65 With respect to the financial stability policy area, the major concern is, of course, fiscal policy. It is essential that the FSM governments proceed with current plans to adopt a new financial management information system (FMIS). At the present time, the lack of reliable and timely information on the fiscal position of any of the five governments is a constraint to sound fiscal policy development. Similarly, to improve accountability and transparency, the new FMIS should be augmented by improved accounting standards and performance, greater resources devoted to audit and compliance, improved response to audit findings, and improved dissemination of results. All of these have been identified under an accountability improvement project (AIP) and should be funded adequately.

d Outcome Measures and Justification

66 Achievement of strategic goal 1 may be measured by a growing economy and increased employment; however, it is preferred to focus on a narrower set of outcome measures that are more closely and more directly related to the strategic goal. While it is difficult to measure achievement of the goal directly, five measures are identified below. Each of these can be measured using existing

data collection and analysis systems. For each there is data for the baseline year (FY2003). A few additional measures are identified for possible future consideration; however, they cannot currently be measured using existing data collection systems.

- Fiscal stability is maintained
[fiscal balance as % of GDP for each government and consolidated]
- External debt remains at prudent levels
[(a) total external debt as % of GDP, (b) debt service as % of total export of goods and services]
- Tax policy does not discourage internationally competitive production
[(a) average effective tariff rate on imports, (b) import taxes as % of total taxes]
- Export production increases
[\$ value of exports]
- Tourism sector grows
[# of tourist arrivals]

67 Additional outcome measures that should be considered, but that cannot be adopted at the present time due to inadequate data systems, include:

- Total investment as % of GDP
- Tourist expenditures (\$) and tourism value-added as % of GDP
- Business confidence rising (measured through quarterly or semi-annual business confidence sample survey)

2.2.2 Strategic Goal 2: Improve the competitiveness of the factors of production in the FSM to promote private sector development.

a Analysis and Justification

68 There are significant distortions in the markets for labor, land and finance in the FSM. Many of these distortions are long-standing and cannot be readily influenced by feasible policy measures. This makes it all the more important that policy measures that can be plausibly implemented be given priority attention in order to progressively move the FSM economy forward. Small, incremental improvements in the markets, as called for below, can add up to significant gains in competitiveness over time.

69 Some actions called for may suffer from yielding limited benefits—notably where it is difficult to determine which constraints are binding. For example, it may be that improvement of the efficiency of adjudication of land disputes does

not immediately result in significant amounts of land being brought into directly productive activities. Other constraints may persist. However, this should not be seen as a reason to forestall action on the numerous pieces of the reform agenda. The approach recommended is to make as many improvements as possible, knowing that benefits may be forthcoming only over time, when other complementary reforms are implemented and as the economy as a whole becomes characterized by more market-oriented behavior.

70 The policy issues are addressed separately for three factors of production.

b Economic Policy Implications

i Labor Market Policies

71 To address the distortions caused by the “Dutch Disease” effect that have caused public sector wages to be high relative to both productivity and to private sector wages, it will be necessary to:

- Avoid labor market restrictions such as minimum wages.
- Resolve alien labor recruitment and retention issues to ensure access to sufficiently skilled labor for FSM enterprises.
- Encourage wage restraint in the public sector.

72 To address the distortions caused by the ease of migration to high wage locations, such as Guam, Commonwealth of the Northern Marianas, Hawaii, and mainland US, it will be necessary to:

- Reduce the “push” factors leading to emigration of productive workers, especially by improving living standards in general and health and education services in particular.
- Reduce the negative impact of Micronesian emigrants in their new communities, especially through improved orientation programs and screening (health and character) of potential migrants.
- Improve the likelihood of success of Micronesian emigrants through targeted human resource development (training), regulation of external labor recruitment programs, and increased overall academic standards.
- Introduce programs to encourage remittances and return of skilled Micronesian workers and entrepreneurs.

ii Land Market Policies

73 While there are a wide range of proposed project and program activities to address land distortions and improve the economic use of land in the FSM, the policy implications can be limited to two items:

- Improve the effectiveness and public outreach of institutions that support an efficient market for land sales and leases.
- Facilitate the use of land as collateral for commercial lending.

74 In addition, consideration of Constitutional reform is proposed to address restrictions on sales of land (Pohnpei), and on transitory (10 year time-limited) land ownership by foreign banking institutions to affect mortgage foreclosure to recover secured debts.

iii Financial Market Policies

75 To support financial sector deepening and to better meet the needs of an outward-oriented private sector, three policies are highlighted:

- Reduce the risks of bank lending to domestic businesses.
- Reduce transaction costs for banks and businesses in the event of loan default or business insolvency.
- Expand access to bank financial services and products to a broader range of enterprises.

c Critical Issues for Implementation

76 Many of the policy issues outlined above are being implemented as part of the PSD project. However, given the delay between design (1999-2000) and the initiation of the project (2003), there is a pressing need for a rejuvenation of effort to implement the PSD project. There is also a need to highlight the policy objectives more clearly and to share them more widely, especially with private sector advocates in the four states.

77 The use of the private sector development grant under the amended Compact has been substantially focused in FY2004 on sectoral development activities (agriculture, fisheries and tourism). While spending in these areas is certainly appropriate, it will be necessary to identify the more “policy-based” objectives that require funding to implement and seek to get them prioritized for funding under the PSD sector grant in FY2005 and beyond.

d Outcome Measures and Justification

78 In the interest of simplicity and ease of monitoring it is proposed that there be only one or two outcome measures to monitor achievement of strategic goal 3 for each of the three factors of production. Over time it may be beneficial to expand the set of outcome measures to highlight these areas.

50 *FSM Strategic Development Plan*

i Labor

- Private sector employment growth
[(a) # of private sector employees, (b) \$ value of private sector wages]
- Reduced distortion in labor market due to relative wage levels in public sector
[ratio of average public and private sector wages]

ii Land

- Increased lending as a result of improved use of land as collateral
[\$ value of leasehold/mortgage secured lending]

iii Financial Sector

- Increased lending of mobilized savings for business investment
[(a) ratio of loans to deposits, (b) total commercial lending as % of GDP]

79 Additional outcome measures that should be considered, but that cannot be adopted at the present time due to inadequate data systems, include:

- Ratio of public and private sector wages categorized by corresponding skill levels.
- Total number and value (\$) of registered land sale and lease transactions.
- Total number of secured transaction on active register and value (\$) of security registered.

2.2.3 Strategic Goal 3: Improve the environment for direct investment and expand entrepreneurial and business development support services.

a Analysis and Justification

80 An often-noted characteristic of the FSM private sector is a lack of entrepreneurial talent and a tendency for successful businesses to engage in a wide variety of endeavors through horizontal expansion. As noted above, there have been many project activities to address the development of entrepreneurial skills and the delivery of business development services. While not all of these attempts have been successful, there is a cumulative effect of support in this area that is undoubtedly positive.

b Economic Policy Implications

81 The broad policies required to achieve this goal are quite limited. The activities and outputs associated with this strategic goal are outlined in detail in the strategic matrix in Section 3.

- Improve the corporate regulatory environment.
- Revise foreign investment laws and regulations to improve attractiveness.
- Government support at the level of private enterprises should be limited to facilitation, coordination, information dissemination, and broad-based advisory and training services (and not on subsidized finance).
- Support for entrepreneurial development and export promotion should not be limited to new entrepreneurs or to small and micro-enterprises.

c Critical Issues for Implementation

82 The FSM needs to coordinate the ongoing activities under this strategic goal; there are now numerous players and potential for inefficiencies. The US Commerce Department's program, based at the University of Guam but now active in all four states, provides significant and welcome resources and needs to be complemented through activities of the government, the ADB, UNDP and the University of Hawaii's business development program. The 3rd FSM Economic Summit provided an opportunity for the players to meet and clarify roles and objectives.

d Outcome Measures and Justification

83 At the present time the statistical collection system can only provide a rough proxy indicators for achievement of the foreign investment component of this strategic goal and there are no readily available indicators for the entrepreneurship and business development service component.

- Increased domestic and foreign investment
[(a) # of existing domestic and foreign investor enterprises, (b) gross turnover of existing domestic and foreign investor enterprises]

84 It will be necessary to coordinate with the providers of support in this area to develop a small number of feasible outcome measures, these may include:

- Foreign Direct Investment (\$)
- Total number and value (\$) of commercial bank and FSMDB lending to enterprises (aggregated by annual turnover and/or employment level).
- Number and value (\$) of business support services provided to the private sector (measured by fee collection where service fees are charged).

2.2.4 Strategic Goal 4: Reduce the direct role of government in the economy.

a Analysis and Justification

85 The government has been the dominant force in the FSM economy for at least four decades and it is essential, for the sake of stability, that the government remains an important force for the foreseeable future. What is most important is that the long-standing rhetorical policy of the FSM to promote private sector development, be put into effect with a sense of purpose. The areas of greatest concern with respect to impact on private sector economic incentives are two-fold: first, government must avoid the past tendency to spend excessively on wages to the detriment of other government responsibilities; and second, government involvement in commercial activities, while undertaken for ostensibly positive social purposes, has proven to be detrimental to the fiscal position of the governments and to the development of those sectors in which direct intervention was greatest. Put in simple terms, the role of government must change from direct intervention to a facilitation role in support of private sector development.

b Economic Policy Implications

86 Achievement of this strategic goals calls for attention to three policy areas:

- Maintain wage discipline in the public sector (including public enterprises).
- Eliminate new investments in public enterprises and eventually eliminate subsidies to commercial public enterprises.
- Pursue opportunities to privatize or otherwise transform existing public enterprises.

c Critical Issues for Implementation

87 Similar to the situation described earlier, the economic policies to achieve strategic goal 4 are not new. A greater degree of transparency and public dissemination of policy monitoring may assist policy makers to implement policies (or to resist taking actions contrary to policies) by making the public and key private sector stakeholders more aware of the overall economic management strategy and the linkages to long-term private sector development.

d Outcome Measures and Justification

88 In order to measure achievement of strategic goal 4, five outcome measures are proposed:

- Government recurrent expenditures decline in importance [operating expenditures as % of GDP]

- Government wage bill growth is restrained
[wage bill as % of operating expenditures]
- Subsidies and transfers to public enterprises decline
[subsidies and transfers as % of government expenditures]
- Public Enterprises decline in importance
[public enterprise value-added as % of GDP]
- Private sector increases in importance
[private sector value-added as % of GDP]

2.2.5 Strategic Goal 5: Provide efficient and cost-effective economic infrastructure to support competitive private sector development.

a Analysis and Justification

89 The FSM economy suffers from all of the constraints and vulnerabilities common to small island economies, including, distance from supply and product markets, high transportation costs, natural disasters, small and fragmented domestic market size, etc. However, the economic infrastructure in the state centers, Chuuk excepted, is relatively well developed. The private sector has demonstrated its willingness and ability to pay for infrastructure services, but it is important to ensure that the costs they face for roads, ports, water and power are kept as low as possible to support competitiveness.

90 It is imperative that the existing public infrastructure supporting economic development be managed more efficiently and that future public investment decisions be more significantly influenced by economic signals such as market demand, willingness-to-pay, and private sector investment interest.

b Economic Implications

- Dedicate at least 30 percent of amended Compact sector grants to infrastructure development (and maintenance).
- Establish effective infrastructure plan implementation council (IPIC) as outlined in the IDP.

c Critical Issues for Implementation

91 Given the nature of the sector grant funding under the amended Compact, the FSM should be able to reach the 30 percent target for spending on the infrastructure sector. This level of funding, together with all other donor financed projects will still only fund a fraction of identified infrastructure needs. Still, implementation will require governments to avoid ramping up real expenditure levels on operations that may be funded out of Compact sector funds.

d Outcome Measures and Justification

92 In order to measure achievement of strategic goal 5, three outcome measures are proposed:

- Public investment remains adequate
[public investment as % of total government expenditures]
- Expenditure on infrastructure maintenance increases
[value (\$) of maintenance expenditures]
- Utilities price and collect charges reflecting capital and current costs of production
[cost recovery of utilities as % of total cost of production]

93 An additional outcome measure that should be considered, but that cannot be adopted at the present time due to inadequate data systems, is:

- Average cost of electricity for commercial users compared to Pacific region benchmark (%)

3 Agriculture

3.1 Agriculture Sector Review

3.1.1 Introduction

1 Of FSM's population of 107,000, an estimated 80 percent have subsistence or semi-subsistence livelihoods. All families living outside more urbanized areas are engaged in land-based food production of some kind. While agriculture is not a major part of the economy in terms of export receipts, it nevertheless provides a livelihood and employment to most of the population. Income derived from subsistence activities amounted to 31.5 percent of aggregate household income in 1998.¹ Gross domestic product (GDP) for agriculture, hunting and forestry was estimated at \$30.3 million per year or 17 percent of total GDP in 1998². Exports in 2002 were valued at \$1.43 million, down from \$1.62 million in 1994.

2 Though agriculture remains important to the economy, production is much lower today than in past times. Recent policies have tended to favor commercial development of agriculture, and have failed to account sufficiently for the subsistence and semi-subsistence tradition and its inherent characteristics. The vision for the sector has been inconsistent.

3 Over the years, agriculture's socio-cultural role as a safety net for the disadvantaged has greatly diminished. Inequality of income and the incidence of families with incomes below the poverty line are among the highest in the Pacific region.³ The poorest quintile of households, most of whom are engaged in subsistence agriculture, receives just 3.6 percent of household income, while the highest receive 55.5 percent.⁴ The poorest households are increasing in number, and they are living in conditions of hardship, a situation that can no longer be ignored.

4 Traditional subsistence foods have been overwhelmingly replaced by imported foods (\$28.2 million in 2002). Traditional foods are regarded as inferior ("starch foods"), and are not fully recognized for their economic or nutritional value. Support services have not targeted traditional agriculture. And most young people want to escape agriculture, preferring wage employment or migration.

¹ Household Income & Expenditure Survey. FSM Dept. of Statistics. 1998

² New GDP data not available as at November, 2004.

³ Poverty incidence is worse in only PNG and Timor Leste.

⁴ ADB TA 6047-REG: National Poverty Reductions Strategies for PDMCs. Jan 2004

5 Commercial agriculture has had some successes—especially in niche export markets, e.g., kava (sakau), betel nut, cooked breadfruit, and bottled processed noni. The common feature of these products is that their markets were developed and are operated entirely by the private sector, with government support confined to quarantine services. This should be the model for the future. Products where government has been involved or is active have either largely failed (pepper, livestock) or continue to require subsidies (copra).

6 There is scope for import substitution on a limited scale. In 2002, food imports totaled \$28.2m of which about \$1.6m were for fruit and vegetables that could be produced locally.

7 In sum:

- Government expenditure in the sector is largely ineffective;
- Government expenditure can be better targeted at traditional crop production;
- non-government groups can provide cost-effective support to traditional farmers;
- more people than 10 years ago are relying on subsistence agriculture for employment;
- the integration of agriculture and culture must be recognized by sector planners;
- traditional farmers place higher priority on social/cultural obligations than on agriculture;
- traditional farmers prefer crops that allow flexibility to meet social/cultural obligations while still managing their commercial risk;
- land resources are adequate in Kosrae, Pohnpei and Yap but under pressure in Chuuk;
- niche markets exist for traditional crops;
- opportunities exist for local production of some imported fruit and vegetables; and
- some local foods can address serious dietary deficiencies.

8 Kosrae

- Traditionally there has been strong government involvement the economy.
- during Compact 1, the private sector scarcely grew and GDP grew by only 0.6 percent a year.
- The preferred staple crops are taro and breadfruit.

- Banana was formerly a significant crop
- Citrus fruits are the backbone of local agriculture, but “citrus canker” is reducing yields and cutting access to key export markets in Guam and RMI.
- Noni, a fledgling industry in Kosrae, has been entirely developed and supported by the private sector.
- Greater reliance on rice & canned meat, and over-fishing of the reef, is increasing vulnerability.
- There is still spare capacity in traditional agriculture.

9 Chuuk

- The most economically troubled state, it suffered financial crises in the mid-1990s and 2001.
- It has accumulated creditor and outstanding court order debts of more than \$20 million because of weak fiscal management.
- GDP declined by an average of 0.4 percent yearly over the first Compact period.
- Land pressures are undermining food security.
- There is almost no forest cover.
- The preferred staple crop is breadfruit.
- The large, bountiful lagoon and out-migration are key factors in avoiding a food security crisis, but dynamite and poison fishing are problems, as are exports of reef fish to Guam.
- Chuukese are the biggest migrant group in FSM.
- Traditional farming is producing enough food with little or no technical support.

10 Pohnpei

- Annual GDP growth averaged 2.8 percent during the first Compact period.
- There is some benefit from the national capital being located in Pohnpei.
- Breadfruit and yam are the preferred staple crops.
- Watershed destruction in the forest reserve for kava production has reduced primary forest cover from 15,000ha in 1994 to 4,200 ha in 2002.
- NGO/community partnerships are delivering agriculture services with a conservation focus.

- Kava is the beverage and cash crop of choice. Most is consumed locally but some 272,000 kg are exported annually, mainly to Guam, Hawaii and Saipan.
- Betel nut production is growing rapidly as a profitable cash crop option.

11 Yap

- The state has strong fiscal discipline, and enjoyed 3 percent annual growth in GDP during Compact 1.
- Taro is the main food staple.
- Women do most subsistence agriculture and marketing work.
- Slash-and-burn agriculture is preferred.
- It is the state least reliant on imported food, and it has well organized, functional community leadership.
- Betel nut production is intercropped and is all smallholder production.

3.1.2 Farming Systems

a Subsistence Agriculture

12 Most agricultural production in FSM is subsistence in nature. The aim is to provide food at minimum cost for family use, for ceremonial purposes, to meet social obligations and to generate income. Income sources include agro-forest and home gardens, backyard livestock production, reef fishing, and handicrafts. Nevertheless, most people have come to prefer the convenience of cash transactions using income from informal and formal employment, and/or remittances from within FSM and from overseas. With the decreasing regard for local foods, policy makers have tended to overlook subsistence agriculture development.

13 Economic growth during the 15-year Compact period was slight. GDP grew by only 1.6 percent yearly with wide variation between states. Employment increased at about the same pace. Almost all the growth occurred during the first ten years. With the second step-down of Compact funding in 1996, the economy went into decline. Reduced funding coupled with cuts in the public sector reduced cash incomes, and GDP declined by an average of nearly 1 percent yearly through the last five years of the Compact. Many families were forced to fall back on subsistence agriculture, the 2000 Census showing 20 percent of families having subsistence agriculture as the main source of employment compared with 10 percent.⁵

⁵ This increase may be partly explained by changes to the Census questions.

14 The traditional farming system, especially in Pohnpei and Yap, is slash and burn. Today, traditional farming is still based on fairly complex intercropping systems, using prolonged periods of fallow to replenish fertility. Root crops (yam, taro), banana, kava in Pohnpei, and betel nut in Yap and Pohnpei, are grown amongst food trees (breadfruit, coconut). One important aspect of the development of traditional farming systems over the centuries has been management of risk and vulnerability – especially from typhoons, but also from salt water flooding on atolls. This is why most FSM farmers find monocrop agriculture difficult to adopt.

15 There is a lack of hard information on the agriculture sector. However, a recent survey on Pohnpei showed average agricultural production per household of \$4700 in 2003, equivalent to 74 percent of median household income in 2000. But only 25 percent of this came from market sales; own consumption accounted for 68 percent and 22 percent was used for ceremonial activities or to fulfill social obligations. Looking at it another way, after providing for household needs, only half of the discretionary surplus is used to generate cash income.⁶

16 The major species of livestock are free-range chicken and pigs. Both

Table 1 Major crops by state

Species	Chuuk	Kosrae	Pohnpei	Yap
1. Food Crops:				
Coconut	Y	Y	Y	Y
Breadfruit	Y	Y	Y	Y
Giant Taro	Y	Y	Y	Y
Yam	N	Y	Y	
Cassava	Y	Y	Y	
Banana	Y	Y	Y	Y
Taro Leaf	Y		Y	
2. Commercial Crops				
Kava			Y	
Betel Nut			Y	Y
Banana		Y	Y	
Breadfruit	Y			
Citrus		Y		
Processed Noni		Y		
Taro	Y	Y		

⁶ Mark Drew to Pohnpei Director of Agriculture – data are part of a thesis dissertation, 2004

are kept for home consumption purposes, and pigs have an important ceremonial value, especially for funerals. They tend to fetch high prices. Large pigs (>180kgs) can sell for up to \$2,000, with a typical price of \$1,000. Although these prices are close to \$10 per kg carcass weight equivalent, they are down from a decade ago, when a more buoyant economy supported prices at least 50 percent higher. There are a few regular piggeries. Imported pig feed is expensive, which helps to explain the high prices.

17 Poultry are run free-range, getting food scraps and scavenging for food. They are used for both meat and egg production. There are a few commercial layer poultry operations, but imported feed makes production costs high. Egg imports in 2002 amounted to \$444,400, suggesting additional opportunities for local production, based on locally grown feeds.

b Commercial Agriculture

18 Commercial agriculture can be defined as production primarily for sale. Despite several (misguided) attempts to stimulate commercial agriculture, it has never been a significant factor in the economy. Its development has been constrained by cultural issues, especially attitudes to agricultural work, the cost and time associated with funerals, freight difficulties, and government interference. Government has made investments in copra (ongoing), black pepper, broiler chicken, and layer poultry (ongoing).

19 There are export markets in Guam, RMI and Saipan for betel nut and kava, and in Bangladesh for copra. There are potential markets for root crops and banana in Guam, RMI and Saipan and for niche products in specific markets. In addition, there are immediate prospects for import substitution of selected fruit and vegetables in local markets.

Table 2 FSM Livestock Population Estimates

	Chuuk	Kosrae	Pohnpei	Yap	Total
Layers	1000	na	20001	3,000	6000
Free range chicken	Na	3,000	15-20000	na	18-23000
Pigs	18,000	4,500	25-30000	4,500	52-57000
Goats	-	20	<150	-	<170
Cattle	-	-	20-30	-	

Note: Layers are run on two commercial farms, one of which is run by government.

20 Agriculture exports amounted to about \$1.4 million a year, equivalent to an average annual increase of 6.5 percent, 1999-2002. Exports of betel nut, kava and copra grew annually by 18 percent, 7 percent and 5 percent respec-

tively in the same period. All three crops are grown by traditional, semi-subsistence farmers, not by commercial operators. Exports of banana, citrus fruits and root crops declined over the same period by an average of 17 percent. The majority of agriculture exports are sourced from Yap – 51 percent and 65 percent of total agriculture exports for 1999 and 2002 respectively -- while Pohnpei accounted for 31 percent and 26 percent. Conversely, exports from Chuuk and Kosrae are negligible.

21 Agriculture export data are sourced from quarantine records. However, a great deal of product is thought to be exported by individuals in their personal luggage, especially to Guam, Saipan and Majuro. The Pohnpei Conservation Society estimates about 30-40 thousand kg of kava is currently exported annually with an export value of \$0.33-\$0.44 million.⁷ The corresponding official export figure for 2002 was 22,000 kg, valued at \$0.24 million.

22 Subsistence farmers tend to sell with a sum of money in mind to meet an immediate cash need. Betel nut, kava and copra suit this mentality well—they are largely non-perishable, with harvesting time being quite flexible. Conversely, vegetable crops (e.g. cucumber, egg plant) require more labor and greater precision in harvesting. Thus, commercial agriculture output from traditional farmers is from crops with which farmers are familiar and from crops that

Table 3: Major export crops by state by destination market

Product	Chuuk	Kosrae	Pohnpei	Yap	Destination
Copra	Y		Y	Y	Bangladesh, Japan, Korea ¹
Banana	Y	Y	Y		Guam, RMI
Citrus fruits		Y			RMI
Root crops		Y	Y		Palau, Guam, RMI
Black Ppr.			Y		
Kava			Y		Guam, RMI, Saipan
Betel Nut	Y		Y	Y	Saipan, Guam, Palau

can be readily integrated into the existing farming system. There are very few commercial farmers (see the case study). The Chinese operate a “model” farm in Pohnpei and sell commercially in Kolonia.

⁷ based on updates of an unpublished TNC Report on the Kava Market (1997).

23 A 1997 TNC Report provided a description of the kava industry on Pohnpei, which is largely relevant today: “The kava industry is currently the major income source for much of the island’s rural population. 4000-5000 people (15 percent of the population) are engaged in kava-growing and approximately 2500-5000 Ha are planted. Domestic market consists of about 50 licensed kava bars, a number of retail stores, and numerous unlicensed temporary kava bars and is estimated at 477,000 kg/yr – 40 percent of total production. (1996). Local demand is mainly for fresh plants, processed (roots pounded and squeezed) fresh and bottled extract, and pounded and frozen roots. There also

Table 4: Indicative Crop Budgets – Cucumber and Chinese Cabbage

		Cucumber/acre			Chinese Cabbage/acre				
	Units	Quantity	Price/unit	Total	Units	Quantity	Price/unit	Total	
GROSS OUTPUT & BENEFITS									
Plant population	plants	3485			plants	21500			
Yield & sales	lbs	23,522	0.90	\$21,170	Lbs	32250	1.00	\$32,250	
VARIABLE PRODUCTION COSTS									
Inputs									
Seedlings/pots	number	3485	0.10	\$348	number	21500	0.10	\$2,150	
Fertilizer	lbs			\$250	Lbs			\$250	
Sprays	sum			\$50	Lump sum			\$50	
	Sub-total			\$648	Sub-total			\$2,450	
Husbandry									
Mechanical land Preparation	lump sum			\$100	Lump sum			\$100	
Planting, crop maintenance									
harvest, post harvest	Hired/day	402	1.50	(603)	Man days	397	1.50	(595)	
	Sub-total			\$100	Sub-total			\$100	
Marketing									
Transport				\$100				\$100	
Boxes (2ply 40lb/box)	number	784	1.50	\$1,176	number	1075	1.50	\$1,612	
	Sub-total			\$1,276	Sub-total			\$1,712	
Debt									
\$10,000	For 1 yr	9%/yr		\$900	9%/yr			\$900	
	Sub-total			\$900	Sub-total			\$900	
Total Cash Cost				\$2,924	Total Cash Cost				\$5,162
GROSS MARGIN (excluding own labor)				\$18,246	GROSS MARGIN (excluding own labor)				\$27,088
GM per lb				\$0.77	GM per lb				\$0.84
RETURNS TO LABOR:									
\$ per day worked				\$45	\$ per day worked				\$6
\$ per hour				\$6	\$ per hour				\$1
BREAK EVEN PRICE (without labor cost)				\$0.09	BREAK EVEN PRICE (without labor cost)				\$0.1
(with labor):				\$0.15	(with labor):				\$0.1
<i>Compared to:</i>									
CIF Cost of imported Product per lb¹:				\$0.92	CIF Cost of imported Product per lb¹:				\$0.9
Retail Price (Nov. 2004) per lb				\$1.45	Retail Price (Nov. 2004) per lb				\$1.6

Source: Adaptation from ADB TA – 2484. Agriculture Market Study.
Note: data from local importer invoice (Sept. 04).

exists an export market (mainly to expatriate Pohnpeians living in Guam, Saipan, Hawaii, and the US mainland) estimated at 40,000 kg/yr – 3 percent of total production - for pounded and frozen roots and liquid extract. Another 660,000 kg - 56 percent of total production - is harvested annually for customary use and personal consumption by farmers and their extended families”.

24 Gross margin analysis of cabbage and cucumber shows a profitable opportunity to grow crops which are currently imported in significant quantities (see Table 4). Costs of production are 5-times lower than the CIF cost of equivalent imported product. Assuming a crop failure rate of one in four (drought, typhoons, disease etc), farmers can still expect to earn for their labor around \$5 per hour, about 3 times the rate for agriculture labor.

25 Internal marketing infrastructure is limited. A “farmers” market in Pohnpei is run by the municipality. Stalls are rented to vendors for \$35 per month but management is weak. Most produce is marketed through supermarkets, with individual growers delivering directly. However, supermarkets report that supplies of local product are limited and erratic.

26 Underlining the vulnerability of commercial agriculture, Yap was hit by a severe typhoon in early 2004, resulting in a dramatic loss of agriculture production.

27 Coconut is an integral part of island life, and is especially important in the outer islands where 19,071 people (19 percent of the population) live.

28 FSM produces around 40 million nuts annually, with a copra equivalent of 6,500 tons⁸. However, the tree stock is ageing with very limited replanting. Coconut has largely reverted to a food crop in the outer islands. Since 1991,

Table 5: Imports of “substitutable” fruit and vegetables: 2000–2002 (US\$)

Product/Year	2000	2001	2002
Eggs	218,229	423,858	444,386
Cabbage, lettuce, etc	100,762	127,369	187,539
Citrus fruits	31,174	60,664	57,147
Onions, etc	153,200	229,624	179,388
Potatoes	44,896	69,113	102,498
Fruit juice	117,321	213,928	194,132
Other fruit & vegetables	231,643	171,270	252,420
Total:	897,225	1,295,828	1,417,510

Source: Office of Statistics, DEA

⁸ Namio Manpi, General Manager, Coconut Development Authority.

Table 6: Outer island population by State: 2000

State	Number of OIs	Total population	OI population	% population in OIs
Chuuk	4	53,595	13,130	24
Kosrae	0	7,686	-	0
Pohnpei	5	34,486	2,091	6
Yap	10	11,241	3,850	34
Total	19	107,008	19,071	18

Source: FSM Census 2000.

copra production has exceeded 1,000 tons only once, and it has averaged 610 tons in the last five years. Prices are subsidized but irregular collection and slow payment are a disincentive to farmers. Subsidy allocations by the national government have dropped by 62 percent from \$200,000 in FY2002 to \$75,000 in FY2005. Storage losses - typically at least 15 percent - exacerbate the situation.

29 The government moved in September 2004 to reduce the subsidized price from 13 cents/lb (\$260 per ton equivalent) to 5 cents/lb (\$100 per ton equivalent). Widespread opposition led government to change its decision and introduce a subsidy price of 10 cents/lb (\$205 per ton) - still a 23 percent drop in price. Freight to Pohnpei, wharfage costs, etc account for an additional \$205 per ton. The FOB price is still above the world price of around \$350/t. All copra is now marketed by a Singapore agent who sells for 5 percent commission.

30 Some regard the copra price as a social payment - to encourage outer islanders to remain in their islands, and not migrate to Pohnpei, Weno or further afield. Others see it as fiscal and economic efficiency.

Table 7: Agriculture Exports - FSM 1999-2002 (FOB US\$)

	1999	2000	2001	2002
Copra	173,568	186,380	200,908	210,676
Banana	188,294	71,918	32,606	25,897
Citrus	-	44,417	22,615	27,886
Kava	188,893	151,522	160,403	241,253
Betel Nuts	511,000	625,233	907,710	887,654
Piper Leaves	13,349	17,658	20,845	25,039
Root Crops	381	13,655	7,668	3,542
Other	2,722	12,483	5,657	6,577
Total:	1,127,811	1,139,538	1,367,279	1,428,586

Source: Division of Statistics, FSM Dept. of Economic Affairs

Table 8: Agriculture Exports by State–2002 (FOB US\$)

	Year	Chuuk	Kosrae	Pohnpei	Yap	Total
Copra	1999	10,643	Na	83,055	79,870	173,568
	2000	19,127	747	62,388	104,118	186,380
	2001	52,970	6,688	141,250	-	200,908
	2002	76,175	423	88,228	45,850	210,676
Banana	1999	121,275	Na	58,540	8,479	188,294
	2000	5,610	44,468	21,673	166	71,918
	2001	6,617	8,074	17,821	94	32,606
	2002	7,058	5923	12,881	35	25,897
Citrus	1999	-	Na	-	-	-
	2000	-	42,755	30	1,632	44,417
	2001	-	21,105	8	1,502	22,615
	2002	-	25,292	57	2,537	27,886
Kava	1999	-	Na	188,893	-	188,893
	2000	-	377	151,145	-	151,522
	2001	-	-	160,403	-	160,403
	2002	-	38	241,215	-	241,253
Betelnut	1999	23,587	Na	3,885	483,529	511,000
	2000	-	3	18,110	607,121	625,233
	2001	-	13	106,350	801,347	907,710
	2002	-	16	30,649	856,989	887,654
Piper Leaves	1999	-	Na	13,349	-	13,349
	2000	-	-	1,375	16,283	17,658
	2001	-	-	2,145	18,700	20,845
	2002	-	-	2,888	22,151	25,039
Root Crops	1999	-	Na	-	381	381
	2000	-	26,625	845	2,457	29,927
	2001	-	8,019	1,740	6,778	16,537
	2002	-	2,609	995	-	3,605
Other	1999	6,693	Na	226	190	7,109
	2000	168	11,077	105	1,133	12,483
	2001	198	3,146	770	1,542	5,657
	2002	211	2,762	712	2,892	6,577
Total:	1999	162,198	45,2171	347,948	572,449	1,082,595
	2000	24,905	126,051	255,671	732,910	1,139,538
	2001	59,785	47,045	430,486	829,962	1,367,279
	2002	83,444	37,064	377,624	930,454	1,428,586

Source: Division of Statistics, FSM Dept. of Economic Affairs
(i) No breakdown by crop available.

31 There are commercial poultry operations on most islands. On Pohnpei, there are two commercial farms with a total of two thousand birds. One is privately owned (1400 birds) and one is government-owned, but operated by the Chinese as part of a “model” farm.

32 Availability of inputs e.g. seeds, fertilizer, chemicals, animal feeds, is variable. The private sector provides feedstuffs for pigs and poultry on a fairly regular basis. However, the Department of Agriculture in some states continues to compete with the private sector in the provision of seeds and fertilizer. While this is done with the best of intentions, it undermines the opportunities for smaller private sector providers. As an example, the Pohnpei Department of Agriculture operates a revolving fund to purchase seeds and fertilizers, with turnover around \$50,000 per year. It has around 5000 customers and, apart from a small mark-up to cover overheads, it charges wholesale prices.

3.1.3 Key Productive Resources

33 Land Arable land in FSM is generally sufficient to underpin food production needs. The exception is Chuuk, where a combination of high population and limited land means food production capacity is stretched under traditional farming practices. Chuuk accounts for over 50 percent of FSM's population, but has only 12 percent of the arable land. Arable land per capita is 0.1 ha in Chuuk, compared to 0.95 ha, 0.65 ha and 0.80 ha in Kosrae, Pohnpei and Yap, respectively.

34 In pre-colonial times, land tenure was the responsibility of the traditional chiefs, and then this responsibility passed to successive colonial rulers: the Spanish government (1880-1898); the German government (1898-1914); the Japanese mandate (1914-1945); and the US-administered UN Trust Territory (1945-1986). Since Federation in 1986, surveying of individual land plots for issuance of title has been proceeding slowly. Previous studies have also highlighted this point.⁹ Lack of title on government land issued under the Homestead Land Grant Scheme of 1960 is constraining investment.

35 Land can be mobilized under private lease arrangements. The terms of lease of agricultural land varies: Chuuk – 99 years; Kosrae – 25 years¹⁰; Pohnpei – 25 years; and Yap – 49 years. However, rental arrangements are mostly informal, with little transparency of terms. Surveying and registration is proceeding, but a slow pace. In Chuuk, a fire destroyed many land records in January 2004, further exacerbating the problem.

36 Land degradation is a serious issue on most islands. On Pohnpei, encroachment by squatters growing kava into the upper watershed has reduced the area of primary forest significantly – from 15,000 ha in 1975 to 5,200 ha in 1995

⁹ FSM Economic Report – PIER Series, ADB 1996

¹⁰ The Kosrae authorities are considering an increase to 55 years

Table 9: Total arable soils by state and availability per capita

	Well suited (ha)	Moderately suited (ha)	Total (ha)	Total ha per capita
Chuuk				
Total arable soils			5484	0.10
Including:				
Root Crops	451	2679	3130	0.06
Vegetable crops	451	3920	4371	0.08
Tree Crops	1139	3558	4697	0.09
Kosrae				
Total arable soils	-	-	7311	0.95
Including:				
Root Crops	0	7049	7049	0.92
Vegetable crops	0	1323	1323	0.17
Tree Crops	752	5964	6716	0.87
Pohnpei				
Total arable soils	-	22493	22493	0.65
Including:				
Root Crops	-	11080	11080	0.32
Vegetable crops	-	6843	6843	0.20
Tree Crops	-	22251	22251	0.65
Yap:				
Total arable soils			9049	0.80
Including:				
Root Crops	1635	7139	8774	0.78
Vegetable crops	1746	7236	8982	0.80
Tree Crops	637	8238	8875	0.79
FSM			44337	0.41
Total arable soils				
Including:				
Root Crops	2086	27947	30033	0.28
Vegetable crops	2197	19322	21519	0.20
Tree Crops	2528	40011	42539	0.40

to 4,200 ha in 2002¹¹. Siltation of fringing reefs as a result of deforestation and subsequent erosion is causing significant damage to traditional food supplies.

37 On the outer islands, the gradual demise of the copra industry is having a double impact. It is forcing villagers to rely more on sea foods and, with loss of income from copra, the ability to purchase imported food is diminishing. The sustainability of this is uncertain.

¹¹ ADB TA 1925 – Pohnpei Watershed Management and Environment - 1997; and Pohnpei Conservation Society data - 2002

a Labor

38 The 2000 Census shows that 52 percent of the labor force (37,414 out of a total working age population of 63,836) were engaged in agriculture and/or fishing. Seventy percent said they were engaged in subsistence activities, indicating 30 percent regarded themselves as “commercial” farmers or fishermen. There was a notable narrowing of the gap in labor force participation rates between males and females in 1994 (1.9) – i.e. 1.9 males per 1 female, and 2000 (1.3). Much of the additional participation appears to have been in the agriculture sector where women are becoming more active. In 2000, the Census showed 17 percent of the working age population engaged in subsistence activities – up significantly from 10 percent in 1994. The rate for females increased from 6 percent in 1994 to 18 percent in 2000. Women in Yap provide the majority of the agriculture labor. Elsewhere, the work is undertaken by men or shared.

39 In Chuuk, Pohnpei and Yap, agriculture and fisheries activities are the most important with 24 percent, 26 percent and 34 percent respectively of the working age population engaged in the sector. In Kosrae, only 9 percent of the population was engaged in agriculture or fisheries.

40 Eighty percent of the males and 86 percent of the females engaged in subsistence agriculture had either no education or had failed to complete high school. This stark reality highlights the dualistic nature of FSM society – the educated participate in the cash economy; the rest are increasingly marginalized to subsistence agriculture.

41 There is continuing debate over the impact of migration on the FSM economy, regarding both the skill mix and remittance flows. Of significance to the agriculture sector is the outflow of young people, especially men. Anecdotal evidence suggests that this is a factor, but not yet a major concern. Certainly, the demographic structure is skewed – FSM has one of the highest proportions of the population (40 percent) under 15 years - indicating a big increase in demand for employment in the future. If the youth show a continuing propensity to migrate, there may be problems for agriculture as an increasingly aged population tries to maintain traditional family farms.

42 Agriculture as a career has low status. This is well illustrated by the closure in 2002 of the Jesuit-operated Pohnpei Agriculture and Trades School course on vocational agriculture – one of the few remaining courses of its type in the region. The College of Micronesia is offering a degree course in agriculture, aimed at providing career opportunities in agriculture, but not at the manual work level. There are currently 15 students majoring in the two year agriculture degree out of around 2500 total students across FSM – about 0.5%. In addition, in Kosrae there is a one year course for agricultural technician training. There are currently 14 students taking the course.

b Capital

43 Access to affordable capital is a constraint for many FSM farmers. Frequently their needs are fall below the minimum threshold of finance agencies. For example, the minimum loan size from FSM Development Bank (FSM DB) under the microfinance loan guarantee scheme is \$500. Loans are geared towards larger commercial operations, though FSM’s recent history is littered with such failed enterprises. Evidence suggests that commercial crop production is sufficiently profitable to justify a well designed credit program at an appropriate scale. Gross margin analysis (see Table 4) indicates that returns per acre and per hour are strong, even after debt servicing. Returns to labor are about 3 times the wages for an agriculture laborer.

44 Opportunities for capital formation from savings are constrained by social issues – the demands of extended family members and a shrinking job market. The FSM DB and others are building compulsory savings into their loan products. FSM DB has a new product that forces borrowers to save at the rate of 0.5 percent per week. Thus, a borrower with a \$3,000 loan will save at the rate of \$780 per year. Similarly, the Yap Small Business Development Center gives \$100 loans on a monthly basis. Repayment is \$112 each month, of which \$5 (5%) is debt service cost and \$7 is compulsory savings.

45 FSM DB has had very limited exposure to the agriculture sector over the past five years.

46 As discussed earlier, commercial lending to agriculture is constrained by collateral issues – currently \$38,000 outstanding loans. FSM DB is currently testing its ability to repossess a lease on a commercial non-agriculture property where the lease was offered for collateral on a defaulted loan. Some progress on land surveying and registration, along with a transparent lease process, would improve the opportunity of commercial farmers to offer land to FSM DB as collateral.

Table 10: FSM DB loan portfolio to agriculture, fisheries & tourism - share of total outstanding

	1999	2002
Agriculture	1%	0.2%
Fisheries	40%	4.2%
Tourism	31%	47%

Source: FSM DB Annual Reports.

Note: These are the FSM government’s three “priority productive” sectors.

47 Government budget allocations for agriculture in 2004 and estimates for 2005 demonstrate the lack of Government support for the agriculture sector. While agriculture is designated as one of Governments priority productive sectors, that priority is not reflected in the national and state budget resource allocations with only 1.8 percent of the total allocations being applied to agriculture in both 2004 and (budgeted in) 2005.

c Technical Support

48 Under the COM Cooperative Research and Extension Service affiliated with the USDA Land Grant Program (also administered in RMI and Palau), the major thrust of agriculture technical backup is offered. This service has a total of 43 staff and a budget of \$0.75 million. This budget is approximately comprised of \$200,000 from FSM Government, \$200,000 from Land Grant as matching funds and a further \$350,000 from a “Match Free” fund within USDA. Of the 43 staff, 18 are agriculture extension agents and 3 are researchers. In each of the states, wages, salaries and associated staff costs account for over 97 percent of total budget. This constrains the capacity of the service to deliver relevant services to rural communities. There is an opportunity to improve the productivity of these funds. Discussions with the relevant USDA staff regarding applying them to community oriented NGOs to deliver agriculture extension should be a priority. Existing staff can either be retained as subject matter specialists until

Table 11: Agriculture and Forest Sector Budget Allocations – 2004 (\$)

Source/State	FSM	Chuuk	Kosrae	Pohnpei	Yap	Total
Health		80,000				80,000
Private Sector					17,913	17,913
Environment	218,467	379,810	185,370	298,000	87,124	1,168,771
Capacity Building		41,381	139,338		41,086	221,805
Sub-total: Compact 2	218,467	501,191	324,708	298,000	149,260	1,491,626
Federal Programs			52,000			52,000
Domestic Revenue	215,533	47,500		289,587	36,200	588,820
Total	434,000	548,691	412,708	637,587	185,460	2,218,466
Agriculture % share of total budget	1.4%	1.6%	3.3%	2.0%	1.1%	1.8%

Source: DEA;

Note: (1) A share of the Economic Development Authority Budget

Table 12: Agriculture & Forest Sector Budget Allocations – 2005 Estimates (\$)

Source/State	FSM	Chuuk	Kosrae	Pohnpei	Yap	Total
Health					11,500	11,500
Private Sector		491,792	534,817	298,000	95,680	1,420,289
Environment		45,718	139,813	-	35,771	221,302
Capacity Building					15,623	15,623
Sub-total: Compact 2		537,510	674,630	298,000	158,575	1,668,714
Federal Programs			28,000	25,182		53,182
Domestic Revenue	433,048	47,500		277,409	27,903	785,860
Total Agriculture	433,048	585,010	702,630	600,591	186,478	2,507,757
% share of total budget	1.3%	1.6%	5%	1.8%	1%	1.8%

Source: DEA; Note: (\$) Assumes same budget allocation as 2004

they retire, or re-directed to community oriented agencies. But outputs to farmers must be the priority.

49 Other agencies with activities in FSM agriculture are SPC and Peoples Republic of China. In addition, there are volunteers from Peace Corp and JVC supplementing State Agriculture staff.

3.2 Development Problems, Issues and Constraints

3.2.1 The need for a consistent, agreed vision for the future

50 The agriculture sector has been typified over the last 20 years by a lack of a consistent and agreed vision and by expensive failed government investments.

51 Policy advice has tended to favor commercial, market-oriented approaches (both export and import substitution at various times). Policy advice has paid too little attention to the prevalence and characteristics of traditional agriculture and the varying needs of different states – especially Chuuk. Future agriculture policy must reflect the needs of those who rely on the sector for food, livelihood and employment. Future investments must directly benefit them.

3.2.2 Traditional agriculture has been misunderstood and overlooked

52 Traditional farm families are increasingly in need of cash. For many, agriculture is the only income source. For others, opportunities in agriculture are

perceived to be too limited, risky or difficult and out-migration to the United States is the preferred alternative. There are opportunities to work with village communities, and to introduce simple but improved technologies, business understanding and market awareness. But small traditional subsistence and near subsistence farmers are a difficult extension target, requiring very different strategies from commercial farmers.

53 In 1997, the extension officers from State Departments of Agriculture were moved from the Department of Agriculture management to the College of Micronesia Land Grant Section, which has USDA Land Grant funding. However, the move was made with little or no reference to the farming community and with a fiscal not a service quality objective. For example, in Pohnpei, five staff were moved from the State Department of Agriculture with combined salaries then of \$50,000. DoA agreed to continue this payment, and the Land Grant Fund to provide another \$50,000 as a matching grant. Today, the arrangement remains, but \$50,000 is sufficient for three salaries only. As a result, the extension service staff has been cut by 40 percent since 1997.

54 R&D for traditional agriculture has been limited. One comment was that there has been no research outcome of any value to farmers since 1994 when intercropping with spices research work was done. A further complaint is that, even if research is undertaken, the results are never properly disseminated. Another is that R&D programs reflect the interests and hobbies of researchers, not the needs of farmers (e.g., the banana germ plasm R&D effort).

55 The combination of poor performance and fiscal constraints is leading to alternative responses. DoAs are looking to collaborate with donors and NGOs that want to see achievement-oriented outcomes, not continual institution building.

56 A number of agencies are using a community-based approach. They recognize farmers are reluctant to openly share knowledge, and are suspicious of outsiders and new ideas. But once a new technology has been demonstrated in the community, with time to absorb the concept and information, and the message has been reinforced, farmers do respond. A community approach can work, with homogenous groups, using a gentle approach and regular follow up to allow shyness to be overcome and messages to be absorbed and recognizing that work in agriculture has lower priority than say funerals. Using multiple avenues of contact, e.g. radio/tv, interpersonal, workshops, is also important.

57 What FAO has been trying over the past 2-3 years (2001-2003) in the region is to involve community/village based stakeholders in the decisions on interventions with capacity building exercises on technical topics such as record keeping, farm planning, etc based on a better knowledge of marketing related issues. FAO believes that, for any positive changes to be initiated, target groups

need better understanding of what the real world (without handouts and subsidies) is about. Then farmers and processors will have a better basis for decision making.

58 The Natural Resource Conservation Service (NRCS) has been doing community-based extension work with groups of farmers (20-30) who are organized by the village chief. Each farmer signs an agreement to participate. NRCS believes the key is grassroots involvement in initial planning, when needs are determined by the community for the type of service required. Demonstration key—farmers must see results before they will adopt new ways. NRCS staff make regular follow ups, at least twice a month. NRCS believes there many opportunities to “tweak” traditional agriculture to improve both yields and profitability. For example, using pig manure as a fertilizer has increased banana bunch weights from 30 kg to 80kg.

59 The Pohnpei Conservation Society (PCS) started in 1997. Today it has 19 staff and a \$350,000 budget funded independently of government. It works with farmers to encourage agriculture in the lowlands and discourage encroachment into high forest areas. Its extension strategy is based on a belief that knowledge can be effectively shared between villages and between islands, science can be applied to traditional farming systems, but that it must be underpinned by dissemination through farmer groups/associations. It sees a current disconnect between R&D and farmer needs—no interaction, no dissemination, and no feedback.

60 The Yap agriculture garden program (Sudal Victory Garden Project) is jointly funded by the Salvation Army, the Red Cross, UNDP and Yap State Dept. of Agriculture. It aims to provide relief after typhoon “Sudal.” It assists men and women to establish a food garden (cucumber, egg plant, beans, etc) of up to 350 sq. ft., by providing funds for seeds, fertilizer, tools, fencing, etc – up to about \$200 per applicant. The ultimate aim is to form a cooperative from the successful grantees, with a market outlet based around the local supermarket. It is a grass roots approach, with none of the grand vision style of the past.

3.2.3 Food insecurity, vulnerability and hardship are big issues

61 Chuuk State, with 50 percent of the population and 12 percent of the arable soil is considerably more vulnerable to food shortages than other states. “Chuuk is dangerously over-stretched in demands on natural resources. The large, bountiful lagoon and out-migration are the saving factors in avoiding a

food security crisis”¹². Chuuk’s indicators are the worst on nearly every criterion.¹³

62 Food security in the outer islands is underpinned by swamp (pit) taro production and (falling) copra sales. (CDA purchased 466t of copra in 2003). Properly managed, swamp taro could last in the ground for at least 10 years but traditional techniques for protecting taro pits from sea flooding and salt toxicity are however being lost and islanders are switching to imported rice. One major reason for this is a loss of interest by young people who fail to see their relevance. Copra is subsidized (see Section 2.5) but recent cuts have reduced prices by 23% (from 16.5c/lb to 13c/lb) to farmers, with further cuts likely. This year in Kapingamarangi Island in Pohnpei state (pop’n – 474) there was famine because of shipping delays and salt damage to taro pits.

63 Rice and noodles have become the food staples in FSM; imports in 2002 were worth almost \$6.0 million. The shift away from reliance on traditional crops (including taro, yam, breadfruit and banana) does however bring exposure to cash shortages, shipping delays, etc. Some regard this as dependency (on foreign food supplies) rather than food insecurity due to intermittent loss of availability). As one villager commented “our traditional root crops and banana have become ‘show foods’ at special occasions – afterwards we go home to eat rice and tinned meat”.

64 The Census 2000 (see Section 1.3.2) showed increasing reliance on subsistence agriculture – indicating a declining capacity to buy imported food. The number of women engaged in subsistence agriculture increased threefold. In Chuuk, Pohnpei and Yap subsistence agriculture was the most important activity for 24, 26 and 34 percent respectively of the working age population. Eighty percent of males and 86 percent of females so engaged had either no education or had failed to complete high school.

65 Environmental degradation continues. There is heavy reliance in most islands on seafood, especially catches from the fringing reef. However, land degradation and resulting reef siltation are degrading reefs to the point where they are dying.

3.2.4 Nutrition habits are resulting in disease and death

66 A 1994 blood survey in Chuuk and Pohnpei showed greater than 50% of children had low levels of vitamin A, with Chuuk being the worst. In 2000, a blood survey showed Yap and Kosrae had 38% and 63% of children with low

¹² Personal comment – Bill Raynor, Director, The Nature Conservancy, FSM Office.

¹³ ADB TA 6047 – REG; National Poverty Reduction Strategies for the PDMCs.

levels of vitamin A. A recent UNICEF study found that 30-50 percent of youth in Pohnpei state reported consuming no fruit or vegetables.¹⁴

67 Vitamin A deficiency can lead to diabetes, infections, impaired vision, heart disease, cancer and anaemia. Infant mortality (aged 0-1 year) is around 50 per 1000 in FSM. In a recent dietary survey in Kosrae, not a single mother or child was meeting vitamin A dietary needs, but many were eating three times their need for protein.¹⁵

68 Some traditional FSM foods (especially yellow flesh banana, taro and breadfruit) are high in beta keratin, the source of vitamin A. While a white Cavendish banana has 30 micrograms of bk per 100 gm, the FSM “karat” banana has 800 micrograms of bk. One karat banana per day would be more than sufficient to provide for a child’s vitamin A needs.¹⁶ Conversely, rice contains no bk. Rice simply has to be supplemented by healthier and more nutritious traditional local foods.

69 While this need is being actively promoted by a local NGO – the Island Foods Community of Pohnpei - there is an equal in other states. While the Department of Health has a nutrition officer, this person is frequently required to help in curative medicine. An agro-nutrition approach is needed whereby diet improvement and improved recognition of and performance in traditional farming are promoted in an integrated manner.

3.2.5 Education resources are skewed away from rural populations

¹⁴ "The State of Health Behavior and Lifestyle of Pacific Youth: Pohnpei State, Federated States of Micronesia." UNICEF Pacific office.

¹⁵ Corsi Allison. An Exploratory Study of Food and Nutritional Beliefs and Practices in Pohnpei, Federated States of Micronesia; University of Colorado; A thesis submitted to the Department of International Health, Rollins School of Public Health, Emory University. August, 2004;

¹⁶ Englberger L. A Community and Laboratory-based Assessment of Natural Food Sources of Vitamin A in the Federated States of Micronesia. The University of Queensland, Doctorate Dissertation. April 15, 2003.

Table 13: CDA copra purchases

	Total subsidy (\$)	Copra prod'n (t)	Subsidy/lb (c)	Farmer price (c)
2002	200,000	754	13.2	13
2003	150,000	466	16.1	13
2004	100,000	6001	8.3	10
2005	75,000	5002	7.5	10

Note (1) – CDA estimate; (2) Mission estimate

70 As discussed earlier, eighty percent of the males and 86 percent of the females engaged in subsistence agriculture have either no education, or have failed to complete high school. This stark reality highlights the dualistic nature of FSM society – the educated participate in the cash economy while those without education are increasingly marginalized to subsistence agriculture. The closure in 2002 of the vocational agriculture course at PATS was a serious blow for young people wanting to learn about agriculture. The reason given is that young people are not interested, but given their general level of literacy and numeracy, it seems probable that many simply lack the confidence or ability to proceed further in education.

3.2.6 The coconut crop has potential

71 The important reality is that coconut provides only cash crop option for the 19,071 people living in the outer islands. The crop has been heavily subsidized by Government (see Section 2.1.2).

72 Subsidies are paid in two forms; thus, CDA made a profit on subsidy payments of \$28,000 in 2003, but will incur a loss of about \$20,000 in 2004 and a projected loss of about \$25,000 in 2005.

73 Surplus operating funds are applied to:

- 2004: 600t shipping at \$205/t = \$123,000. Further subsidy required is about \$53,000.

Table 14: Indicative CDA operating budget¹

Financial Year	Total Budget (\$)	Net Rev. (oil etc sales)	Total	Wages and overheads	Operating funds
2004	115,000	40,000	155,000	\$85,000	\$70,000
2005	109,000	40,000 ²	149,000	\$85,000	\$64,000

Note (1) Net of subsidy and copra purchase; (2) Mission estimate

- 2005: 500t shipping at \$215 = \$107,500. Further subsidy required is about \$43,500.

74 Thus, in 2004, CDA will incur a copra purchase loss of about \$20,000, plus a shipping loss of about \$53,000 – total \$73,000. In 2005, the projected loss is \$25,000 for purchase and \$43,500 for shipping – total \$68,500.

75 The coconut tree stock is the African Talls variety, which has an optimal 70 years productive lifespan, after which production continues but at a slowly declining rate. While the FSM tree stock is ageing, it is still productive and younger than trees in other parts of the region e.g. Tonga or Samoa.

76 The prospects lie in the extraction of oil in each outer island. This will allow reduced freights, reduced losses and retention of by-products.

77 The 2004 copra crop of 600 tons is equivalent to around 1,200 tons of fresh nuts. With an oil extraction rate of 40 fresh nuts per gallon, and with 3000 fresh nuts per ton, the oil extraction rate per ton of fresh nuts is approximately 75 gallons. On this basis, 1,200 tons of fresh nuts would produce 90,000 gallons of oil. However, because losses caused by shrinkage and insect damage are avoided, oil production could be reasonably expected to be 100,000 gallons. The oil extracted from fresh nuts is the premium, virgin grade.

78 Coconut oil prices are currently around \$550 fob per ton (\$2.10 per gallon), equating to \$210,000 of oil exports. This compares well to copra export revenue after subsidies (\$350 per ton fob less \$88 of subsidy) in 2004 of \$157,000. This should allow farm gate payments to farmers to increase significantly and subsidy payments to be eliminated. Clearly in recent years, government policy has not been for the benefit of growers.

79 There are still further opportunities for value adding to the coconut crop by processing the oil into high-end products as has been successfully achieved elsewhere in the Pacific.

80 The EU New and Renewable Energy Resources Project may offer another alternative by developing coconut oil as a replacement fuel in Outer Islands.

Table 15: World Prices of Copra and Coconut Oil (US\$ per ton).

	2002	2003	2004
Coconut Oil	383	425	603
Copra	242	273	409

Source: World Bank Commodity Prices – October 2004.

3.2.7 Marketing strategies – think small, think niche

81 Previous approaches to development of the sector have identified market opportunities and made the (incorrect) assumption that farmers would move their production systems to capture these opportunities. This is not correct for the majority of FSM farmers. The vital thing to understand about market opportunities is that they are opportunities—they come and go. Like any window, they open and they close. Recognizing this reality is vital to success. The cumbersome processes of governments are typically too slow for niche marketing. The saga of the Pohnpei pepper industry is a classic example. A private sector operator developed a profitable market that government encouraged other growers to supply as well. The subsequent collapse of that industry profited no-one. Only now, several years later, is the market being recovered as a small niche market.

82 FSM agriculture will never develop on a foundation of large monoculture crops. The capacity to supply is too limited and the most farmers will not change their farming system. Exposure to one or two crops is risky. For example, the demise of banana exports to Guam resulted from the difficulty of getting access to airfreight space as fish will always have priority for cargo space. But FSM agriculture can develop by accessing several small, diverse niche markets for different crops, recognizing that these markets will close off from time to time, but that others will become available. An example is the production of processed noni by an entrepreneur in Kosrae.

83 In this kind of flexible changing marketing environment, government's role is to provide an enabling environment, including a consistent and appropriate policy framework, secure land tenure, and the provision of public infrastructure, R&D and effective quarantine and protection services. The private sector's role is to find and fill markets with quality product, on a consistent basis and in a way which treats farmer suppliers equitably. One important aspect of this is providing farmers with up-to-date market information, including prices, marketing costs and customer feedback. Successful exporters are often the best source of market information but this is rarely acknowledged. The farmer's role is to provide product that meets the quality and quantity requirements of the market on a regular basis. This should not happen in isolation. There has to be regular dialogue between government and the private sector (i.e. exporters in this case), between government and farmers, and between the private sector (exporters and input suppliers) and farmers. Such dialogue does not occur in FSM at this time.

84 A number of niche markets do exist and are being filled to some degree. FSM can project an image that is clean and green, with an environment in which food can be produced without concern about contamination. Local products can be labeled as being produced by small, poor farmers in FSM, perhaps organically. Such strategies can return a premium price in some markets. Niche markets can be for import substitution too. A community of farmers could agree

to produce to replace a share of the market for some imported fruit and vegetables. Discussions with one importer indicated that out of a range of 18 varieties of vegetables and 15 varieties of fruits that were imported, 8 vegetables and 7 fruit varieties could be produced locally (see Table 3). There are opportunities for value adding to local crops, either for local or export marketing. The Island Food Society of Pohnpei recently funded an international expert in food processing to run training in Pohnpei. There was considerable interest from local people interested in small scale operations. Niche markets exist for local crops as well as introduced crops – they may be different markets but that is the strength of such a strategy. One market closes off, another one continues, another opens.

85 Imports of vegetables and fruits which can be grown locally in FSM amounted to \$1.4 million in 2002. It seems reasonable to assume that technically, at least half of this amount could be replaced with local production in the medium term. In addition, imports of rice and noodles amounted to \$5.9 million in 2002. It seems reasonable to assume that at least 10 percent of this amount could be replaced with locally produced root and tree crops in the medium term.

3.2.8 There is no data on the agriculture sector

86 An important function of government is establishment of an enabling policy environment. To develop effective policy that reflects the priorities of all stakeholders, policy makers need good information on crop varieties, areas, consumption, prices, diseases, yields, profitability, etc. Likewise, for livestock, they need data on species, numbers, prices, diseases, etc. There is a complete absence of such data in FSM. The only reliable data comes from the quarantine service, but because of staff constraints, their data is not up to date.

87 Extension staff would benefit enormously from a simple farm monitoring program where they worked with village leaders to gather area and yield data and identified a few randomly selected farmers to monitor in depth on a regular basis. In this way, the data could be constantly updated, both horizontally (general data) and vertical data (in depth data from individual farmers).

3.2.9 Land tenure

88 “Land tenure arrangements vary in each state, and depend on the type and prevalence of traditional and customary authority, and the degree of change to modern systems of land registration and ownership. Systems that are in the process of transition are least clear. Land is perceived as scarce and has high value (but there is no transaction price data that would at least provide some indication of land values) but standards for land value appraisal systems are not clear. Where survey and ownership records and values are disputed, and progress with new surveys and registration is slow, the access and security of ownership to land is a constraint to production and investment. Where customary

agreements or modern systems provide fair and undisputed access, value and ownership, the constraint is diminished".¹⁷ This is an accurate assessment of this issue today in relation to agriculture.

3.2.10 Migration

89 Continuing out migration is likely. The rate of that migration is the important issue in agriculture. If there is a high rate of migration amongst young people, the demographic reality is that initially the population will remain roughly constant, and then begin to decline. FSM could learn from the experiences in parts of Polynesia in the South Pacific. If the population falls at some point in the future, the largest outflow is likely to be from among the rural poor.

3.2.11 There are other issues

90 There are other issues that affect both traditional and commercial agriculture. Many of them were raised in ADB TA 2484 – Agriculture Market Study which was undertaken for the National Agriculture Policy Conference in 1998 and are as relevant today as they were then. See Annex 1 for selected coverage.

3.3 Strategic Goals, Policies & Outcomes

91 In April 2004 the DEA prepared a draft policy matrix for the development of agriculture in FSM. This section reviews that matrix. The revised sector goals and policies are designed to support agriculture sector development strategies that:

- Ensure that within an agreed framework, investment in the sector is consistent, equitable and relevant
- Encourage broad dialogue between all stakeholders, including national and state governments, private sector businesses, civil society service providers and farmer groups.
- Focuses attention on the realities of the agriculture sector – it is largely based on traditional agriculture
- Brings rural communities into the decision making process, encouraging greater self reliance, responsibility and local level initiative for the development of agriculture
- Recognizes that significant commercial production can come from within traditional agriculture
- Understands the market opportunities in import substitution, local sales and regional exports

¹⁷ Quote from ADB TA – 2484. Agriculture Market Study.

- Allows the private sector to devise appropriate, realistic strategies for each market segment
- Ensures the private sector are fully responsible for supplies of farm inputs
- Encourages the provision of sustainable financing for commercial farming
- Develop extension support services that respond to the different needs of traditional and commercial farmers
- Ensures future R&D efforts relate directly to the expressed needs of traditional and commercial farmers
- Encourages civil society to participate in delivery of extension services on a contractual basis
- Ensures environmentally sustainable production

3.3.1 Mission Statement: The agriculture sector, including forestry, shall provide: (i) food security, cash incomes and healthy livelihoods; and (ii) opportunities for domestic and export markets, while promoting environmentally sustainable production within a stable and consistent policy framework.

92 The Draft Strategic Goals and Policies for the agriculture sector are:

3.3.2 Strategic Goal 1: A well resourced and properly focused agriculture sector consistently operating within a stable policy framework

a Rationale for change:

93 This is an entirely new Strategic Goal. It has been added to address the need to provide consistent vision and adequate productive investment that benefits farmers and their families. Higher priority should be given to agricultural funding with a particular focus on the needs of traditional farmers. Education and health receive adequate funding but once again more attention could be paid to helping traditional farmers and their families. The Compact 2 funding schedule will result in reduced Government budget resources. Greater efficiency and productivity from Government expenditures will have to be achieved

b Supporting Policies:

- Adherence to an agreed policy framework based on solid information
- Allocation of an equitable Government budget share to agriculture
- Equitable allocation of Government budget for agriculture between staff salary related costs and operating expenses
- Delivery of effective education to rural population

- Raising the image of agriculture as a worthy and satisfying career choice

94 The agriculture sector has lacked a consistent and agreed vision. Policy advice has tended to favor commercial, market oriented approaches (both export and import substitution at various times). Policy advice has paid too little attention to traditional agriculture and the fact that different States have different needs, constraints and opportunities. Future agriculture policy must reflect the expressed needs of those who rely on the sector for food, livelihood and employment. Future investments must benefit them as well - directly. The expectation that single solutions for agriculture based on large Government expenditure has been the norm. But most such investments have failed and have tended to either ignore or overwhelm small, traditional farmers.

95 An important function of Government is establishment of an enabling policy environment. To develop an effective policy that reflects the needs and priorities of all stakeholders, policy makers need good information on crop varieties, areas, consumption, prices, diseases, yields, profitability etc. Likewise, for livestock, they need data on species, numbers, prices, diseases, etc. There is a complete absence of such agriculture data in FSM. The only reliable data comes from the quarantine service, but due to staff constraints, their data is not up to date. Establishment of a farm monitoring system run by extension staff, and adequate resourcing of the Quarantine service to record export data would address this issue.

3.3.3 Strategic Goal 2: To Increase production of traditional farming systems for home nutritional and traditional needs and cash incomes.

a Rationale for change:

96 This Strategic Goal and Supporting Policies are a revision of the Strategic Goal #1 in the matrix presented to the 3rd Economic Summit in April 2004. It has been modified to incorporate parts of Strategic Goals 3 and 4 from the earlier version as well. The reason for this is: (i) to focus this strategic goal specifically on the farm family; (ii) the need to differentiate services, especially extension services between traditional and commercial agriculture; (iii) the need to highlight the need to offer support services at community level where extension will be effective and to employ agencies best equipped to deliver such services – not necessarily from inside Government; and (iv) to ensure closely related aspects of traditional agriculture such as quarantine and nutritional health are seen as part of the same goal. The specific issues associated with availability of arable land per capita in Chuuk state, the high levels of food imports and under-resourcing of quarantine services are addressed.

b Supporting Policies:

- Improved outputs and profitability from traditional farming systems
- Development of a flexible extension service specifically designed to deliver quality services to traditional farmers
- Elimination of Vitamin A deficiency among the FSM population
- Develop more focused, HH food security strategy for agriculture in Chuuk
- Replacement of some imported foods with local product
- Adequate investment in border protection and agricultural quarantine

97 Traditional farm families are increasingly in need of cash to purchase food, pay for utilities, transport etc. With too few formal jobs available, agriculture is the only alternative income source. For others, out-migration to the USA is the preferred alternative. There are opportunities to work with village communities, to introduce simple but improved technologies, business understanding and market awareness. But small traditional subsistence and near subsistence farmers are a difficult extension target, requiring very different strategies from commercial farmers. Changes to extension delivery have been attempted in the past but with little or no reference to the farming community and with fiscal objectives, not a service quality outcome objective. Research and development (R&D) for traditional agriculture has been very limited, with programs not reflecting the needs of farmers and results not properly disseminated.

98 A combination of poor performance and fiscal constraints accentuates the need for development of alternative responses to servicing farmer needs. Some DoAs are looking to collaborate with donors and civil society organizations (NGOs), but donors and NGOs are frustrated with Government programs. To them the important thing is the need to achieve focused outcomes, not continual institution building.

99 A number of agencies are using a community based approach. They understand that traditional farmers can be reluctant to openly share knowledge and be suspicious of outsiders and new ideas. But, once a new technology has been demonstrated in the community, with time to absorb the concept and information, and the message has been reinforced, farmers do respond. The secret is a community approach, with regular follow up and recognizing the hitherto lower priority of agriculture. For example what FAO has been trying in the Pacific over the past 2 to 3 years is to combine the involvement of community/village based stakeholders in the decision on the interventions with capacity building exercises related to technical topics such as record keeping, farm planning based on a better knowledge of marketing related issues, etc. The Natural Resource Conservation Service (NRCS) have been doing community based ex-

tension by working with groups of farmers (20-30) who are organized by the village chief. The key is grassroots involvement in the initial planning, where the needs are determined by the community, from which the type of service required can be determined. NRCS believes there many opportunities to “tweak” traditional agriculture to improve both yields and profitability. There are a number of other civil society groups in FSM successfully using the same approach. Two examples are:

- The Pohnpei Conservation Society (PCS) started in 1997. Today it has 19 staff and a \$350,000 budget funded independently of government. They work with farmers to encourage agriculture in the lowlands and to discourage encroachment into the high forest areas;
- The Yap agriculture garden program (Sudal Victory Garden Project) is joint-funded by Salvation Army, Red Cross UNDP and Yap State Dept. of Agriculture. It assists with establishing food gardens by providing funds for seeds, fertilizer, tools, fencing, etc. The ultimate aim is to form a cooperative from the successful grantees, with a market outlet based around a local supermarket.

100 Chuuk State, with 50% of the FSM population and 12% of the arable soils is considerably more vulnerable to issues of food insecurity than other states. In the outer islands, food security is under-pinned by swamp (pit) taro production and cash sales from copra production. Traditional means of protecting taro pits from sea flooding and salt toxicity are failing due to increasing reliance on imported rice. Copra has been subsidized but recent subsidy cuts have reduced prices by 23% to farmers, with further cuts likely.

101 Rice and noodles have become the main food staple with imports worth almost \$6.0 million in 2002. Because these foods require cash to purchase them, the food security of many households is exposed to loss of cash income and shipping delays, etc. Public service layoffs are forcing some workers to fall back on the safety net of subsistence agriculture. Census 2000 data demonstrates this - the number of women engaged in subsistence agriculture increased three-fold; in three of the States (Chuuk, Pohnpei and Yap), subsistence agriculture was the most important activity for 24 percent, 26 percent and 34 percent respectively of the working age population; 80 percent of the males and 86 percent of the females engaged in subsistence agriculture had either no education, or had failed to complete high school.

102 A very high proportion of the population has been shown to be deficient in Vitamin A. There is a direct link between this and the heavy reliance on imported rice as the food staple of choice. Conversely, Some traditional FSM foods (especially yellow flesh banana, taro and breadfruit) have been analyzed and shown to be very high in beta keratin (bk) (the source of Vit. A). Vitamin A

deficiency increases susceptibility of the population, especially children, to many other diseases (including diabetes, infections, impaired vision, heart disease, cancer and anaemia. While there is no doubt that rice is always going to play a major role in the diets of the FSM population, it must be supplemented by healthier and more nutritious traditional local foods.

103 This issue is being actively promoted on Pohnpei by a local NGO but there is an equal need to address the issue in other States. There is a need to promote an “agro-nutrition approach” whereby diet improvement and improved recognition and performance in traditional farming techniques are promoted in an integrated manner.

3.3.4 Strategic Goal 3: Increased volumes of saleable surpluses to be marketed by the private sector into local and regional markets.

a Rationale for change:

104 This Strategic Goal and Supporting Policies are a revision of the Strategic Goal #2 in the matrix presented to the 3rd Economic Summit in April 2004. The reason for this are: (i) while the role of the private sector must be recognized, there is an issue of recognizing and building dialogue between all stakeholders and their roles; (ii) small incremental gains from niche markets will build confidence among all stakeholders, especially farmers where improved status and recognition are important needs; (iii) some products have potential for value adding – especially relevant to the coconut crop.

b Supporting Policies:

- Establishment of regular dialogue between stakeholders (Government, private sector and growers)
- Recognition of the separate roles of stakeholders.
- Encouragement of niche commercial crops for import substitution and export
- Manage the coconut industry for the benefit of both producers and processors
- Differentiate extension services between commercial farmers and traditional farmers
- Develop small-scale agriculture/food production units and industries

105 Previous approaches to development of the sector have identified market opportunities and made the (incorrect) assumption that farmers would move their production systems to capture these opportunities. This is not correct for the majority of FSM farmers. But there are niche windows of opportunity for agricultural products from FSM. Such markets may be small and diverse, but the

thing to understand is that they come and go - like any window, they open and they close and for agricultural products, this can be a rapid process. Recognizing this reality is a vital part of any investment strategy for a productive sector. Being able to capture these opportunities while they are there is the strength of the private sector. The cumbersome and bureaucratic processes of Governments are typically too slow for niche marketing. Niche markets exist for local crops as well as introduced crops – they may be different markets but that is the strength of such a strategy. One market closes off, another one continues, another opens.

106 Policy makers must recognize that agriculture will never develop with large mono-culture crop systems. The capacity to supply is too limited and the majority of farmers will not change their farming system. Exposure to one or two crops is a risky business but Agriculture can develop by accessing several small, diverse niche markets, recognizing these markets will close from time to time, but that others will become available.

107 In this kind of flexible changing marketing environment, each stakeholder should recognize its particular role. Government's role is to provide an enabling environment, including a consistent and appropriate policy framework, secure land tenure, provision of relevant public infrastructure, relevant research and development and effective quarantine and protection services. The farmers' role is to provide product that meets the quality and quantity requirements of the market on a regular basis. The private sector role is to find and fill markets with quality product, on a consistent basis and in a way which treats farmer suppliers equitably. One important aspect of this is providing farmers with up to date market information, including prices, marketing costs and customer feedback. Everything else in the marketing chain should be the role of the private sector. Pacific Governments have tended to ignore this, claiming their economy is too small for an effective private sector. The reality is that successful exporters are the best source of market information but this is rarely acknowledged. These roles should not be played out in isolation. There needs to be regular dialogue between Government and the private sector (involved marketing and input supply), between Government and farmers and between private sector and farmers.

108 There are a number of niche markets that already exist, and are being filled to some degree. There are opportunities to leverage the FSM image of a clean and green environment where food can be produced without concerns about contamination. Local products can be labeled as being produced by small, poor farmers in FSM, perhaps organically. Such a strategy would return a premium price in some markets. Niche markets can be for import substitution too. A community of farmers could agree to produce to replace a share of the market for some imported fruit and vegetables.

109 Agriculture must be adaptable to the demands that socio-cultural activities place on farmers and their families. The major constraints to commercial agriculture are not mainly technical, economic, freight and lack of markets.

110 The success and growth of commercial crops produced by traditional agriculture cannot be over-looked. Betel nut and kava are major contributors to FSM agriculture exports.

111 The Coconut crop is the only cash crop option for the 19,071 people living in the outer islands. The crop continues to be subsidized by Government, but to a lesser degree. The government marketing agency (CDA) will incur losses of about \$73,000 in 2004 and is projected to lose about \$68,500 in 2005. These losses would be very much higher if the copra price had not increased by 70% in the last 2-3 years. The prospects for the future lie in the extraction of oil from fresh nuts. Current production would produce about 100,000 gallons - the oil extracted from fresh nuts is the premium, virgin grade.

112 Revenue would equate to about \$210,000, compared to 2004 copra export revenue of \$157,000 – 33 percent higher. Farm gate payments could increase and Government could cease subsidy payments. Clearly in recent years, Government policy for the coconut crop has not been for the benefit of the growers.

113 There are still further opportunities for value adding to the coconut crop by processing the oil into high end products as has been successfully achieved elsewhere in the Pacific.

3.3.5 Strategic Goal 4: Promote environmentally sound and sustainable production.

a Supporting Policies:

- Establish effective mechanisms to control invasive species
- Discourage slash and burn farming/deforestation

114 FSMs limited land resources and fragile eco-systems cannot be left to casual methods for addressing environmental protection, given the rapid deterioration that can result from inappropriate production practices. The causes and effects of environmental decline are often not immediately obvious or understood by resource users. For those striving to make a living the issue may not be a priority. As proven in a number of programs, a community-based approach focusing on resource users through education and support services can yield results. The policy is aimed at a pro-active and integrated approach to addressing environmental sustainability.

115 Environmental degradation continues to impact on food security. There is heavy reliance in most islands in FSM on seafood, especially subsistence catches from the fringing reef. However, land degradation and resulting reef siltation are heavily degrading reefs to the point where they are dying.

3.4 Policies & Outcome Performance Measures

Strat. Goal & Outcomes	Outcome performance measure	Discussion
1.1 Adherence to an agreed policy framework based on solid information		
1.1 (i)	Agriculture sector policy reflects the views and priority needs of all major stakeholders by Dec. 2006.	The private sector is very cynical about Government's role in the sector and farmers have little participation or service support.
1.1 (ii)	Public investments in agriculture sector are agreed by private sector and farmers in relevant States before expenditure is approved	A unified, multi-stakeholder sector planning approach is the absolute pre-requisite to any subsequent performance.
1.1 (iii)	Less waste of scarce public resources	Wastage should be minimized.
1.2 Allocation of an equitable Government budget share to agriculture		
1.2 (i)	Budget share allocated to agriculture increases to 3% of total by 2009	The current share is 1.8% - not a true reflection of the role of agriculture in FSM society or economy.
1.3 Equitable allocation of Government budget for agriculture between staff salary related costs and operating expenses		
1.3 (i)	75% of agriculture extension services are undertaken by civil society and community groups on contract basis by 2007.	Expenditure should focus on quality outcomes for farmers..
1.4 Delivery of effective education to rural population		
1.4 (i)	Better educated rural population, equipped to improve traditional systems to meet fiscal demands of Compact 2, attain at least 50% high school completion rates by 2015	Currently, traditional farmers are disadvantaged by their limited education. Understanding technical and financial opportunities requires basic levels of education.
1.5 Raising the image of agriculture as a worthy and satisfying career choice		
1.5 (i)	Rates of youth migration are contained at 2004 levels	Agriculture needs a better image. If it were presented to young people within a dynamic policy framework with a clear vision and profitable opportunities, more would see it as a career with dignity.

Strat. Goal & Outcomes	Outcome performance measure	Discussion
1.6 Affordable farm monitoring system established		
1.6 (i)	Quality agricultural data available on real time basis to all stakeholders including non-government	Policy makers and business people are working a relative vacuum as there is so little data available.
1.7 Invest in border protection and agricultural quarantine		
1.7 (i)	Subsistence families and traditional farmers adequately protected from introduced weeds, pests and diseases	Limited investment in quarantine places those who rely on natural resources for a living a great risk of loss of livelihood.
1.7 (ii)	Export market access is enhanced by adequate certification on country by country basis.	Market access for agriculture products today is built on certification of being free of disease, pests and contamination. Failure to properly certify can quickly close a market for farmers.
Development of a flexible, affordable extension service specifically designed to deliver quality services to traditional farmers		
2.1 (i)	75% of agriculture extension services are undertaken by civil society and community groups on contract basis by 2007.	By moving to contracts, Government will have more control over performance and measurement of it. Contractors will have a direct incentive to perform or they lose their contract.
2.1 (ii)	A livelihoods approach to traditional agriculture with community ownership results in a 10% increase in production and the consumption of local foods and 10% increase in quantity of local produce sold in local markets by 2009.	By providing well-targeted and quality services to farmers, there is a real opportunity to capture immediate and sustainable output gains.
2.2 Elimination of Vitamin A deficiency among the FSM population		
2.2 (i)	Vitamin A deficiency levels less than 10% by 2009	Correction of this problem is simple and low cost. A well-directed campaign to include local nutritious foods in diets would address this.
2.2 (ii)	50% reduction in infant mortality by 2010	FSM infant mortality rates could be halved with proper infant nutrition.

Strat. Goal & Outcomes	Outcome performance measure	Discussion
2.2 (iii)	Reported morbidity rates among all age groups reduced by 50% by 2010	As well as death, Vit A deficiency contributes to a number of non-fatal illnesses that weaken the population. Susceptibility to many of these diseases will be lowered with good diet.
2.3 Develop of more focused, HH food security strategy for agriculture in Chuuk		
2.3 (i)	Agriculture program in Chuuk better reflects the pressing food security issues there.	A review of the extension strategy for Chuuk is the first step to solving the issues of land shortage and overcrowding.
2.3 (ii)	Food insecurity reduces by 30% by 2009	The specific food security orientation of the Chuuk extension program will reduce reliance on imports by providing more local food.
2.3 (iii)	Cooked foods exports increase by 30% by 2009	Exports of cooked processed foods from Chuuk are an opportunity that the revised extension package will build on.
2.4 Replace some imported foods with local product		
2.4 (i)	10% reduction in HH expenditure on imported foods by 2010 in FSM	The traditional farming system has considerable potential for increased output. Home technology courses in food presentation will allow diets to be varied and made more interesting and more convenient, hence encouraging a switch back to local foods.
2.4 (ii)	Tourism and visitor industry using local foods in 20% of meals presented by 2010.	The projected growth in tourism is an opportunity to present local foods to visitors, hence maximizing economic gains from tourism. A program to encourage chefs to use local food and entice visitors to eat it will be introduced.
3.1 Establishment of regular dialogue between stakeholders (Government, private sector and growers)		
3.1 (i)	Collaborative approach to domestic and export market-	As discussed under Policy 1.1 above, if farmers are to gain

Strat. Goal & Outcomes	Outcome performance measure	Discussion
	ing by 2007 results in greater market volumes and higher prices	from investments in the sector, marketing must also be a collaborative effort with each stakeholder focusing their own particular responsibilities and roles.
3.1 (ii)	Higher cash returns for commercial farmers and exporters	By working together in finding, accessing and filling markets, the stakeholders will achieve greater volumes and prices which will benefit growers.
3.1 (iii)	More efficient provision of key inputs including farm supplies and freight services by 2007	Farmers are constrained by erratic input supplies. Inputs should be the domain of the private sector. Groups of farmers can buy together and obtain better prices by bulk buying.
3.2 Recognition of the separate roles of stakeholders.		
3.2 (i)	More efficient marketing on behalf of growers results in greater market volumes and higher prices	See 3.1 (i) above.
3.2 (ii)	Higher cash returns for commercial farmers and exporters	See 3.1 (ii) above.
3.3 Encouragement of niche commercial crops for import substitution and export		
3.3 (i)	Export receipts for agriculture increase by 2% annually compound from 2009	Many small profitable domestic and export markets exist. They need to be recognized as such. This requires greater skill by farmers and extension staff in meeting these opportunities quickly. In turn, this requires communication and regular dialogue.
3.3 (ii)	Import value of fruit and vegetable able to be grown in FSM increasing by 2% annually by 2009.	See 3.3 (i) above.
3.3 (iii).	Higher cash returns for commercial farmers and exporters	See 3.1 (ii) above.
3.3 (iv)	50% increase in rate of new	The slow land registration rate

Strat. Goal & Outcomes	Outcome performance measure	Discussion
	land titles registered	obstructs greater commercial agriculture development. The contracting out of the surveying work may improve this. Right now land titles are not a major issue, but they will become one as the sector begins to develop. The issue must be addressed.
3.4 Manage the coconut industry for the benefit of both producers and processors		
3.4 (i)	Future structure of coconut oil industry is established within private sector framework that offers social protection to outer islands by 2006	Recognition of the role of the coconut crop in the lives of outer island communities is important as this industry is re-structured. Equally important is the need to move to a private sector ownership structure. Defining the best way of achieving both these goals will be an important outcome and challenge. There are some options available and investigation of the best choice is an urgent task.
3.4 (ii)	20% higher cash returns for outer island farmers by 2007	Coconut oil prices are 33% higher than copra prices. By extracting oil from fresh nuts on the outer islands, extraction will be higher, losses lower and the product more valuable. The challenge is to design a business model that benefits all industry stakeholders.
3.4 (iii)	At least 3 new employment opportunities in each outer island by 2006	Oil extraction in the outer islands will provide jobs.
3.4 (iv)	Nil direct subsidy payments to coconut producers by 2006	The opportunity to place the industry on a feasible financially sustainable footing exists. Prices for oil are at a high level but equally so are copra prices. Subsidies would need to be much higher if copra prices were lower.

Strat. Goal & Outcomes	Outcome performance measure	Discussion
3.4 (v)	20% reduction in out migration rates from outer islands to main islands or USA by 2010.	By underpinning the financial returns to outer island farmers, two advantages will accrue. The cash incomes will rise and the environment will be less pressured as less demands are placed on marine resources. This will encourage many to stay.
3.4 (vi)	Coconut crop export receipts up by 10%	Additional value of virgin quality coconut oils over copra.
3.5	Differentiate extension services between commercial farmers and traditional farmers	
3.5 (i)	Value of commercial agriculture activity grows by 5% per year from 2007	By developing a smaller separate fully commercially oriented extension arm, commercial farmers will be provided with quality technical, business and market help. This will quickly lead to better performance and entice other farmers into commercial farming.
3.5(ii)	Number of commercially focused agriculture enterprises increases by 25% per year on 2004 baseline.	See 3.5 (i) above.
3.6	Develop small-scale agriculture/food production units and industries	
3.6 (i)	Value of agriculture exports increases 2% per year from 2006	Some products are suitable for further processing and value adding. Coconut oil can be made into perfumes and attractively packaged for tourism; food can be cooked and packaged; by-products can be fed to livestock. There are opportunities which could be captured in a sector environment where stakeholders collaborate to produce competitive products.
3.6 (ii)	5 new jobs created per year from 2006	Difficult to measure how many, but small scale domestic processing offers opportunities for women.
3.6 (iii)	Food imports reduced by 3%	Fresh, quality products at

Strat. Goal & Outcomes	Outcome performance measure	Discussion
	per year from 2006	competitive prices will easily compete with imports.
Establish effective mechanisms to control invasive species		
4.1 (i)	Increase in returns to organic farmers by 10%	Organics offers real opportunity as a profitable niche market. Protecting the environment is a pre-requisite the achieving this.
4.2 Discourage slash and burn farming/deforestation		
4.2 (i)	Maintenance of remaining forest cover at 2004 levels.	Greater involvement of communities in having responsibility for this outcome will be important.

3.5 Assessment of risks and weaknesses

#	Risk	Suggested response
	Strategic Goal # 1: A well resourced and properly focused agriculture sector consistently operating within a stable policy framework	
1.	High growth projections for FSM economy prove to be unrealistic..	Recognize and accept sensible, realistic potential of the FSM economy and plan accordingly with expectations of incremental gains.
2.	Failure to adopt an all embracing policy framework, money continues to be wasted, farmers continue to suffer.	See Output 1.1.1 and Output 1.1.2 in Agriculture Policy Matrix.
3.	Political interference in sector management	Minimize political interference in sector management.
4.	Failure to re-structure agriculture services to release funds for more productive uses in agriculture.	Extension services are contracted out to ensure salary costs are managed and that flexibility in staff recruitment is achieved.
5.	Agriculture continues to be a career of last resort for young people, with out-migration the only real option.	Government takes the lead in raising the profile of agriculture, ensuring functional quality support services are available and that the profitable opportunities offered in agriculture are understood and taken up.
	Strategic Goal # 2: Increase production from within traditional farming systems for home nutritional and traditional needs and cash incomes	
6.	Continued attitude that traditional farmers are not relevant in economic and political terms	Senior political and public service leaders' emphasize the risks of continuing this complacency.
	Failure to re-structure extension services to offer more effective community based support to traditional farmers.	Where appropriate, extension services could be contracted out to civil society groups (e.g. modeled on existing successes in conservation) with specific conditions that services are to be community based and traditional agriculture focused.
7.	Inadequate funding for quarantine services results in farmers' livelihoods being damaged by introduced species and market failures.	Ensure quarantine services get adequate resources.
8.	Strategic Goal # 3:	

#	Risk	Suggested response
	Increased volumes of saleable surpluses to be marketed by the private sector into local and regional markets.	
9.	Failure of agriculture market stakeholders to collaborate in clearly defined roles	Govt and private sector leaders meet to formulate a marketing approach based on agreed roles; regular dialogue; and mutual trust. Regular meetings between stakeholders with transparent reporting of discussion are required. But unfair competition from subsidized Government production e.g. vegetables from the Chinese funded demonstration farm, will deter investment.
10.	Mistrust of private sector impacts in clear decision making for sustainable future of coconut industry and livelihoods of OIs.	Government and private sector agree to jointly fund and manage preparation of a business plan and feasibility study for the coconut industry with wide consultation with all stakeholders, including OIs. Careful consideration to ownership structure that includes a stake for OIs.
11.	Future developments in food processing are dominated by Government ownership and management with resulting inevitable failure.	Ensure all opportunities are widely advertised; ensure training courses are for private sector trainees as first priority; ensure suitable credit products are provided by Banks; and ensure private sector has ownership and management roles.
	Strategic Goal # 4: Promote environmentally sound and sustainable production.	
12.	Failure to identify profitable organic markets on which to base organic production.	See response to Risk # 7 above.
13.	Failure to convince rural communities to respect the remaining forest environment.	Work closely with communities at community level; place management responsibility on community, with incentive system for successful compliance.

3.6 Agriculture Sector growth projections (2005 – 2023)

116 Growth scenarios for the agriculture sector have been calculated (see Table 16 and Annex 2 for details). Growth projections for subsistence agriculture and forestry, export receipts have been calculated. Special account has been taken of the potential to add value to the coconut industry by moving from copra to oil production and of the opportunity to replace some food imports with locally produced crops – but only on a range of products that are able to be readily substituted.

117 In the moderate growth scenario over the period from 2005 - 2023, subsistence agriculture is expected to grow by 3.3 percent per annum, exports by 13.3 percent and 82 per cent of the readily replaceable products will be locally produced (see Table 5). The moderate growth scenario expects population growth to be 0.5 percent. In addition, account is taken of a higher proportion of the population falling back on traditional agriculture and higher output from traditional agriculture as a result of implementation of the Sector Matrix, especially restructuring of extension delivery. Export receipts are expected to grow as a result of improved extension to commercial farmers, a focus on niche markets and increases in food processing. As mentioned, the potential of the coconut crop is captured by moving to oil extraction resulting in 23 percent additional export receipts from coconut. Imports of readily replaceable products, taking account of limited tourism growth, increases by 1.5 percent annually.

118 In the sustained growth scenario over the period from 2005 - 2023, subsistence agriculture is expected to grow by 9.6 percent per annum, exports by 33.5 percent and 97 per cent of the readily replaceable products will be locally produced (see Table 5). The sustained growth scenario expects population growth to be 1.5 percent. As mentioned, the potential of the coconut crop is captured by moving to oil extraction resulting in 12 percent additional export receipts from coconut. Imports of readily replaceable products, taking account of strong tourism growth, increases by 5 percent annually.

119 In the low growth scenario over the period from 2005 - 2023, subsistence agriculture is expected to grow by 1 percent per annum, exports by 3.6 percent and 59 per cent of the readily replaceable products will be locally produced (see Table 5). The low growth scenario expects population growth to be negative (-0.5%). As mentioned, the potential of the coconut crop is captured by moving to oil extraction resulting in 4 percent additional export receipts from coconut. Imports of readily replaceable products, taking account of nil tourism growth remains static.

120 In summary, the agriculture sector and FSM farmers could make significant contributions to economic growth with increased support and direction.

Table 16 Sustained Growth Scenario

Sustained Growth Scenario:				
Subsistence Agriculture:				
Ave. growth rate (2005-2023)	9.62%			
Year:	2010	2015	2020	2023
Growth rate:	6.0%	6.0%	6.0%	6.0%
Total subsistence agric. (\$m)	38.83	51.47	68.88	82.03
Commercial Agriculture				
a) Agric. export receipts				
Ave. growth rate (2005-2023)	33.53%			
Growth rate:	11%	11%	11%	11%
<i>plus:</i>				
Coconut export growth:	18%	18%	18%	18%
Total Agric. Exports (\$m)	30.19	53.61	96.57	138.60
b) Food import substitution				
% replaced by 2023	97.24%			
Growth rate ¹ :	23%	23%	23%	23%
Net Food Imports (\$m)	1.18	0.44	0.16	0.11
<hr/>				
Moderate Growth Scenario:				
Subsistence Agriculture:				
Ave. growth rate (2005-2023)	3.27%			
Year:	2010	2015	2020	2023
Growth rate:	3.0%	3.0%	3.0%	3.0%
Total subsistence agric. (\$m)	28.85	33.12	37.47	40.35
Commercial Agriculture				
a) Agric. export receipts				
Ave. growth rate (2005-2023)	13.31%			
Growth rate:	7%	7%	7%	7%
<i>plus:</i>				
Coconut export growth:	11%	11%	11%	11%
Total Agric. Exports (\$m)	24.00	34.60	50.10	62.72
b) Food import substitution				
% replaced by 2023	82.42%			
Growth rate ¹ :	12%	12%	12%	12%
Net Food Imports (\$m)	1.21	0.71	0.42	0.34

Table 17 Moderate Growth Scenario

Table 18 Low Growth Scenario

Low Growth Scenario:				
Subsistence Agriculture:				
Ave. growth rate (2005-2023)	1.03%			
Year:	2010	2015	2020	2023
Growth rate:	1.00%	1.0%	1.0%	1.0%
Total subsistence agric. (\$m)	23.83	25.05	26.33	27.12
Commercial Agriculture				
a) Agric. export receipts				
Ave. growth rate (2005-2023)	3.62%			
Growth rate:	3%	3%	3%	3%
<i>plus:</i>				
Coconut export growth:	4%	4%	4%	4%
Total Agric. Exports (\$m)	18.95	22.11	25.79	28.30
b) Food import substitution				
% replaced by 2023	59.21%			
Growth rate ¹ :	6%	6%	6%	6%
Net Food Imports (\$m)	1.22	0.89	0.66	0.58

3.7 Agriculture Infrastructure Investment

121 An Infrastructure Development Plan (IDP) was prepared in 2002 by Nathan and Associates. The IDP covered anticipated infrastructure needs in FSM for the period 2003-2017. While the IDP addresses the infrastructure needs of the private sector, it makes no specific mention of the agriculture sector. However, does address one major area of importance to agriculture and that is secondary rural roads. There is \$250 million earmarked for expenditure on roads. The IDP notes that: (i) tourism is expected to grow strongly and that handicraft production will grow as part of tourism growth; (ii) existing infrastructure is confined mainly to main islands and that there is very limited infrastructure on the outer islands (with the exception of two outer islands in Yap); and (iii) continuing maintenance of infrastructure investments requires considerable strengthening.

122 Infrastructure investments relevant to agriculture which should be considered for addition to the IDP include infrastructure for quarantine, additional market infrastructure and coconut oil extraction facilities in the outer islands.

3.7.1 Quarantine infrastructure needs:

a Inspection facilities

- i Office (located near port or airport), inspection area, equipment, and a refrigerated container to store product after inspection, pre-export.*

Cost estimate: \$110,000 per State.

- ii Heat treatment plant*

There would be requirement for a small plant ONLY if there is sufficient capacity for thru-put. Investment is a “chicken & egg situation” - no product means not needed while no plant means no access for some products. Only relevant if papaya, banana, etc exports with fruit fly infestation problem. Say 2 required in medium term.

Cost estimate \$250,000 per plant (2).

- iii Chill Treatment Plant*

For tangerines from Kosrae only. The refrigerated storage container could be used. However, requires 10 days at 0C which is expensive in electricity costs – thus requires a minimum of 5 ton per batch – a volume that is seldom achieved at present.

iv Fumigation Plants

Methyl Bromide is being phased out due to ozone problems. CSIRO (Australia) is investigating and developing a new technology which is likely to be approved. When this happens, fumigation plants could be considered.

Cost estimate: \$25,000 per State.

Total quarantine infrastructure cost estimate: \$1,040,000

b Market infrastructure needs:

i Market cool storage, grading and packaging facilities – 1 per State.

Cost estimate: \$30,000 per state

ii Total market infrastructure cost estimate: \$120,000

c Coconut oil extraction facilities:

The capital cost of equipment and building renovation in each of the 19 outer islands is estimated to be \$9,500, as follows:

- equipment - \$3,000
- generator - \$1,500
- building - \$4,500
- freight - \$500

Total coconut oil extraction cost estimate: \$180,500

Total agriculture infrastructure capital requirements: \$1,340,500.

4 Fisheries

4.1 Fisheries Sector Review

4.1.1 Introduction

1 The extensive marine resources of the Federated States of Micronesia are contained within an Exclusive Economic Zone (EEZ) covering some 900,000 square miles extending from 135° to 165° east longitude and from 10° north to 1° south latitude in the western Pacific Ocean.

2 Responsibility for the oversight and management of nearshore and coastal resources to 12 miles is vested in State Governments with the management of offshore oceanic resources retained as a National Government function. In reflection of this demarcation, this review divides consideration of the marine and fisheries resources into Coastal and Nearshore Fisheries and Marine Resources and Oceanic Resources.

3 The past 15 years has seen substantive documentation and reporting of the marine and fisheries resources of FSM, most particularly in relation to optimizing National benefit from oceanic tuna fisheries. The preparation of the current report draws heavily on previous documentation, in particular the studies and reports associated with the development of sectoral policy and linked to the series of FSM Economic Summits.

4.1.2 Coastal and Nearshore Fisheries and Marine Resources

a The Nature, Extent and Utilization of Resources

4 Coastal and nearshore marine and fisheries resource use in FSM comprises inshore fisheries (those taking place in mangroves, reef areas, and lagoons), nearshore fisheries for large pelagic species (including tunas) and bottom fisheries (for snappers, groupers and other demersal species).

5 The nature and extent of these resources has been variously documented¹. The coastal areas and lagoons have an enormous variety of different resources with very different uses including:

- Living resources including reef and deep-slope fish, mangrove crab, land crab, coconut crab, lobster, deep-water shrimp, trochus shell, clams, pearl oyster, ornamental shells, turtles, octopus and squid, sea cucumber, sponges, corals. Uses include food, cash income from local and export sales of fresh and processed products, handicrafts, and shore protection by the reefs in general.

1 References throughout the report are given as endnotes.

- Non-living resources including sand and coral rubble used for building, road and other infrastructure construction.
- Recreational and tourist resources including swimming, diving and other aesthetic and economic benefits derived from the natural beauty of reefs and coastal areas
- Coastal based infrastructure including port facilities and airports to support fishing, tourism and other import/export activities that depend on access to the accessible coastal areas.

6 According to Smith, 1992², the nature and extent of resources remained difficult to determine. Based on a rough stock assessment of fishable biomass of between 15 and 70 tons per square mile, and a total lagoon area of over 2,700 square miles, a total fishable resource of 100,000 tons was estimated.

7 Subsistence fishers make the greatest use of inshore resources with much of the artisanal (small-scale commercial) fishing effort more focused on nearshore, bottom and coastal pelagic resources. A wide range of fishing methods are practiced with the most common being spearing (both by day and with the use of lights at night), trolling from small outboard-powered skiffs, hand-lining, gill-netting and cast-netting.

8 In the main islands of each state small-scale fishers sell catch in excess of their own requirements through various outlets. A few fishers and traders also ship small quantities of fish to other parts of FSM and elsewhere although commercial activity in the export of reef fish has recently been controlled in Kosrae, Yap and Pohnpei due to concerns as to resource depletion. The artisanal fisheries are essentially extensions of the subsistence fishery and can also focus on inshore species, which are susceptible to over-exploitation. Artisanal fishers also harvest trochus, some beche-de-mer, crabs, and some lobster for export. The greatest cash value resource is trochus (*Trochus niloticus*) shells, a commodity endemic to Yap but which since the 1930s has been progressively introduced to many other locations within FSM.

9 Attempts to develop and structure the small-scale commercial fishery, through projects such as the financing (or gratis provision) of fishing craft in Chuuk and Kosrae, as well as other schemes, have met with limited success. Problems with catch distribution and marketing are perennial constraints. Nevertheless a great deal of (mainly foreign) development funding has been directed towards the commercialization of inshore fisheries, and has included regional or village fisheries centers, infrastructure projects, and the provision of boats, motors and other equipment.

2 2 Smith, Andrew. FSM Marine Resource Profiles. FFA report No.92/17. March 1992

10 Nearshore and bottom fish resources are utilized by artisanal fishers operating mainly from outboard boats of 5-7 m in length. Most hand-line bottom-fishing is conducted in waters shallower than 100 m, as the bathymetry of FSM's islands does not provide much demersal habitat below that limit. Hand-line trolling is a common method employed by these vessels. Ice is increasingly being carried and the catch is either sold immediately upon landing, or else iced or refrigerated on shore for later sale or export.

b Institutional Arrangements

11 The development and management of coastal fisheries in FSM out to 12 miles from the shore is the constitutional responsibility of the four state governments. This responsibility encompasses all reef and lagoon fisheries as well as near-shore fisheries for coastal and ocean pelagic species, including tunas. Responsibility for marine resource fisheries development and management activities has been divested to separate agencies in Kosrae, Pohnpei and Yap with a single agency responsible for both management and development in Chuuk.

12 The FSM national government has the responsibility to provide support to state agencies involved in coastal fisheries development and management efforts. This is done primarily through the Fisheries Section of the Division of Sector Development within the Department of Economic Affairs. The Fisheries Section assists the states in implementing their development and management plans through the provision of technical support and information, facilitation of contacts between state agencies and external organizations, and coordinating the activities of FSM's international development partners in the fisheries sector. The Fisheries Section also retains responsibility for the operation of the National Aquaculture Center in Kosrae State.

13 In addition to the State and National Government Fisheries and Marine Resource Agencies, various other organizations are involved in coastal resource management. These include environmental agencies, fisheries and economic development authorities, and non-government organizations. Because of the variety of agencies involved in coastal resource management in FSM, coordination of activities and harmonization of goals and objectives is an ongoing challenge.

c Legal Arrangements

14 In the mid-1990's draft marine resources legislation was prepared for each State in consultation with State officials. The draft legislation was intended, in each case, to enable community or traditional participation in fisheries management, and to harmonize key provisions among states and with the national government for effective management and enforcement purposes. These respective marine resources laws, responding to different needs and situations in each

State, were originally inspired by the concept of a “model law”. Since that time, there have been changes in personnel, political administrations and priorities in the states. There has been uneven progress in revising the State fisheries laws. New laws have been passed in recent years in Yap and Kosrae but have yet to be adopted in Pohnpei and Chuuk. However, in Pohnpei, the recent adoption of a Marine Protected Areas Act, has provided a partial framework for fisheries management.

d Sector Performance

15 Dalzell et al. (1996)³ used information from Smith (1992a)⁴ to estimate coastal fisheries production and value as being approximately 6,243 metric tons valued at \$11,237,400 for subsistence fisheries and 637 metric tons valued at \$1,483,544 for small scale commercial fisheries. The Statistics Unit (1999)⁵ suggested that some 490 mt of fish and shellfish worth about \$1.2 million was “purchased by local fishing markets” in 1997.

16 The Household Income and Expenditure Survey (HIES) of 1998 reported that \$18,496,000 was spent by households in FSM on fresh and frozen fish, the vast majority of which would come from small-scale commercial fishing in FSM. Using average fish price information in Statistics Unit (1999), this equates to 6,323 metric tons of purchased fish.

17 Fisheries Engineering (1995)⁶ carried out extensive fieldwork in Pohnpei and estimated the total coastal fishery production of Pohnpei Island to be about 1780 metric tons (75% reef/inshore, 25% pelagic). Of this, 780 metric tons was attributed to subsistence catch and 1000 to commercial effort (with the proviso that approximately 28% of this was for non-sale domestic consumption).

18 Given an extrapolation of the catch level reported in Pohnpei (32% of FSM population) to all of FSM, the catch by coastal fisheries would be about 5,500 metric tons. However, taking account of population increase and the likely higher per capita catches of the outer islands and Chuuk, a more likely catch estimate is approximately 8000 metric tons per year.

3 Dalzell, P., T.Adams, and N.Polunin (1996). Coastal Fisheries in the Pacific Islands. *Oceanography and Marine Biology*, volume 34, pages 395-531.

4 Smith, Andrew. FSM Marine Resource Profiles. FFA report No.92/17. March 1992

5 Statistics Unit. Statistics Review. FSM Department of Economic Affairs (1999).

6 Fisheries Engineering Company (1995). Report on In-shore Fisheries Resources and Environment in Pohnpei State. Prepared for Overseas Fishery Cooperation Foundation, April 1995.

Table 1 Value of Exports of Reef Fish and Marine Products 2000 – 2002

Marine Product	2000	2001	2002
Reef fish	\$ 75,272	\$100,823	\$109,512
Crabs/lobster	\$172,339	\$177,948	\$206,480
Live clams			\$ 21,037
Other marine products	\$ 41,836	\$ 2,837	\$ 4,561

Source: DEA Statistics Unit

19 Gillett et al. (2001)⁷ estimated an annual catch of about 2,000 metric tons of tuna by small-scale coastal fisheries in FSM. Given agreement that the pelagic catch represents 25% of the fish caught in small-scale fisheries (as suggested by the Fisheries Engineering study and by individuals knowledgeable in FSM fisheries), then the total catch from small-scale fisheries would be about 8,000 mt.

20 Given known increases in fishing effort in recent years and taking account of increasing populations, an approximate indication of coastal fisheries production would be in the range of 10,000 metric tons distributed equally between subsistence and commercial activity. At \$2.90 per kg for the commercial catch and \$2 per kg of value for the subsistence catch this equates to a value of \$24.5 million per year.

21 The documented export component of the artisanal fishery is reported in Table 1. The commercial export of reef fish has been discouraged in Yap and Kosrae and limited in Pohnpei. There are currently no controls on the export of reef fish from Chuuk and the majority of current exports are thought to be taken from Chuuk lagoon. Given the general tendency to limit or control reef fish exports, it is unlikely that there will be a major increase in export values from the sector.

22 Perhaps with the exception of Chuuk, there is an increasing realization of reef fisheries depletion issues and the need for fisheries management. This is reflected in the formal establishment of 11 Marine Protected Areas (MPA's) in Pohnpei and well progressed plans for MPA's in Kosrae and Yap.

e Problems, Constraints and Issues

23 In reflection of the gradual move to a commercial economy, nearshore marine and fisheries resources have increasingly become the target for commercial development. The introduction of new fishing methods and associated technol-

7 Gillett, R and Lightfoot, C. The Contribution of Fisheries to Pacific Island Economies. 2001

ogy and the establishment of fisheries infrastructure have made commercial activity more prevalent and accessible, especially in proximity to urban development. Traditional communities have often yielded to unsustainable fishing methods to meet the need for immediate cash income.

24 Increasing population over the past fifty years has placed much greater demands on the resource for income generating activity, food, housing and other coastal based developments. The competition is intensifying between resource uses and their users, and inappropriate fishing techniques has accelerated resource depletion.

25 Increasingly the focus of effort in relation to coastal and nearshore resources has turned to resource management and issues relating to sustainability and the need to preserve fisheries for subsistence and community access. This is clearly exemplified in the work activities of State marine resource agencies and NGO's.

26 The particular configuration of resources and the ease with which they can be commercially extracted are two of the key factors influencing the need for coastal resource management in each state. Other important factors are population density, and the degree to which other developments are taking place in the coastal zone. Dredging and sand-mining, the construction of roads, wharves and buildings, solid and liquid waste disposal, deforestation and agriculture development almost always have negative downstream effects on coastal marine living resources, and FSM is no exception in this regard. As elsewhere, the impacts of coastal development in FSM are most pronounced in urban areas where population, infrastructure development and pollution are concentrated. Since these are also the areas where commercial pressure on coastal fish stocks is strongest, the result can be a degradation in fisheries.

27 Coastal and inshore resource management issues were summarized at the 2000 Coastal Fisheries Consortium⁸ as follows:

28 Chuuk State has historically had the largest state fishery agency in FSM. It is also the state with the most serious fishery management problems. High and rapidly growing population is creating greater pressure on fishery resources. There are large numbers of boats in the lagoon (reportedly over 2,000). Although many of these are used primarily for transport, many are also used for fishing, at least occasionally. Good air connections exist to Guam, which provides a market for a component of the catch. Dynamite fishing is prevalent, and dredging and sand-mining for land fill and for building materials is largely uncontrolled. The dredging problem is exacerbated by the shortage of land on

8 Preston, G. Proceedings of the Coastal Fisheries Consortium. ADB TA No. 2832-FSM. 2001

Weno, the state center, where development is leading to extensive shoreline reclamation. The State's numerous municipalities (and in some cases individual reef owners) nominally have some authority to control access to their fishing areas but these seem to be upheld only in the outer island and more remote parts of Chuuk proper, and are largely ignored close to the population centers. There are no current data on fish catches or production but anecdotal information suggests that large quantities of reef fish are being exported by air to Guam, and that strong declines in abundance of some resources are said to have occurred in some areas.

29 Kosrae is the state with the least complex fishery management environment. A single small high island with a small population (who are historically not such ardent fishermen as those of other FSM states), limited resources, and far from most commercial marketing opportunities, Kosrae's fishery management problems are mainly related to the smallness of the resource. Harvests of certain key species such as trochus and crabs are, or need to be, controlled, but most threats to coastal resources come from land-based developments which cause increased runoff, pollution or sedimentation. However Kosrae probably has the best-developed coastal management system of any state, with environmental review procedures being progressively implemented for all coastal development projects. Basic statistics on catches are said to be collected on a regular basis, but these are not analyzed or published.

30 Pohnpei is something of an intermediate case in terms of resources, degree of exploitation, and the extent of fishery management problems. Some production statistics are collected by the State fisheries agency, but these are not analyzed to show trends or even annual production data. The general perception in Pohnpei seems to be that resources are not yet in crisis but that the time is approaching when management action will be needed, at least on Pohnpei proper. Unfortunately there is also something of a fatalistic view that management will not be possible until a crisis situation develops. As in other states, enforcement of State fishery laws by State police or conservation officers is largely ineffective, while the absence of traditional reef/ lagoon tenure systems on Pohnpei proper may impede the development of community-based management arrangements. A major issue in Pohnpei is land-based development: the island has lost a large proportion of its virgin forest to the cultivation of sakau and this is thought to have caused increased runoff, sedimentation, and chronic reef degradation.

31 Yap is unique in the degree to which traditional marine tenure arrangements have been preserved, both in Yap proper and in the outer islands. Inshore fishery management in the state essentially needs to be community-based because the state constitution and laws recognize that communities and their leaders have authority over access to and use of coastal areas. Relative to other

states, Yap has a large resource base and in most areas a small population, so management issues related to over-exploitation are generally not pronounced. Nevertheless some resources, especially of sessile types such as clams and beche-de-mer, or of other species close to the state center of Colonia, have been seriously over-exploited in the past, demonstrating that the traditional system of tenure does not guarantee effective stewardship. For several years the State Government has been progressively trying to introduce a coastal area management plan that will be implemented through the actions of both Government and traditional groups. As elsewhere, sand-mining and dredging were noted as serious environmental problems that were difficult to control.

32 As can be seen, the four FSM states are quite different in the fishery management problems they face. However, some common themes emerge:

- In most states there is more than one agency that has responsibilities relating to inshore fisheries management. This is not a problem when agency heads are willing to work together, but that is sometimes not the case.
- There appears to be a general lack of awareness or understanding of the resource base that is available to support coastal fishery development. Few detailed assessments have been carried out of inshore resources, and comparative information from elsewhere has not been extrapolated to the FSM situation. In general, there is perhaps an over-optimistic view of the degree to which coastal resources can support commercial development.
- Perhaps because of the failure to appreciate that coastal resources are limited, there has also been a general lack of awareness of the need for fisheries management, and the advantages that this may bring in terms of sustainable benefits. This often extends to all levels, from resource users to decision-makers, and may include the staff of fishery agencies. In those locations where traditional marine tenure does not exist, even if resource users are aware of the benefits of management, there may be no incentive for them to act in a conservation-minded manner.
- There is a universal difficulty in enforcing State-level fishery regulations. Enforcement is impeded at every step: there are not enough enforcement officers or patrols, enforcement officers often turn a blind eye to offenders because of family or personal connections, and on the rare occasions that cases are brought to court, they are often dismissed or dealt with lightly, providing no disincentive to the offender.
- There is also a widespread belief among State fishery agencies that management must be effected through communities or municipalities. This is generally coupled with a lack of knowledge on how to go about the process of promoting or introducing community-based management.

- In three of the four states, sand-mining and dredging are said to be serious environmental problems that are difficult to control (often because of vested interests) and which are having negative effects on coastal fishery resources.
- In general the States are progressing towards an integrated approach to coastal area management. Three of the four states have or are working towards coastal resource management plans, although only in Yap and Kosrae is this at a reasonably advanced stage of implementation.

33 A final observation is that management arrangements seem to be most effective in those States or areas where a community-based or participatory approach is used. This observation encompasses both the more traditional systems in place in Yap and in the outer-island areas of other states, as well as the more modern participatory approach

34 Increasingly, the principle issue for nearshore resources is that of sustainability and effective resource management.

f Development Potential

35 Due to their distinct biological, physical and economic characteristics, FSM's four states each have different prospects for the development of coastal living marine resources. In terms of resource endowment Chuuk and Yap states and, to a lesser extent, Pohnpei state, have extensive areas of reef and lagoon and in consequence relatively substantial inshore resources. Kosrae, a single high island with a limited coastline and small fringing lagoon is much more limited in this regard.

36 As well as resource abundance, the commercial potential varies considerably from state to state. Local markets for fish could be developed further in each state, particularly in Pohnpei which, as the seat of national government, has the most extensive cash economy. Yap, being in closest physical proximity to Guam and the large demand for fish there, formally participated in a relatively steady reef fish export trade to that destination. As a resource management measure, this trade has recently been restricted. Pohnpei also participates in a similar trade with some species controls and a higher overall cost for fish transportation. Chuuk exports of reef fish have increased in recent years despite resources within the state being less conveniently distributed in relation to transportation hubs. Kosrae, which is hampered both by high transportation costs and limited resource endowment, is effectively excluded from such trade.

37 In three of the four FSM states (i.e. all but Kosrae) there exist 'outer' islands that are either coral atolls or single coral islands. The outer islands participate in the cash economy to varying degrees, and constitute a special case when it comes to both fisheries development and living marine resource man-

agement. For most of the atolls, many of which are small by regional standards, the lack of regular transportation and resource limitations preclude the monetization of most coastal fishery resources. All states except Kosrae possess uninhabited or lightly-inhabited atolls (and islands, in the case of Chuuk) which have commonly been seen as ‘storehouses’ of marine resources, and whose existence further complicates management in those states.

38 The main role of small-scale fisheries is likely to continue to be in providing subsistence protein, contributing to dietary health, and helping maintain rural lifestyles in the face of a tendency to urban drift or emigration. Artisanal fishing may be able to expand in some areas through local market development or by taking advantage of export opportunities to Guam and Saipan. Where marketing problems can be overcome, however, resource constraints will quickly limit commercial fishery expansion.

39 There has been no significant documented attempts to quantify what the development potential of most inshore resources might be, except in regard to one or two specific fisheries such as for trochus. In general terms, however, this potential must be quite limited, and is unlikely to be sufficient to justify extensive infrastructure development. In addition, the importance of the contribution of coastal fisheries to subsistence living and dietary health should be recalled when considering commercialization and the development of export markets.

40 One area of possible development potential is in linking the management of inshore resources to key activities in the tourism industry based on sound environmental management. A pristine marine environment is one of the underpinning sales opportunities for tourism development. It may be, that in some situations, there is greater potential benefit to be had from the closure or preservation of selected sites through the establishment of marine reserves, sanctuaries, or marine protected areas). For example, if key selected areas of coral bio-diversity or fish abundance were reserved as dive sites and marketed accordingly, it may be that there would be greater overall community benefit generated from income generated by the dive industry.

41 This has been clearly demonstrated in Palau with an extensive Marine Protected Area (MPA) program. Primarily due to the efforts of the Pohnpei Conservation Society, a network of 11 MPA’s, underpinned by legislation, are already in place in Pohnpei. The development challenge here is to link conservation efforts to tourism marketing and establish mechanisms to ensure direct benefits to communities.

42 There may also be scope to further develop coastal pelagic fisheries. Deployment of Fish Aggregating Devices (FAD’s) in coastal areas has potential to divert fishing effort from nearshore and reef based fishing to targeting of tunas and other coastal pelagic species. The emphasis in this scenario would likely

be on diverting fishing effort from heavily fished resources rather than increasing overall fishing effort.

43 Given the increasing focus on resource management and conservation, it must be concluded that there is very little real development potential in near-shore and coastal fisheries.

g Aquaculture

44 Aquaculture has been the focus of technical and development attention in FSM, as well as in some neighboring countries, for at least 20 years. Numerous documents, reports and reviews exist, most of which emphasize the potential of specific forms of aquaculture for development as well as for other purposes, such as reef reseeded.

45 A National Aquaculture Center (NAC) was established in Kosrae in 1991 to explore aquaculture potential and to undertake research, demonstration and training. Its primary work involved propagation of giant clams for farming and re-seeding in other states. In its early days the NAC was the operational base for aquaculture extension agents funded through the US Center for Tropical and Sub-Tropical Aquaculture (CTSA)/ Land Grant Program, but these have now relocated their activities to Pohnpei.

46 Despite the activities of the Center, so far no private commercial culture operations for giant clam have commenced in FSM, there has been little reseeded activity carried out, and there appears to be little prospect of any such development in the foreseeable future. Other aquaculture initiatives have been and continue to be supported both by the Government and by several local and international organizations working in FSM, including CTSA, the College of Micronesia, Japan Overseas Cooperation Volunteers, and the Pohnpei Agricultural Training School, and the FAO South Pacific Regional Aquaculture Program.

47 Sponge culture trials were begun in Pohnpei about 10 years ago and several pilot farms started in Pohnpei with donor funding support. There are now 9 established farms in operation but production volumes have yet to reach the levels required to attract export markets. The culture of *Eucaema* seaweed was attempted in Pohnpei during the mid 1980's, but relatively low returns to farmers and other problems prohibited it from developing despite success in growing the seaweed. Black pearl culture trials began on Nukuoro atoll in Pohnpei state in 1995. Initial harvesting has reportedly yielded good quality pearls and several other ventures are in the early stages of development. Ventures in farming milkfish, tilapia, carp and prawns have been attempted or proposed but have to date not resulted in sustained commercial success. More recently, a Korean Joint Venture company (Hans Micronesia Inc) has reportedly commenced an operation whereby fry are imported into Chuuk for sea-cage

grow-out and subsequent export. In Kosrae, a project is underway to develop capacity for the culture of mangrove crabs.

48 Despite widespread investment and interest among both national and state governments in the commercial potential of various aquaculture pursuits, there has been very little commercial development. Traditional land tenure systems are a further impediment to the development of terrestrial aquaculture projects in some areas. Prospects for commercial activities have probably been overstated, and it seems unlikely that the sector will become a significant revenue earner for FSM, at least in the near future.

49 However, this is not to say that there is not potential for subsistence and artisanal aquaculture activities to be successful, either in income generation or simply for food production.

50 Other aquaculture projects that have been investigated include trochus re-seeding and transplanting. Much has also been made of the potential for cultured clams in reef re-seeding or re-stocking programs. Re-stocking is viewed as a way to restore populations of vulnerable species such as giant clams that have been depleted by over-fishing. However, it is important to note that restocking will not have a beneficial effect in the absence of fishery management. If resources are depleted because they are being harvested before they get a chance to reproduce, the same thing will likely happen to re-stocked resources.

51 In the regional sense, there is little, if any, evidence that re-stocking programs for tropical marine invertebrates (or most other marine species) makes any detectable difference to the wild populations, even when done on a very large scale. The small scale of hatchery operations and the potential absence of management or monitoring systems will likely mean that juvenile release programs will not have any meaningful impact on wild populations and therefore be unlikely to contribute in any significant manner to resource management or conservation. However, in a scenario where restocking activities are coordinated with community participation in management strategies (such as the establishment of marine reserves or protected areas), the restocking event is likely to be positive and focusing for communities.

52 Ten years prior to the 2000 fisheries consortium, a review of aquaculture in FSM⁹ made the following comments:

- The present status of aquaculture in the FSM indicated that the prospect for commercial activities has been exaggerated. Expectations have been

9 Anon. Evaluation of aquaculture projects and production of an aquaculture development plan for the Federated States of Micronesia. Report prepared for the FSM National Office of Planning and Statistics. Australian Planning and Training Associates (APTA) Pty.Ltd. 1990

inflated to unrealistic levels through uncritical assertions about the commercial viability of aquaculture;

- On the evidence obtained in the course of the review, and from analysis of similar activity throughout the Pacific and Asia, aquaculture will not be a significant revenue earner for the FSM;
- This emphasis on aquaculture, in terms of its commercial potential, has been to the detriment of the ability in the individual states and the nation as a whole to develop a coherent Fisheries Development Plan, of which aquaculture forms an integrated part, through the diversion of resources, manpower and funds;
- A number of projects identified as coming under aquaculture divert attention from addressing real concerns of resource conservation and management. Reseeding programs cannot substitute for conservation of stocks and control of fishing effort.

53 These conclusions would appear to be still valid today. After at least 20 years of investment and technical support there is still not a single commercial aquaculture enterprise in FSM, and aquaculture activities have not yet had any demonstrable consequence in regard to resource conservation and management. Most aquaculture specialists in FSM agree that the future development of aquaculture in the country will revolve around high-value export products such as pearls, aquarium life, sponges, and perhaps organisms with pharmaceutical properties.

54 Given the high likelihood of continuing support for aquaculture by FSM's development partners, it may be more appropriate for the Government to consider channeling its own resources into other development or conservation activities with more tangible or immediate benefits.

55 In consideration of this, a review of the operation of the FSM National Aquaculture Center¹⁰ in 2000 concluded:

- The NAC's focus on giant clam aquaculture is providing little or no economic development benefit to FSM;
- There may be environmental or conservation benefits from giant clam culture operations in certain states (especially Chuuk) if these take place within the framework of a broader community-based coastal resource management initiative. However these benefits could be delivered more effectively and at lower cost through non-aquaculture solutions, or through state-level aquaculture facilities or arrangements;

10 Preston, G. Future Operations of the National Aquaculture Center. ADB TA No. 2832-FSM. 2001

- Physical location of the NAC and associated transportation logistics and costs will make it difficult for the Center to assist the states by regular provision of seedlings or juveniles;
- Uncertain markets and a lack of business experience within NAC mean that there is little prospect of the Center becoming self-financing, or even recovering a major portion of its operating costs, under present management arrangements;
- There may be scope for research into aquaculture development prospects based on higher-value species or products. However this would be strategic research involving high risks and a very long-term perspective. For research activities to be of any value, they would require a higher level of scientific, technical and management capacity than the Center presently embodies.

56 The review noted that continued operation of the NAC by the Department of Economic Affairs (DEA) would constitute an indefinite commitment to financing activities and be unlikely to generate significant economic benefits. It was suggested that the DEA either divest itself of the NAC, or enter into a partnership with another organization better positioned to deliver research, educational and extension outputs, probably based on species other than giant clams.

57 The future operation of the NAC was given further consideration in the privatization study of 2000¹¹. This study concluded that, following a detailed market research study, FSM should seek out opportunities for possible joint venture partners and look to commercialize center activities.

h Coastal and Nearshore Resources and the Sustained Growth Strategy

58 The level of employment (formal and informal) and income (in-kind and cash) activity in inshore fisheries is related to two essential factors: Compact funding levels and population growth. Historically, Compact funded Government and related jobs have provided attractive incomes, drawing labor away from activities such as subsistence fisheries. This has formally resulted in a reduced dependence on inshore fisheries as a source of food or cash income.

59 However, the 2000 census shows a dramatic increase in the number of people engaged in subsistence and artisanal activity in fisheries and agriculture. This indicates a refocusing of effort in subsistence fishing. Increasing effort in inshore fisheries as a cash or in-kind income source combined with rising populations has, in recent years, resulted in greater levels of overall exploitation. A

11 Aries Group, Privatization of Public Enterprises and Corporate Governance Reforms. ADB TA# 3201 FSM

combination of population increase and high unemployment could place an unbearable burden on inshore resources in some areas.

60 Inshore fisheries and marine resources are seen by resource users as having a number of inherent advantages as a source of income and employment. Harvesting of wild species and use for food or domestic and export sales is immediate compared to the growing period needed and seasonality of agriculture. Reliable figures do not exist on the supply of inshore fishery products for subsistence and domestic use. If incomes fall (as a result of a decline in Compact funding) there is likely to be greater activity and supply from inshore fisheries for food and cash purposes, especially from subsistence and artisanal activity.

61 Increased emigration to locations such as Guam can provide a conduit for marine products from FSM, as well as expanding the commercial market for those products. Increased supply through viable and sustainable inshore fishing and aquaculture enterprises and improved processing, quality control and marketing could add value to the economy, but potentially at a high environmental cost.

62 The overriding issue is thus, the environmental sustainability of resources. The inshore resource has, in many cases, already been depleted and the immediate focus required is resource preservation rather than development.

63 However, as previously noted in relation to development potential, the inter-relationship between marine resource management and marine based tourism does offer potential for positive contributions to economic development. This is especially apparent in a scenario where infrastructure development programs cited in the tourism development plan of the IDP are implemented and tourism marketing strategies better developed to reflect the eco-tourism potential of established Marine Protected Areas.

4.1.3 Oceanic Resources

a The Nature and Extent of Resources and Levels of Exploitation

64 The Exclusive Economic Zone of the Federated States of Micronesia (EEZ) covers an area approximately 900,000 square miles across the Western and Central Pacific Ocean (WCPO). It is one of the largest EEZs under national jurisdiction in the WCPO and has a diverse tuna fishery which ranges from subsistence and artisanal operations to industrial scale longline, pole and line, and purse seine fishing.

65 The main oceanic target species are skipjack tuna (*katsuwonis pelamis*), yellowfin tuna (*thunnus albacares*) and bigeye tuna (*thunnus obesus*) with the vast majority of fishing effort coming from the established distant water fishing

nations (DWFN), the United States, Japan, People's Republic of China (PRC), South Korea, Taiwan.

66 The extent of the tuna resource of FSM (as a portion of the resource of the WCPO) has the potential to vary greatly depending on fishing effort, the migratory nature of the species and the climatic events known as *La Niña* and *El Niño* which effect sea temperature.

67 During a *La Niña* period (such as 1995), surface tuna schools are most active in the western Pacific Ocean in the area of the FSM EEZ. In contrast, as was the case in 1998, the surface schools concentrate more to the eastern part of the central Pacific during *El Niño* periods. The impact of this variation in all methods tuna catches within the EEZ of FSM is given in Figure 1.

68 As indicated in the table, FSM catches grew steadily to 253,174 metric tons (mt) in 1995 with subsequent significant declines through to 1998. An improved catch in 1999 of 178,473 has been followed by progressive declines to the lowest catch since 1985 in 2002 of 43,690. The catch trend improved with a reported 2003 catch of 161,810.

69 During the first half of the 1990s the tuna catch in FSM generally followed an upward trend that occurred in the entire Western and Central Pacific Ocean (WCPO). In reflection of the *La Niña* and *El Niño* phenomena, the catch in FSM started declining in 1996 while overall WCPO catches continued to increase. The difference became most significant in 1998 and again in 2002, when the total catch of tuna in FSM's EEZ reached lows of 47,000 mt and 43,690 mt. In the 1998 instance, the same time, the total tuna catch in the WCPO jumped to an estimated 1,773,780 mt, the highest on record.

70 The total catch of target tunas in the WCPO in 2000 was 1,852,746 mt. This was the second highest ever recorded for the region, after that of 1998. The tuna catch in the WCPO was 76% of the total estimated Pacific Ocean tuna catch of 2,452,746 mt and 48% of the world tuna catch of 3,832,118. This was the highest ever recorded.

71 The nature and extent of the levels of tuna exploitation in FSM waters in recent years is detailed in tables and figures provided as Appendix 1 and summarized here, with the addition of historic data, as Table 2.

72 More than 80% of tunas are landed by large purse seine vessels. Of these, the data from 1999 – 2003 shows a predominance of landings attributable to Japan with 194,307 tons and between 34 – 36 active vessels in any one year. Taiwan operated 40 – 42 active vessels in any one year for 163,927 tons and Korea maintained 24 – 26 active vessels for 146,772 tons.

73 The US reported catches totaled 4599 tons and those of FSM domestic vessels amounted to 3004 tons. The total catch for purse seine vessels fishing in FSM waters for the period was 562,509 tons.

74 As indicated in Table 2, longline fishing has shown a dramatic reduction in catches in the period 1999 – 2002 with a subsequent increase again reported in 2003. The downward trend matches reported catch reductions in other WCPO fisheries such as Fiji, Samoa and Tonga.

75 The FSM longline fleet comprises vessels from Japan, China, Taiwan and FSM. The vessels target deep swimming large yellowfin and bigeye tuna, primarily for fresh chilled export to Japan.

76 From total landings for the period 1999 – 2003 of 32,900 tons¹², the Guam based Japanese fleet vessel reported landings of 16,799 tons inclusive of by-catch. This fleet comprised 126 vessels in 1999, reducing to 110 and 66 in 2000 – 2001. The fleet further decreased to 61 vessels in 2002 but increased to 80 in 2003. The average catch per vessel in 1999 was 61.84 tons compared to 52.46 in 2003.

77 The Taiwanese fleet comprised the largest number of vessels with 79 in 1999 and 123, 98, 58 and 69 in the 3 subsequent years to 2003. These vessels

Table 2 Tuna Catches in the FSM EEZ 1991 - 2003

Year	Purse Seine	Longline	Pole & Line	Total (MT)
1991	110,445	10,024	23,819	144,288
1992	127,645	12,987	3,176	143,809
1993	159,356	15,025	6,720	181,101
1994	187,496	15,770	6,473	209,738
1995	216,294	18,724	18,156	253,174
1996	139,731	11,081	1,054	151,866
1997	70,572	9,597	1,003	81,172
1998	73,027	9,216	1,026	83,268
1999	168,127	9,791	555	178,473
2000	114,372	9,080	3,814	127,266
2001	82,797	5,175	687	90,660
2002	40,884	2,806		43,690
2003	154,262	8,271	1,733	162,212

12 Note: This figure does not include by-catch landings

landed a total of 6,357 tons for the period. Catches per vessel averaged only 12.46 tons per vessel in 1999 are remained low through to 2003 when a 20.7 ton average was achieved.

78 The FSM based Chinese fleet reduced to 21 vessels in 2003 landing just 620 tons. This compares to a high of 54 vessels in 1999 for 1027 tons. These vessels averaged 19 tons of landings for the 1999 fishing year but increased this to 29.5 tons in 2003.

79 In pursuit of domestic capacity development in the longline fishery in the 1990's, FSM encouraged both public and private sector investment in longline vessels. Domestic vessel numbers reached 25 in 1999 for 487 tons of landed catch at an average of 19.48 tons. Domestic vessels numbers have generally declined with 18 in 2002 and 21 in 2003. In the 2004 fishing year, only 12 vessels were thought to be active in the domestic fleet. The 21 operational vessels in 2003 reported 413 tons for an average of 19.66 tons.

80 As indicated in Table 2, the Japanese pole and line fishing fleet has operated variously in FSM with catch highs achieved in 1991 and 1995 and a subsequent reduction in fishing from 2000 to 2003 where there were 6 licensed vessels and reported landings of 1733 tons.

b Institutional Arrangements And Resource Management

81 Following a review and consultation process spanning some 10 years, the Marine Resources Act of 2002 (MRA 2002) was passed in to law as Title 24 of the FSM code.

82 The law established the National Oceanic Resource Management Authority (NORMA) (previously known as the Micronesian Maritime Authority (MMA) and the Micronesian Fisheries Authority (MFA)) as the national agency responsible for the management of oceanic resources from 12 – 200 miles in the FSM economic zone.

83 The mission of the Authority is to be an effective guardian and manager of the living and non-living marine resources in the exclusive economic zone of the Federated States of Micronesia for people living today and for the generations of citizens to come.

84 The Authority is tasked to :

- Ensure that these resources are used in a sustainable way;
- Obtain maximum sustainable economic benefits from the resources; and
- Promote economic security for the Nation through their use.

85 The Authority is empowered to draft regulations for the management, development and sustainable use of fisheries resources and related activities in the exclusive economic zone, in relation to fisheries monitoring and control and to implement access agreements and fisheries management agreements. Other regulatory powers relate to confidentiality of information, compliance with regional arrangements, the issuance of citations and assessment of penalties. NORMA is also tasked in the regulation and management of marine scientific management and training.

86 In addition to the regulatory function, NORMA is also tasked with the provision of technical assistance in the delimitation of the exclusive economic zone, the negotiation and implementation of access agreements and fisheries management agreements and the issuance of fishing licenses.

87 NORMA has a coordination role in the implementation of fisheries monitoring and control activities but active surveillance activity and the operation of patrol boats is carried out by the Maritime Wing of the FSM National Police under the Department of Justice.

88 In a regional sense, FSM has a history of active participation in the programs of the regional fisheries agencies, the Oceanic Fisheries Program of the Secretariat for the Pacific Community and the Forum Fisheries Agency (FFA). As such FSM is a party to the 1982 Nauru Agreement Concerning the Management of Common Interest and the 1994 Federated States of Micronesia Arrangement for Regional Fisheries Access.

89 NORMA representatives have also represented FSM in all 7 sessions of the Preparatory Conference for the Establishment of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific. FSM will host the new Commission which is established as the new coordinating agency for western Pacific oceanic fisheries management.

90 In 2000 the FSM President directed NORMA (then MMA) representatives to establish a National Steering Committee in support of the development of a Tuna Management Plan for FSM. A comprehensive plan has subsequently been developed and approved and is now recognized as the guiding instrument for tuna resource management in FSM.

91 The specific goals adopted in the plan are to:

- Ensure that the tuna catch does not exceed sustainable levels;
- Obtain national revenue from foreign fishing access agreements;
- Support development of FSM-owned and/or foreign FSM-based fishing enterprises;
- Encourage investment in enterprises related to tuna fisheries;

- Promote employment opportunities;
- Enhance international relationships beneficial to FSM.

92 The plan recognizes that tuna resource is shared with other countries in the region and is finite. It thus embodies principles relating to the precautionary approach to fisheries management. It is anticipated that the plan will continue to guide the development and management of the tuna resource of FSM for the foreseeable future.

c Current Situation and Sector Performance

93 The contribution of oceanic fisheries to the economy of FSM can be divided into benefits derived from activities as follows:

- foreign vessel access and license agreements;
- investment in shore based transshipment infrastructure and the provision of long line transshipment services for domestic based foreign long line vessels;
- domestic owned and operated long line and purse seine vessels;
- the purchase and on-sale or value adding of by catch;
- services provided in support of purse seine transshipment;
- the general provision of vessel support services in established ports;
- employment opportunities in each of the above activities;

d Access Arrangements

94 By far the largest and most consistent contribution to the economy from the sector has been the income that has been derived from access fees. With the inclusion of a 2003 access fee return of \$ 13, 473,183, total income for the period 1990 – 2003 is close to \$200,000,000. Figure 2 below shows annual fluctuations in access fee payments for the period. The downward spike of 1995 reflects a year where access arrangements with Taiwan were not successful and no agreement was reached. The peak income of 1994 reflects the presence in FSM that year of a large domestically based Taiwanese longline fleet. Similarly, the 1996 peak reflects a large payment from the US fleet of over \$6 million as part of the US multi-lateral access arrangement. Purse seine fees have stabilized with the implementation of 5 year access agreements with Korea and Taiwan. However, fees did drop in 2000 as a result of reduced fishing effort due to depressed prices.

95 More detailed data regarding access fees by fishing method and flag state for 2001- 2002 is given as part of Appendix 2.

96 In January, 2000 there were 7 bilateral and one multilateral foreign fishing agreements in place. In addition, there were 9 agreements with domestically-based foreign vessels. These agreements have remained relatively stable in recent years with 6 bilateral and 2 multilateral agreements (US Treaty and FSM Arrangement) and 8 agreements for domestically based foreign vessels comprising 6 purse seine licenses and 270 long line licenses.

97 In addition to the revenue from both foreign and domestically-based bilateral arrangements, as party to the Forum Fisheries Agency-administered

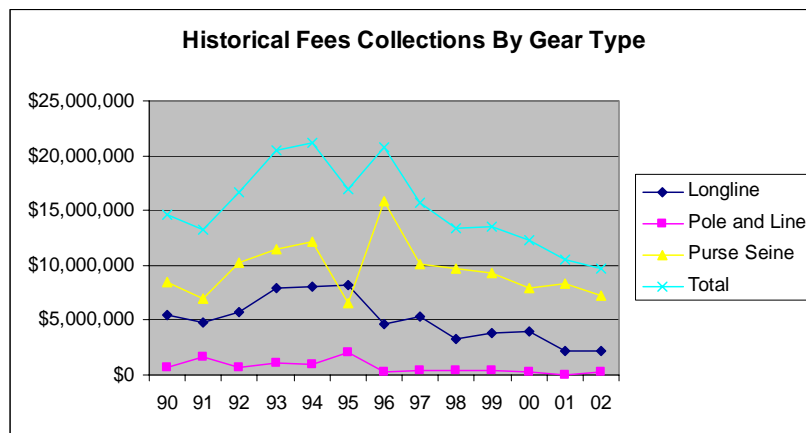


Figure 2. Historical Access Fee Collection by Gear Type

Multilateral Treaty with the United States, FSM receives a further estimated \$110,000 annually that is tied to fisheries development projects. The Japanese agreement also includes an annual payment of goods and services with an estimated value of \$550,000.

e Infrastructure and Long Line Transshipment

98 FSM National and State government investment in fishing vessels and infrastructure during the early 1990's is variously reported at between \$100 – 130 million. Much of this investment was channeled through a myriad of government owned corporations in each State with the intention that the establishment of fisheries infrastructure would stimulate State economies and foster further investment.

99 The various National and State entities established for fishing, vessel servicing and transshipment have ultimately accumulated high debt levels and large financial losses¹³ and have either ceased to operate or scaled back in their activities. Details of these entities and their current status are given as Appendix 3.

100 Transshipment facilities for longline caught sashimi tuna were heavily utilized during the mid-1990's with the presence in FSM of the Chinese company, Ting Hong, and the domestic basing of more than 200 vessels across the 4 States. However, Ting Hong operations departed FSM in 1996 leaving only 100 domestic based vessels and diminished utilization of the facilities. Ting Hong alone reported some 4500 individual transshipments in 1994¹⁴. By 2000, the number of transshipments across at FSM ports had reduced to 1004 and by 2002 this figure had further reduced to 774¹⁵. Utilization of facilities in Yap, Chuuk and Kosrae reduced to the extent that facilities in each port are now inoperable and longline transshipments are no longer taking place. The longline fleets of Japan, Taiwan and China have opted to transship from Guam and only 21 Pohnpei base Chinese vessels continued to transship from Pohnpei in 2004.

f Domestic Operated Long Line and Purse Seine Vessels

101 Details as to business structures and associated investments are given as Appendix 3. It is apparent that Government and domestic private sector investment in longline and purse seine vessels has proved to be high risk. This has been especially apparent in recent years with a significant reduction in the number of operational vessels in the longline fleet.

13 Burslem, W. FSM National Fisheries Corporation Review. 1999

14 Ting Hong Group. Review and Future Prospects of Ting Hong Operations in the FSM. 1996

15 NORMA. Annual Reports 2000 and 2001-02

102 In the longline fishery, domestic vessels (owned or domestically managed under agreements) rose steadily to number 25 in 1999. Since that time the number of operational vessels has decreased annually with only 18 vessels active in 2002 and 21 in 2003 with a further significant reduction to 2004 where only 12 vessels are reported operational¹⁶.

103 The State Governments of Pohnpei, Chuuk and Yap have all invested in the purchase of and operation of purse seine vessels. Pohnpei has 2 small seiners operated by the Caroline Fishing Corporation. Following issues relating to joint venture ownership and a period of receivership, the operational performance of these vessels has improved in recent times with higher international bulk tuna prices.

104 Chuuk State investment also involved complex joint venture arrangements. These ultimately led to the ownership of a single vessel, the *Nien Feioch*, by the Chuuk Public Fisheries Corporation. This vessel sank at the wharf in Chuuk in early 2004 and was uninsured.

105 Yap State also experienced difficulties with the operational management of their purse seine business. However, with a vessel purchased from South America and tight management, Yap's Diving Seagull company has performed well in recent years and is reportedly debt free in 2004 and able to pay dividends to the State.

106 Under a foreign investment permit, Tri-Marine (FSM) established in FSM in 1999 as a wholly owned subsidiary of Tri-Marine International Incorporated, a large international integrated fishing and processing company. By 2004, Tri-Marine had 3 operational FSM registered vessels.

107 An evolution in National direction in regard to sectoral investment is apparent. Fifteen years ago, the general perception was that, because of the weak private sector and other factors, development opportunities relating to tuna were in government investment in infrastructure and fishing and government participation in commercial activities.

108 Following a generally poor performance from these government interventions, the direction shifted to the idea that the most favorable opportunities were for domestic private sector companies to longline for fresh tuna.

109 In subsequent years, numerous failed operations of this type appear to have resulted in an additional evolution in direction. This is essentially that tuna fishing itself is too risky and that value adding ashore and servicing of fishing vessels are the most important opportunities.

16 Source: NORMA Annual Reports, 2000 and 2001 – 2002

g The Purchase And On-Sale Or Value Adding Of By Catch

110 Outside of the construction of cold stores in Kosrae and Yap, major investment in processing and value adding capacity has been limited to the Pohnpei Fisheries Corporation (PFC) which was established as a Pohnpei State public corporation in 1993. PFC is engaged in two principal lines of business, the provision of ice, and processing and marketing of second grade tuna, marlin, and bi-catch. A review of PFC in 2000¹⁷ revealed significant cumulative loss, cash flow difficulties and an inability to source sufficient raw material to adequately utilize facilities. Despite recommendations to the contrary, PFC remains operational.

h Services Provided In Support Of Purse Seine Transshipment

111 Since 1993 there has been a regional ban on at-sea in-zone transshipments of purse seine catches. This was intended to facilitate monitoring of catches, increase port usage, and generate revenue. In subsequent years, a large amount of tuna has been transshipped through FSM ports with an estimated 2400 individual transshipments in the period 1993 – 2003.

112 The ports of FSM have different attributes for transshipment. In general, Chuuk has the best anchorage, simply because the lagoon is large. Pohnpei has the best facilities for supplies, service, provisions, and crew rest/recreation. Yap is not favoured because the fishing action is mostly located at considerable distance to the east and the anchorage is small. The harbour at Kosrae is also considered small. In recent years the choice of transshipment is often between Pohnpei and Majuro in the Marshall Islands, depending on the location of fishing. Transshipment in Chuuk has all but ceased in recent years due to issues relating to security and an attempt to increase the transshipment fee.

113 The majority of FSM transshipments in the past 2 years (130 in 2002 and 100 in 2003) have been in Pohnpei. The number of transshipments in a particular port in any given year cannot be guaranteed as decisions on transshipment location are most often made by the company operating the carrier vessels, in consultation with the purse seine vessel owners or managers. The carrier companies therefore try to place their carriers in the most advantageous position, given the location of the fishing fleet at the time, destination of the fish, and estimated size of the loads to be delivered. However other factors are also taken into consideration, such as the availability of licenses in the particular country concerned, weather conditions, and most recent experiences in that port.

114 Purse seine transshipment does not require specific infrastructure other than general wharf facilities and port services associated with standard cargo

17 Ariès Group, Privatization of Public Enterprises and Corporate Governance Reforms. ADB TA# 3201 FSM

handling. Transfer of fish from seiners to carrier vessels takes place at anchor but vessels do berth for clearance and provisioning. Purse seine transshipment contributes to local economies through the purchase of goods, services and labor as well as in the collection of fees and charges. The extent of spending in any single transshipment will depend on the goods and services available. An estimate of current and potential levels of spending is given in Appendix 4.

i Employment And Employment Opportunities

115 Formal employment in tuna fisheries or related activities was estimated in 2001¹⁸ to total some 614 jobs comprising jobs on foreign vessels (150), jobs on locally based vessels (86), jobs in domestic tuna enterprises (178) and jobs in artisanal vessel operations (200). This estimate is at odds with the 2000 census data which reports formal employment at 226. Possible reasons for this are that 200 of the reported 2001 jobs are essentially informal and many of the 178 reported jobs in domestic tuna enterprise are likely to be casual in nature.

116 Analysis of the 2000 census and comparison with that of 1994 is summarized in Table 3. It indicates a dramatic reduction in the numbers of persons formally employed in the fisheries sector from 646 (approximate to the 2001 report) to 226 and a corresponding significant increase in persons undertaking informal activity in fisheries and agriculture from 7,375 to 15,216. While the loss in formal employment is reflective of the general downturn in transshipment and FSM port based fishing, it must also be seen as a serious indicator of the major problems facing the sector. Accepting the median incomes of the respective census periods, this reflects a loss of annual wage income in the vicinity of \$1.7 million.

117 The continued downturn in sectoral activity subsequent to the 2000 census suggests that levels of formal employment may have continued to decline in the period to 2004.

j The Economic Contribution Of Oceanic Fisheries To Fsm

118 The real contribution of oceanic fisheries to the economy of FSM in any given year is difficult to define. Account must be taken of fluctuations in prices for purse seine caught species as well as the substantial variations in prices obtained for sashimi exports. There is also an issue to define retained value in the services provided to the sector and in the value of the subsistence sector contribution. This said, an estimate of the value of oceanic resources for 2001 and 2002 is presented in Table 4.

18 Gillett, R and Lightfoot, C. The Contribution of Fisheries to Pacific Island Economies. 2001

119 While these figures provide a reasonable estimate of the total value of the resource, they do not in any way take account of costs or contribute to the determination of profitability.

120 In reality, analysis of the detailed costs of production would reveal a very high production cost in achieving the overall value. This has been exemplified in the generally poor performance of domestic longline vessels. This is best exemplified in discussion of the financial performance of the Government fisheries assets (see Appendix 3)

k Problems, Constraints and Issues

121 The most significant problem with oceanic fisheries in FSM is the failure to date to fully realize the potential benefits associated with the exploitation of available resources.

122 While FSM has enjoyed a reasonably consistent return from receipt of fisheries access fees, attempts to promote returns through infrastructure investment, transshipment, domestic fishing, value added processing, vessel servicing and employment have essentially failed to add significant value or return on investment. This is exemplified in the current non-operational or under-utilized status of infrastructure facilities across the States.

123 In order to examine the current constraints and issues in regard to achieving increased economic benefits, it is important to appreciate the wider international and regional context of oceanic fisheries performance in recent years.

124 Since 2000, Pacific Island domestic based sashimi tuna industries have experienced a downturn across the region. Operators in Fiji, Samoa, and Tonga have experienced declining catch levels (despite increasing fishing effort) and increasing competition from international suppliers to the principle market in Japan. Primarily as a result of supply, sashimi tuna market prices have tended to remain flat. In addition, the impact of the Asian economic crisis and the SARS epidemic have also had a negative impact on sashimi market prices. Coupled with post 9/11 security issues, increases in fuel prices and airfreight costs there has been an overall reduction to profit margins in sashimi tuna longlining.

Table 4 Estimated Value of Oceanic Resources to FSM in 2002

Item	Assumptions & Explanation	Est. Value 2001	Est. Value 2002
Total PS catch in FSM	82,797 tons @ \$800 ton in 2001 40,844 tons @ \$800 ton in 2002	\$ 66,237,600	\$ 32,675,200
Total LL catch in FSM	5,175 tons @ \$5000 ton in 2001 2,806 tons @ \$5000 ton in 2002	\$ 25,875,000	\$ 14,030,000
Access Fees	Combined total – all agreements	\$10,576,211	\$ 10,585,754
Domestic purse seine	FOB value from export data	\$ 6,212,328	\$ 5,454,868
Domestic based foreign PS	FOB value from export data	\$	\$ 635,717
Domestic longline	FOB value from export data	\$ 4,386,581	\$ 1,524,487
Domestic based foreign LL*	FOB value from export data	\$ 1,519,085	\$ 1,181,177
Fines	Actual figures	\$ 697,000	\$ 2,220,000
LL transshipment	1036 @ \$ 5000 retained in 2001 774 @ \$ 5000 retained in 2002	\$ 5,180,000	\$ 3,870,000
PS transshipment	179 @ \$ 10,000 retained in 2001 135 @ \$ 10,000 retained in 2002	\$ 1,790,000	\$ 1,350,000
By-catch sales	\$ 500 per transshipment	\$ 518,000	\$ 518,000
Formal Employment	Year 2000 jobs @ 226 x \$ 4524	\$ 1,022,424	\$ 1,022,424
Informal employment	1250 tons @ \$ 2900 ton	\$ 3,625,000	\$ 3,625,000
Total		\$35,508,629	\$ 31,987,427

125 The supply of tuna for canning from purse seine fishing is essentially a commodity trade and is thus subject to significant market price variations. The very high regional catch levels of the late 1990's saw bulk tuna prices reduced to as little as \$350 mt in 1999 and 2000. Prices have subsequently stabilized in 2003 – 04 at between \$ 750 - \$850 mt. As a result of the volatile nature of the market, commercial purse seine fishing is a high risk business, especially for small operators.

126 The fisheries policies of FSM, as developed during the 1990's promoted foreign access arrangements, Government and private sector investment in infrastructure and fishing vessels, the provision of transshipment services, value added processing and employment as principle development strategies.

127 In considering development constraints, a 1995 study¹⁹ on tuna industry development concluded:

- The FSM labor pool is limited both in number and by range of current skills. The tuna industry specifically needs foreign skills and foreign management until Micronesians can be trained and can gain experience in the industry. Imports of foreign labor are discouraged by bureaucratic administration and the requirement to annually renew elaborate work permits
- All non-service FSM State and National government enterprises that have been in operation for more than 2 years have proven unprofitable. The inability of these ventures to succeed in economic terms can be traced to a variety of reasons, primarily associated with government involvement in their operation. This is exemplified in the summary of SOE status provided as Appendix 3.
- For longline transshipment, the inability to extend airport runways in almost every state without major capital cost could be a development limitation in the future. Additional runway length allowing larger aircraft and improved payloads could be a key factor in achieving improved air freight economies of scale.
- Though simple to administer and understand, Gross Receipts Tax (GRT) is a “cascading” tax and the prevailing tax regime is a disincentive to primary industry and manufacturing investment.
- A very significant problem in the FSM is the difficulty in finding out exactly what the current law is.
- The FSM currently exhibits a comparatively highly protected economy with relatively highly protected and highly priced resources. The FSM

19 Lucas, K. Tiller, S. Swan, J. The National Fisheries Policy Study. ADB TA# 2551 FSM

economy is further protected by investment and recruitment approval processes that emphasize sanctions and concessions as opposed to open, uniform treatment.

128 While strategies to mitigate these constraints were reflected in policy documents, there has been limited success in addressing these issues. This is particularly apparent at the State level, especially in relation to dealing with difficult issues such as the commercialization of State owned assets.

129 In considering constraints in the two sub-sectors of the FSM tuna industry an FFA study²⁰ concluded that the main issues affecting profitability in the longline industry were vessel productivity as reflected in catch rates of target species, availability, reliability and cost of air freight, cost and efficiency of transshipment services in port, and the yen exchange rate. For the purse seine industry it was suggested that the main issues affecting the purse seine industry were the then current overproduction and resultant low prices, high operating costs, restricted fishing grounds, and the lack of skilled senior level labor.

130 The development of domestic fisheries capacity throughout the Pacific region was reviewed in detail in 2003²¹. This review reiterated the perspectives put forward in 1995, and cited the principle constraints to include:

- Reductions in air freight capacity and availability and the economic limitations of restricted freight volumes due to aircraft and runway limitations;
- Increases in the cost of air freight due to escalating fuel costs;
- A poor business environment and inadequate provision of services;
- Government agencies with commercial involvement in the tuna industry detracting from the functioning of private sector tuna firms, especially the Economic Development Authority (EDA) of Pohnpei;
- Requirements for local vessels fishing in FSM waters to undergo customs and immigration formalities and the high cost of these services;
- High cost of operation: high prices for fuel, skilled labor; requirement to air freight in many parts/supplies;

131 Other issues raised included fee variance, higher access fees compared to Palau and the Marshall Islands, the provision of conflicting consultancy ad-

20 Gillett, R. Domestic Tuna Industry Development in the Pacific Islands -The Current Situation and Considerations for Future Development Assistance FFA Report 03/01

21 Gillet, R. Domestic Tuna Industry Development in the Pacific Islands - The Current Situation and Considerations for Future Development Assistance. FFA Report 03/01. 2003

vises, the adequacy of port infrastructure for vessel maintenance, the scarcity of skilled labor, declining catch rates, unclear legislation and unnecessarily high penalties for regulatory transgressions.

132 The demise of transshipment services from FSM ports and the associated loss of income generating opportunities is a clear indication that FSM has failed to deal adequately with constraints and issues that have been on the table for a number of years.

133 There has been a very large amount of technical assistance focused on the development of FSM's tuna industry. A list of such assistance prepared in 2003²² and covering the previous decade shows over 20 interventions by ADB, FAO, SPC, FFA, the World Bank, SPPF, FIAS, and others..

134 It is clear that constraints to industry development have been widely documented, especially those relating to the lack of progress on privatizing government fishery companies and continued government monopolies in providing essential commercial services to the tuna industry.

135 There is an issue relating to lines of communication and the need to clearly define responsibilities in relation to policy implementation. In an attempt to address the constraints facing industry development, the Pohnpei Commercial Tuna Longline Operator Association was formed in 1998 with four members. The Association subsequently organized a successful initiative to eliminate the planned State tax on the export of fish. With Canadian financial assistance, the Association sponsored National Offshore Fisheries Conference in 2002 and established the FSM Offshore Fisheries Association. The industry voice of Pohnpei is thus complimented with a National (and therefore regional perspective). In 2004, a meeting in Suva, Fiji in turn established a Regional Association of Domestic Tuna Fisheries.

136 With the formation of FSM association, there is a clear direction for an industry voice. However, the same cannot be said of Government. There are a range of often conflicting National and State agencies with varying responsibilities in processes to effect changes in policy or to establish a more conducive business environment. For a potential foreign investor in fisheries, there is no clear process or specific agency to facilitate the investment process.

137 The experience of Fiji and Papua New Guinea in the establishment of the Fiji Trade and Investment Board and the PNG Investment Promotion Authority is perhaps worthy of consideration in this context. In each case, a single national agency was established to facilitate and assist investors and lobby Gov-

22 Gillet, R. Domestic Tuna Industry Development in the Pacific Islands - The Current Situation and Considerations for Future Development Assistance. FFA Report 03/01. 2003

ernment and other agencies in matters relating to the investment and business development climate.

138 It is clear that further development of the sector cannot take place without additional investment. State governments, having previously invested large sums in fisheries projects, are reluctant to commit further investment. The domestic private sector has been similarly affected by poor sectoral performance.

139 Investor confidence will continued to be constrained by an ongoing failure to address development issues and achieve progress with policy implementation.

I Development Potential

140 Given a scenario where the existing constraints and problems can be mitigated, there is potential for FSM to enjoy improved benefits from the exploitation of oceanic resources.

141 With the exception of access fees, the industry as currently portrayed has been in serious decline. The principle question is thus, what can be done to improve the situation? What possible strategic advantages are there for FSM in aspects of tuna industry development and how can these be realized into sustained domestic benefit?

i Strategic advantage

142 While FSM's proximity to and shared ownership of tuna resources is a potential advantage, the departure of the foreign domestic based longline fleet suggests that proximity to the resources does not necessarily compensate for FSM being a high cost location from which to operate from.

143 Generally, FSM does have well developed transshipment infrastructure. However, despite much of this being less than 10 years old, the facilities in Yap, Chuuk, Kosrae cannot be made operational without investment in refurbishment. This said, the under-utilized assets could represent a significant foundation for private sector development. The key requirement here is not the ownership of the facilities but the operational control. Recent rhetoric has focused on privatization of government facilities and businesses. This implies a change of ownership to the private sector and is thus unlikely to be acceptable to Government agencies. Perhaps the appropriate rhetoric is commercialization and a scenario where Government ownership is retained and facilities are leased out or managed under joint venture. While Government experience in joint ventures to date has not been positive, this has perhaps been because of a lack of due diligence in entering into business arrangements.

144 It is apparent that regional resource management arrangements in relation to tuna exploitation are an increasing international focus. The establishment

of the new Commission for the Conservation and Management of Highly Migratory Fish Stocks in the WCPO will likely increase capacity and focus on resource management and sustainability issues.

145 The establishment of Tri-Marine (FSM) as a domestic company and the associated registration of three vessels in FSM provides those vessels with access to the FSM arrangement for wider regional access.

ii The need for investment

146 In considering success in the tuna industry, the 2003 study of Pacific wide domestic tuna industry development²³ reported that the operators of almost all successful tuna fishing companies presently located in the region were originally either local non-tuna fishing businessmen, successful operators from other business or owners and managers of overseas fishing companies who moved into the country and invested in domestic development.

147 Although the rhetoric to promote foreign investment has been in place for some time, it is clear that the constraints to such have yet to be comprehensively addressed. Importantly, the 2003 study noted that the issues and constraints for foreign investors were similarly faced by domestic investors. The study suggested that it would be more appropriate to think in terms of stimulating domestic investment through attracting foreign investment.

148 In the case of FSM, opportunities for domestic investment are clearly limited and constrained by past experience, especially in relation to development or commercial bank investment. If it accepted that sectoral investment is fundamental to future development, then attracting foreign investment is also fundamental to any such development.

149 Drawing from the key points raised in the study, it is suggested that there is a need for Government to provide a stable and reliable set of policy measures and a clearly defined trading environment. Importantly, a 1999 study of the FSM foreign investment climate²⁴ noted that national and state legislation dealing with investment used “criteria that are discriminatory, not transparent, and time consuming. This report advised that decisions were likely to be made in a discretionary manner and that the various governments still believed that foreign investment could only be controlled by using excessive legislation.

23 Gillet, R. Domestic Tuna Industry Development in the Pacific Islands - The Current Situation and Considerations for Future Development Assistance. FFA Report 03/01. 2003

24 Report of the Foreign Investment Advisory Service of the International Finance Corporation and the World Bank 1999

150 Access to foreign investment opportunities will improve with greater attention to a facilitation process such as the investment promotion models of Fiji and PNG.

iii Perspectives on domestic development

151 In considering possible opportunities for domestic development, the 2003 study solicited opinion from industry operators and government officials. The resultant general themes can be summarized as:

- Encouraging vertical integration in the industry (companies involved in catching, processing and marketing);
- Expanding the services and facilities available to fishing vessels in FSM ports;
- Improving the performance of Government owned facilities through a commitment to commercializing, investment and value adding;

152 Specific activities or possible interventions related to these themes were suggested as:

- A state-by-state assessment of the changes required to facilitate development and a related initiative to develop state fisheries policies and associated mechanism to assure adherence;
- A ‘tightening’ of the FSM Arrangement for Regional Fisheries Access to encourage domestic development,
- The need for committed strategies to attract investment and progress the commercialization of failed government fisheries enterprises;
- Promotion and support to the role of Fisheries Associations in addressing issues;
- A detailed survey of the operators of fishing fleets to determine what they like/dislike about FSM ports and an associated study to compare FSM port facilities and charges to those of other countries in order to increase competitiveness;
- The airfreight situation: in-depth analysis of options, including the achieving of economies of scale;
- An improved fisheries information strategy, so that the government can get relevant information to the fishing companies;
- A study on the need for the Pohnpei State EDA to continue to operate the Pohnpei transshipment facilities.;
- “Someone who knows what they are talking about” to do a realistic assessment of fisheries privatization in FSM;

- Re-focusing the Yap fisheries school on relevant skills;
- A study of the fisheries fuel and fuel tax situation;
- Establishment of a technical assistance fund that the industry can utilize as and when needed;
- Assistance with the establishment of contact with overseas investors;
- A careful economic analysis of the potential benefits for FSM from possible access fee reductions for domestic based vessels;
- Assistance with meeting US food safety standards (HACCP) requirements;

153 While these are all valid activities, they are largely focused on information gathering and do not substitute for the activities needed to implement effective policies.

iv Access Fees

154 Potential improvements in the return to FSM from foreign vessel access and license agreements were studied in detail in 2000²⁵. Access fees are essentially demand driven and the potential to increase actual income will depend on the importance operators place on gaining access to a particular area and the extent to which they are prepared to pay for such access. The current access regime is termed one of regulated open access. No limits are in place on participation or catches, but some management measures are imposed on total vessel numbers and through the FSM arrangement. The total amount of access fees received per annum have fluctuated due to new entrants, changes in exchange rates, the opening of new fishing grounds, changes in fish prices and catch rates and the distribution of stocks. These matters will continue to influence access fees.

155 To date, discounts to access fees have not been successful in encouraging longline vessels to base in or offload in FSM, promote the development of domestically-owned fleets or encourage investment in FSM fisheries-related activities. However, promoting incentives for domestic basing remains a component for access negotiation. This is more apparent in a scenario where there is an increase in demand for access or where multi-year access is available.

156 The implications for fisheries access in relation to the establishment of the new Fisheries Commission are difficult to determine until such time as the Commission is fully established. The possible implementation of new regional

25 McCoy, M. and Rodwell, L. A Review of the Current Fishery Access Regime in the Federated States of Micronesia and Analysis of Some Options for the Future. ADB TA No. 2832-FSM. 2000

arrangements for the calculation of access fees and terms of licenses has potential to impact on the potential value of access.

157 Given the potential for fluctuation, it is important not to consider annual access fees as a guaranteed dollar value.

v Transshipment

158 There is potential to add economic value from the commercial operation of shore based transshipment infrastructure and the provision of long line transshipment services for domestic based foreign long line vessels. However, the re-establishment of domestic based vessels across each state could only be achieved with a committed strategy to address the range of issues and challenges that have long been documented but not yet addressed.

159 Future private sector investment in domestic owned and operated long line and purse seine vessels is unlikely in the short-term. However, foreign or joint venture opportunities might eventuate in a scenario where there are changes to the investment climate. Again, there is a requirement to address documented constraints and challenges.

160 Economic benefits from improvements to general fishing vessel servicing capacity could also be improved. These range from the supply of fresh produce and supplies to general vessel servicing and the provision of technical services.

vi Adding Value

161 There are also potential opportunities for commercial success in the purchase and on-sale or value adding of by-catch in both the longline and purse seine fisheries. This requires the identification of appropriate economies of scale and of possible niche markets. Again, it is perhaps most likely to be progressed through the identification of suitable business investors or partnerships with access to appropriate technical expertise and links to international markets.

vii Employment

162 All areas of potential sectoral development have the potential to provide new employment opportunities. More jobs at sea, in processing, in transshipment and in vessel servicing.

viii The challenge

163 Importantly, none of this potential will be realized until there is a commitment to a concerted strategy to deal with the issues and constraints to development. Priority steps are to remove government from the operation of business enterprise (not necessarily the ownership) and attract large scale investment partners.

164 The economic performance of the oceanic fisheries sector in FSM is at a crossroads. Failure to address the major issues will only result in further stagnation and the unsustainable continuation of the status quo.

4.2 Strategic Goals, Policies and Outcomes

4.2.1 FSM Fisheries Policy Development Overview

a The Formulation of FSM Fisheries Policy

165 The process of developing a fisheries policy for the FSM was initiated with the declaration of the FSM EEZ in 1989 and was first articulated in a 1991 study. More detailed analysis was undertaken in 1996 for the consideration of the National Fisheries Summit of FSM in December, 1996. The recommendations of the National Summit resulted in the presentation of a National Fisheries Policy Document. The key elements of this policy were as follows:

b Policy Element 1: Private Sector to be Responsible for all Commercial Fisheries Investment and Operations

- Commercial Fisheries Development should be in the hands of the private sector;
- Government's role is to facilitate fisheries development by the private sector by creating a business environment conducive to private enterprise development;
- Phase out subsidies to all government owned fisheries enterprises, with the intent to privatize these as soon as possible

c Policy Element 2: Promote Micronesian-Incorporated Enterprises

- Promote ownership of fishing vessels and shore facilities by Micronesian-incorporated enterprises (local and foreign capital)
- Make a portion (at least 50%) of access fees available to finance (through loans, or loan guarantees) private commercial fisheries development in FSM
- Create other incentives to fisheries development, such as:
 - Tax breaks (on vessel fuel, for example),
 - Amend foreign investment rules (including immigration laws),
 - Reform fisheries and maritime laws.

d Policy Element 3: Manpower Development

- Develop a World-Class FSM Fisheries Manpower Development Program

e Policy Element 4: Ensure Conservation of Marine Resources and Preservation of the Marine Environment

- Ensure conservation of tuna and other marine resources, and preservation of the marine environment through active participation in international and regional bodies and institutions.

f Policy Element 5: Reform Institutional Management Framework

- Consolidation of responsibilities for fisheries policy development, management and enforcement under one well-financed, independent and autonomous body
- Increased cooperation and coordination among all jurisdictions (including private sector as well as government bodies)

g Policy Element 6: Reform of Laws and Regulations Inhibiting Fisheries Development

- Tax Laws (including incentives)
- Duties and Levies
- Regulation of foreign investments
- Labor laws
- Immigration laws and permits
- Maritime Code and relevant Conventions
- Fisheries Laws and relevant Conventions
- Land tenure laws

h Policy Element 7: Promotion of Value Added Investments

- Promote value added investments in:
- Fish and Fish Product Processing;
- Manufacturing;
- Marketing;
- Quality Control.

i Policy Element 8: Controlling Fisheries Access

- All longline vessels (delivering chilled tuna) must be FSM-based to be licensed;

- The need for uniform governing rules within each class of vessels based in FSM (and fishing in ESM waters);
- Long-term access arrangements should be used to encourage FSM-basing of foreign owned vessels.

j Policy Element 9: Promoting Public Awareness

- A public awareness program should be established, with careful thought to key audiences and how best to reach them;
- Stimulate FSM citizen's interest in fisheries through information programs.

166 In the lead up to the 1999 FSM Economic Summit (Summit 2), these policy elements were expanded to detail strategies, activities and accountable agencies in two separate strategic policy framework documents covering oceanic and inshore fisheries. These are provided as Appendix 1.

167 These policy frameworks and detailed activity plans were subsequently adopted by the Summit and can thus be accepted as the agreed National fisheries policy for the period 1999 – 2004.

k Review of Policy Implementation

168 The expected process in the lead up to the 3rd Economic Summit (3ES) would be that the 1999 framework would be tabled to both public and private sector stakeholders for review and comment, especially in relation to implementation progress, issues, current relevance and changing circumstance leading to consideration of possible modification of policy direction.

169 In the case of inshore fisheries, the policy framework was reviewed in 2000 by the Coastal Fisheries Consortium and some minor changes to the policy framework were suggested.

170 In the context of the sectoral review in the present assignment, a summary analysis of progress in the various activities aligned with the policy elements for oceanic and coastal fisheries has been undertaken in the present assignment based on stakeholder consultation. This analysis is provided as Appendix 2.

171 The review findings can be summarized as follows:

i In the case of oceanic fisheries:

- Policy Element 1: There has been no substantive progress in privatizing or further commercializing fisheries related State Owned Enterprise or infrastructure. Infrastructure in Yap, Kosrae and Chuuk is shut down and

that of Pohnpei is under-utilized. Subsidies are still in place to support SOE activities.

- Policy Element 2: The commercial failure or poor performance of domestic private sector investments and a reduction in long line fishing profit margins across the region combine to make further investment both risky and unattractive. This is more apparent with the general lack of progress in establishing clear investment incentives.
- Policy Element 3: While some planning activity has taken place, implementation of a coordinated approach to capacity and skill development is lacking. The re-opening of the MMFA is a positive step.
- Policy Element 4: The passing of revised Title 24 legislation, the adoption of a Tuna Management Plan and the strengthening of NORMA have consolidated national capacity in the management of oceanic resources.
- Policy Element 5: Some consolidation of responsibilities has taken place with the Title 24 revision. Communications between NORMA and Maritime Surveillance have improved. Responsibility for policy development remains fragmented and there is no National level agency mandated to facilitate industry development or investment.
- Policy Element 6: Legal reform is a slow and consultative process. The revised Title 24 is a major achievement as is the adoption of certain maritime regulations. Laws and regulations relating to tax are under review, but those associated with duties, labor, investment, immigration and land are complex and multi-sectoral and require commitment, political will and vocal sectoral lobby to move forward.
- Policy Element 7: There has been no coordinated activity to assess opportunities or implement value adding opportunities. Strategies to add economic benefit through longline fishing transshipment have been frustrated by the inability to attract vessels. Opportunities to add economic benefit through purse seine transshipment have not been fully developed.
- Policy Element 8: FSM's capacity to manage fisheries access arrangements has consolidated and multi year licensing agreements are in place. Licensing concessions for domestic basing have not succeeded in attracting vessels. Issues with operational efficiency and air freight access contribute to Guam remaining the preferred transshipment port for FSM licensed long line vessels.
- Policy Element 9: There does not appear to have been any concerted effort to promote the sector promotion through public awareness activities.

172 While the policy elements, in the main, continue to be relevant to sectoral development, it is apparent that there has been limited progress with im-

plementation. Strategies to promote investment and sectoral growth have not been clear and private sector investment has not been successful. Domestic based foreign longline vessel numbers have dropped to a low of 20, SOE infrastructure is either closed or underutilized and remains the responsibility of Government agencies. The majority of long line transshipment activity has essentially transferred to Guam. Considering the time-span for policy implementation (1999 – 2004) the lost opportunity for economic benefit from the successful implementation of policy element activities is substantial.

173 In situations where the activities associated with policy elements have been actively facilitated (such as in the preparation of a Tuna Management Plan by NORMA), policy implementation has been successful. In many cases, the absence of a directed facilitator or driver for activities would appear to have limited activity success. For example, in the absence of a committed driver to campaign for a fuel subsidy, there is no incentive for Government to establish such a subsidy.

174 Policy elements that relate to wider fiscal management or changes in legislation (such as tax, labor laws, immigration laws, subsidies and duty) are much broader in application than fisheries and are thus more complex and challenging to achieve. Even if there is a strong driving influence from the fisheries sector, legislative process will be influenced by wider political elements.

175 It is thus apparent that, one of the key factors in policy element activity implementation is political will. This is most apparent in relation to difficulties in producing a result in relation to the performance and future direction of certain SOE's. Clearly, without the support of State Governments, an activity to promote private sector or investor management or ownership of these facilities will not succeed.

176 The principal policy elements of 1999 for oceanic fisheries remain relevant and are therefore projected into the revised policy matrix.

ii In the case of Coastal Fisheries

- Policy Element 1: Private Sector to be Responsible for Commercial Marine Investments and Operations: State level infrastructure continues to be managed by Government agencies. Less emphasis on commercial development in the sector is apparent.
- Policy Element 2: Promote Resource Owner and User Responsibility for Sustainable Artisanal and Commercial Development: Some progress with the establishment of fishers associations. Establishment and promotion of MPA's in Pohnpei, Kosrae and Chuuk

- Policy Element 3: Manpower Development: HR plan completed for fisheries management but State level access to training remains opportunistic. No coordinated approach to School curriculum is apparent.
- Policy Element 4: Ensure Sustainable Development of Inshore Marine Resources and Preservation of the Inshore Marine Environment: An increasing focus on MPAs and community management at State level is apparent. Inter-agency consultation and coordination remains an issue.
- Policy Element 5: Reform the Institutional Management Framework: The role of and work program of DEA fisheries was defined by the Coastal Consortium. However, clear determination of agency roles at State level has not been well defined.
- Policy Element 6: Reform of Laws and Regulations Inhibiting Fisheries Development: Focus is increasing inclined to fisheries management rather than development. State laws have been revised in Yap and Kosrae but review processes have stalled in Chuuk and Pohnpei.
- Policy Element 7: Promotion of Value Added Investments: In the artisanal and subsistence sector, there is generally an expanded use of ice (where accessible) to enhance fish quality. However, there are no known new developments in value added processing. The sector focus is increasingly on resource management as opposed to commercial development.
- Policy Element 8: Controlling Fisheries Access: There is increasing community awareness and involvement in consultations in relation to the management of resources and the establishment of Marine Protected Areas (MPA's) in Pohnpei, Kosrae and Yap.
- Policy Element 9: Promote Public Awareness of Marine Resource Conservation: There has been opportunistic distribution of information and resources from DEA to State level agencies. The most active agencies in public awareness promotion appear to be NGO's.

177 The determination of specific coastal fisheries policy is essentially a State level activity. As such, the national policy is primarily a statement of guiding principle rather than a blueprint for State level activity. However, there are common themes from State level that can be accommodated in the national framework. In the context of the current review, there is a distinct move away from resource development activities to a focus on resource management, conservation and aquaculture.

178 These changes from the principle policy elements of 1999 for coastal fisheries are reflected in the revised policy matrix.

4.2.2 Moving forward with Fisheries Policy

179 In determining the future direction of policy, it is perhaps useful to consider the scenario that FSM would like to achieve for fisheries in the next five year period. In a review context, it appears that there are no major differences from the overall objectives of the past five years.

180 However, it is important to consider policy direction in relation to 'lessons learned' from the previous period and also in relation to possible changes in the wider (international and regional) sector environment in the coming period.

181 The key lessons in relation to policy implementation are suggested as:

- There needs to be clearly defined responsibility assigned to undertake activities associated with policy implementation;
- The agency or entities assigned such responsibility should be required to account for progress in relation to activities undertaken;
- In situations where a particular policy requires the wider endorsement of Government or legislative enactment, the implementation strategy should include activities that take account of the need to generate political will.

182 Taking account of the findings of the situational analysis for the sector and the intent of 3ES, the following policy themes are apparent:

183 For Coastal Fisheries:

- An increasing focus on resource management strategies encompassing traditional practice and protected areas;
- An increasing focus on ensuring resource exploitation is carefully managed and priority access is accorded to subsistence and low level artisanal activities rather than commercial fisheries;
- An increasing focus on aquaculture activities at the subsistence and artisanal levels;
- An increasing focus on community participation in management;

184 For Oceanic Fisheries:

- A continued emphasis on improving economic benefits, utilization of infrastructure and domestic commercial activity;
- In the context of the Tuna Management Plan, a more focused emphasis on resource management and monitoring;
- Acknowledgement of the urgent need to attract investment;

4.2.3 The Fisheries Policy Matrix Proposed by the 3rd Economic Summit

185 The Fisheries Policy Matrix proposed by 3ES is provided as Appendix 3. It is apparent from consultations in the current assignment that policy framework as adopted by 2ES was not given major consideration in the lead up to 3ES. As such, the focus of 3ES fisheries consultations appears to have been more on determining suitable outcomes for the management of performance budgeting. In the absence of a review framework, the draft policy matrix endorsed by 3ES does not fully reflect the previously established policy framework. Given that this framework has developed from consultations dating back to 1991, this is a matter for serious consideration.

186 There principal areas of concern can be summarized for each proposed goal as follows:

a *Strategic Goal 1. Inshore fisheries resources are well managed and economic utilization is maximized within sustainable levels.*

187 While the intent of this goal is sound, the listed outcomes will be difficult to measure. It is also apparent that the given activities are not accounted to organizations or areas of responsibility. The role of the DEA fisheries Office is not defined and the importance of NGO activity in marine resource conservation is not considered.

b *Strategic Goal 2. Increase aquaculture activities to supplement and enhance marine stocks for subsistence and marketing.*

188 All previous policy direction in relation to aquaculture in FSM suggested that, while aquaculture development was possible, there were no examples in place of sustainable aquaculture activity. The history and current status of aquaculture activity in FSM is considered in the sector review as is consideration of such by the Coastal Fisheries Consortium. While there is possible potential for aquaculture development, it is difficult to accept the prioritizing of aquaculture as a key national goal, particularly if there is an implication of sustained economic benefit. Aquaculture is more appropriately placed as an activity in relation to coastal fisheries.

c *Strategic Goal 3. Maximize the long term economic benefits to the FSM from its Exclusive Economic Zone.*

189 The intent of this goal is sound. However, it does not define areas of responsibility or emphasize previous intent to commercialize/privatize Government assets. The responsibilities of NORMA are not considered and the activities are not considered in relation to existing income streams.

d Strategic Goal 4. The FSM Exclusive Economic Zone is well managed and economic utilization is maintained within sustainable levels

190 The intent of this goal is also sound. However, it should be reflective of the NORMA role and of the Tuna Management Plan.

191 The 3ES matrix has been widely discussed with stakeholders in the current assignment. With a single exception, stakeholders endorsed the revision of the matrix to more clearly reflect sector policy direction and development priorities.

4.2.4 Outline of a Revised Policy Framework

192 In considering a broad policy framework for the sector, there are essentially two components – the sustainable management of resources and the economic utilization of resources within sustainable parameters. If these are considered in relation to Coastal fisheries and Oceanic fisheries, there are 4 principle goals.

193 Importantly, capacity to implement activities across all 4 principle goal areas is underpinned by human capital - the ability to efficiently undertake activities in relation to policy components. In the 3ES matrix, activities relating to education, training and public awareness are outlined in each of the policy areas. In the proposed revised matrix, these have been combined into a single underpinning goal relating to building technical capacity across the sector.

194 A revision of the 3ES policy matrix is proposed. It must be stressed that the intention is not to undermine the intent of the 3ES matrix. The revised matrix includes and expands on the activity framework of 3ES. The exception is with aquaculture where it is proposed that the 3ES goal be revised as a series of activities and outcomes under a broader coastal fisheries management goal.

195 The principle justification for this is to ensure that aquaculture is considered in the context of its current economic value. This is not to ascertain that aquaculture does not have positive economic potential but to reflect the fact that the nature of this potential has yet to be identified.

196 A revised matrix comprising 5 goals is thus proposed.

4.2.5 Fisheries Sector Goals and Policy

a Mission Statement

197 The marine resources and fisheries of the FSM are managed and developed in consultation between designated authorities and stakeholders in a manner that ensures maximum possible economic and social benefit to the people of

FSM and, at the same time, ensures sustainable resource exploitation and protects marine biodiversity.

b Strategic Goal 1: Stakeholders and personnel contributing to fisheries and marine resource management and development are suitably trained and skilled to effectively participate in sectoral activities

i Policy framework

- The need for sectoral human resource development planning is recognized and supported;
- Fisheries and marine resource curriculum is included in school programs;
- Fisheries and marine resource programs at the COM are supported and opportunities for overseas scholarship are identified and pursued;
- Programs and courses at the Micronesian Maritime Academy are supported;
- Extension, public awareness and educational activities are included in National and State agency work programs;
- State agency personnel are provided with opportunities for skill development;

ii Outcomes

- Human resource development plans are used as tools to promote the effective delivery of education and training programs;
- Improved knowledge of marine resource and fisheries matters in school graduates;
- Improved capacity in fisheries and marine resource management through improved access to relevant technical and tertiary education and strategic research;
- Improved income to FSM nationals through employment in fisheries activities;
- Increased community level awareness in regard to fisheries and marine resource management issues;

iii Analysis and Justification

198 The importance of technical capacity, skill development and resource awareness at community level has been reflected in sector policy since 1995. However, to date there has not been a coordinated approach to addressing strategies to improve access to training, the development of school curriculum or improved general public awareness.

199 Access to training and skill development opportunities for public sector employees is primarily ad hoc. Both at the National and State levels it is important to ensure that managers and employees are suitably skilled to efficiently undertake their assigned duties. Within each agency, there remains a need to fully document required skill levels and match these to skill development plans for employees. For example, a State fisheries department cannot adequately undertake species stock assessment unless staff are technically capable of doing so. Training needs must then be linked to identified training opportunities at national, regional and international levels.

200 The need for improved awareness of marine resources and fisheries through school curriculum has been a policy theme in the sector since 1996. In the absence of a coordinated approach to this, little has been achieved to date. Completing activities in this area requires a coordinated approach between the Education Department, DEA fisheries and stakeholders. In reality, there is a wide variety of suitable curriculum material already available on a regional basis. The challenge is to access this material as teaching resources and to frame it in a manner that can be formally adopted into national curricula.

201 At the tertiary level, there is a need to ensure suitably qualified graduates are available to fill technical positions in Government and in private capacities (including NGO's). Skill development through partnerships and cooperative activities with external institutions (universities, research institutions and NGO's) will serve to meet some research needs and to boost national capacity in aspects of research.

202 Direct employment in commercial fisheries (as vessel crew and in seafood processing) requires an established certification system and an efficient training provider. Incremental increases in the number of FSM vessel crew has the potential to add real value to the private sector economy with 100 jobs equating to \$500,000. Committed support to the Maritime and Fisheries School in Yap should result in a regular supply of technically skilled vessel crews. Skill development in relation to seafood quality and aspects of business will benefit the subsistence and artisanal sector and ideally add better value to commercial sales. Compliance with food safety standards for export markets (HACCP) can be greatly improved with the introduction of a standard short course in quality seafood handling. This type of course has proved very useful in contributing to regulatory compliance in other countries such as PNG.

203 Improving knowledge and understanding of marine and fisheries resources and the importance of their sustainability within communities requires activities within education and in the wider community. In the wider community, this can be as basic as the distribution of posters or as time consuming as a consultative process to establish community resource management mechanisms. Communities have a very important role to place in the future management of

inshore resources. This role requires improved overall understanding as to the nature of resources and the range of options available for resource management.

iv Critical Issues for Implementation

204 The implementation of policy in relation to HR development has suffered from there being no clearly defined accountability for implementation. Responsibility is currently vested across COM, NGO's, the Education Department, DEA Fisheries and State fisheries agencies. The clear requirement is to development a coordinating capacity between agencies and for each to then accept designated tasks in relation to agreed activities.

205 The availability of committed budgetary support is fundamental to the implementation of the full range of activities outlined in this goal. Opportunities for funding in addition to core Government budgets will need to be identified in some instances, particularly in relation to community awareness type activities which are not linked to core budgets.

206 This goal presumes fisheries agencies are well managed and staffed by committed and motivated personnel. If this is not the case, achievement of the desired outcomes will be difficult.

c Strategic Goal 2: Inshore and Coastal marine resources are monitored and managed in a consultative and participatory manner that respects traditional practice, utilizes established scientific methodology, sustains biodiversity and resource abundance.

i Policy framework:

- Responsible agencies have well developed work programs and are adequately resourced to undertake activities;
- National and State Agency relationships and activities are clearly defined;
- Regulatory systems are enacted to ensure well considered resource management practices are in place;
- The status of resources are monitored to identify potential over-exploitation;
- Management systems are holistic and account for consultation in relation to wider resource management perspectives in areas such as coastal zone management, economic planning, land use, watershed management, tourism development , atoll management and biodiversity ;
- Traditional practices are respected and traditional knowledge inputs are reflected in management and regulatory processes;
- Management systems include marine protected areas and community based management;

- Commercial activities are well defined, adequately monitored, exclusive to National participation and maximize national benefit;
- Aquaculture development opportunities are identified and assessed;

ii Outcomes

- Resource management and development agencies have clearly defined roles and complete work program activities in a cost effective and timely manner;
- Information and communication flows between DEA Fisheries and State agencies and relevant stakeholders are optimized;
- Resource management plans for key inshore resources are in place in each State;
- Resource stock assessment information is available and utilized in resource management planning;
- Resource management plans include the establishment of at least Marine Protected Areas (MPA) or Marine Reserve in each State;
- Resource management plans include components of community based management, co-management and traditional management;
- Where appropriate to regulatory systems, a formal and informal enforcement capacity is in place;
- Opportunities for commercial aquaculture activities are evaluated and commercially viable activities are promoted and established;
- Opportunities for stock enhancement through aquaculture related activities are evaluated and activities likely to have a positive impact on the status of stocks are promoted;

iii Analysis and Justification

207 This goal relates to the responsibilities of designated State agencies in relation to resource management and sustainability. The policy framework promotes a coordinated approach to work planning and a focus on ensuring adequate information is available to make decisions in relation to aspects of resource management. This is particularly apparent in relation to resource monitoring and the capacity to undertake valid assessments of the status of stocks. In cases where fisheries agencies are involved in service and commercial type activities (such as the sale of ice), options for divestment of business activities to the private sector are encouraged. Overall, agencies are expected to add value to communities in the efficient implementation of well planned work programs.

208 A strong focus on community is implicit, as is the need to work closely with sector stakeholders including NGO's. The establishment of community endorsed Marine Protected Areas and reserves are proposed. These in turn sit within a wider framework of fishery and bio-diversity management plans. Establishment of a facilitating regulatory framework at State level (as is already the case in Pohnpei) will be a key consideration.

209 The concerns of the 3ES to monitor levels of exploitation and put in place management systems which preserve traditional and community subsistence access to resources are strongly reflected in the framework. There is increasing awareness in communities that some marine and fisheries resources are under pressure from over-exploitation. Community participation in resource management is viewed by many to be the most effective means by which levels of exploitation can be controlled.

210 Establishing and maintaining effective community relationships will facilitate the identification of community management priorities. NGO's have proven very successful in some areas in community level consultations and their increased participation in management development processes is encouraged. In cases where community management plans are established, the need for technical or advisory assistance in management implementation should be considered. In order to provide technical information in support of resource management decision making, agencies must retain or be able to access capacity to undertake resource assessments. Priorities for assessment should be agreed with stakeholders and the results of assessment activities incorporated into decision making.

211 There is a specific focus on the establishment of Marine Protected Areas. This requires a supportive legal framework and a comprehensive community consultation process whereby all stakeholders are involved and committed to the consultation and implementation process.

212 While community management practices are strongly supported, they do not mitigate the need for more formal enforcement, especially in relation to specific rules. Even in community management scenarios, an enforcement capacity is required as an interface between communities and infringers. State level enforcement capacity does not imply a restrictive environment but a capacity to make the public aware of regulations and the potential impacts of non-compliance.

213 The role of the National Fisheries Office in the Department of Economic Affairs was well defined at the 2000 National Fisheries Consortium Meeting. The office is established to serve consultation, coordination and information needs for State fisheries agencies. It is also responsible for the operation of the National Aquaculture Centre in Kosrae. Repeating coastal fisheries meet-

ings on a regular basis was strongly endorsed by the 2000 meeting as a means of promoting ideas and information exchange. DEA remains tasked with the planning and organization of such meetings.

214 The 3ES reflected a strong concern to commit to greater efforts in the exploration of aquaculture opportunities as a means of diverting fishing pressure. While aquaculture developments to date have met with limited success, there is a concern to continue to assess opportunities and, where appropriate, to undertake trials and develop commercial capacity.

215 Aquaculture as a means of reef seeding for clam and trochus is also proposed. While this may not directly contribute to population increase, reef seeding as a means of promoting community resource awareness or as a tool to promote closed areas is a useful resource management tool.

iv Critical Issues for Implementation

216 State level fiscal support for the work programs of fisheries agencies needs to be at a level where monitoring and information gathering activities can be effectively undertaken. Strong management and direction will be required in State agencies to develop and achieve work programs.

217 An enabling regulatory framework in each State will be required to effect a range of resource management and monitoring practices. The absence of such will likely result in dissipated and fragmented efforts in approaching management strategies.

218 Community and stakeholder consultation and commitment is a prerequisite to any community based management strategy. Coordination of efforts and combining efforts between State agencies and communities will be essential to implementation.

219 In the case of aquaculture, the development of working relationships with research and development agencies will greatly assist State and national efforts to identify suitable aquaculture activities.

d Strategic Goal 3: Inshore and Coastal marine resources are effectively exploited to meet subsistence and artisanal needs and optimized stakeholder social and economic benefits within sustainable parameters.

i Policy framework:

- Commercial activities are well defined, adequately monitored, exclusive to National participation and maximize national benefit;
- Commercial activities are limited to the artisanal sector;

- Opportunities to divert commercial fishing pressure from inshore resources are identified and promoted;
- Artisanal fishers are encouraged to form Associations or collectives as a means of communicating more clearly with Government agencies;
- Small boat fishing activities are safe and boats are adequately equipped;
- Government infrastructure in place to support artisanal fisheries activity is operated on a commercial basis;
- Commercial opportunities for aquaculture development are encouraged;

ii Outcomes:

- Commercial fisheries activity takes place within the agreed resource management framework;
- Inshore commercial fishing effort is managed at sustainable levels;
- Alternative income opportunities for artisanal fishers are identified and realized;
- Representative associations or organizations are in place to promote the interests of artisanal fishers;
- Infrastructure in place in support of the artisanal sector is commercially managed;
- Small boat safety incidents are reduced;
- Commercial aquaculture activities are developed;

iii Analysis and Justification

220 The 2000 Coastal Fisheries Consortium consolidated a position of concern at State level (most particularly in Yap and Kosrae) that there could no longer be a substantive focus on development of fishing capacity in inshore and reef fisheries. This has subsequently been reflected in the limitation of reef fish exports in Yap and Kosrae. While it is not the intention to place widespread limitations on commercial activities, it is proposed that these be undertaken in a manner that protects subsistence interests and limits active participation to citizens.

221 Commercial fishing activities need to be more closely monitored in terms of fishing effort and levels of extraction. Analysis of fishing effort is required as a means of providing information to effect recommendations and decisions relating to possible fishing effort restrictions. In situations where commercial effort is seen to be not sustainable, priority access to resources must be accorded to subsistence needs.

222 As a means of decreasing fishing effort in inshore and reef areas, an increased focus on encouraging artisanal activity into coastal fisheries is proposed. Deployment of coastal Fish Aggregating Devices (FAD's) as a focus for coastal pelagic fishing has proven success in many countries. Workshops for fishers in support of this and to promote improved fish handling practice are suggested. Improving fish quality extends shelf life, limits possible waste and potentially provides improved market prices. Opportunities for fishers to identify alternative income sources such as charter fishing or guided reef tours will be considered, particularly in relation to potential increases in tourism.

223 In order to promote more effective communication between Governments and stakeholders, support for the establishment of fishers organizations or associations is suggested. Representative associations will be better able to reflect operational concerns and participate in consultation than individual fishers.

224 Infrastructure in support of small scale fisheries (ice machines, freezers and small fisheries depots) remains in the hands of Government agencies. While ownership of such infrastructure is not in question, the option of private sector (or fishing association) management of these facilities is proposed. Ideally, private management and operation of these facilities could, in itself, be a viable small business or income generator for fishing associations.

225 The inclusion of improved sea safety as a desired outcome reflects a dual concern to save lives and to reduce the cost of search and rescue to the country. Accessing existing regional resources promoting small boat safety and actively distributing this material will help promote public awareness of sea safety issues and appropriate mitigation measures.

226 Commercial aquaculture activities offer another potential means of reducing commercial fishing effort. Given the identification of potential aquaculture activity, existing fishers are likely to be enthusiastic participants in development activities.

iv Critical Issues for Implementation

227 The role and capacity of State agencies to be proactive and dynamic in working with fishing communities is central to achieving the desired outcomes in relation to this goal. The commitment of fishers to sustainable activities and their preparedness to seek and test alternatives requires strong and open communication through established channels.

228 The provision of sufficient resources to agencies to undertake their assigned tasks is fundamental to success as is the commitment and technical capacity of agency managers and personnel. This is particularly apparent in relation to the monitoring of fishing effort and assessments of resource abundance.

229 Focusing the efforts of fisheries agencies on activities as opposed to the management of infrastructure requires political direction and support and the vocal intent of stakeholders. In these are absent, there will likely be little change in current status.

e Strategic Goal 4: Oceanic resources are monitored and managed with best practice methodology to ensure harvest levels remain within sustainable parameters.

i Policy framework:

- Resource management plans are supported and utilized as the basis for resource exploitation;
- The FSM Tuna Management Plan is supported as the guiding principle for resource management;
- Stakeholder participation in the formulation and review of oceanic fisheries management and development strategies is encouraged;
- NORMA is supported as the national agency responsible for the management and development of oceanic resources;
- The Maritime Division of the National Police is supported as the active agency in maritime surveillance;
- Regulatory requirements in support of Title 24 legislation are developed and implemented;
- Access arrangements are negotiated to effect the best possible advantage to FSM;
- Fisheries Monitoring, Control and Surveillance activities are resourced and supported;

ii Outcomes

- Fishing Catch and Effort in FSM waters is effectively monitored and information obtained is utilized in oceanic fisheries management decision making;
- FSM is respected in the Pacific region and by DWFN's as a major stakeholder in the management of Pacific oceanic fisheries;
- FSM is able to sustain or improve fiscal returns from access arrangements;
- Sectoral communications and information exchange between stakeholders are open and transparent;
- Fishing activity in FSM waters is restricted to that undertaken by licensed and recognized operators;

iii Analysis and Justification

230 This goal relates directly to the regulatory responsibilities and associated work program of the National Oceanic Resources Management Agency (NORMA). NORMA is the key national agency in the monitoring of oceanic fisheries in the FSM EEZ. As such, the agency is expected to meet national and regional obligations to collect fishing effort data and scientifically useful information. NORMA maintains an active observer program and associated port sampling and transshipment monitoring. Information is collated and forwarded to the Secretariat for the Pacific Community (SPC) for analysis and compilation into regional catch and effort monitoring initiatives. This work is critical to monitoring the overall health of the regions oceanic fisheries resources. In 2002, FSM adopted a Plan for the Management of Tuna. This plan outlines a framework for sustainable tuna fishing and FSM and is the major guiding influence on national oceanic fisheries policy.

231 FSM is signatory to all the major regional and international initiatives for the sustainable management of oceanic fisheries. To meet its obligations in relation to these agreements, and to ensure an FSM perspective is tabled on the regional and international stage, NORMA is required to ensure representation at regional and international meetings. Such meetings also provide invaluable opportunities to work and interact with fisheries personnel from Pacific neighboring countries and the Deep Water Fishing Nations (DWFN). In order to ensure that relevant information is available to stakeholders, NORMA produces a regular newsletter and will develop an active website within the next year.

232 One of the agencies key responsibilities is the negotiation and management of fisheries access arrangements and fishing vessel licenses. Access agreements account for a large component of national income from fisheries. Senior agency personnel are well experienced in access negotiation and take every opportunity to build indirect national benefit into agreements. The encouragement of domestic basing of foreign vessels, training and employment for FSM nationals and support for domestic investment are useful 'add-ons' to access agreements. Prompt issuing of licenses and publication of associated terms and conditions are part of the agencies responsibilities to industry with potential to reflect DWFN positions in access negotiations.

233 Open communication with stakeholders, especially in regard to resource management issues, is another important NORMA function. Although not directly responsible for investment in the sector, NORMA is a key contact agency for potential investors. The provision of information services to potential investors and interest groups is an important facet of promoting oceanic fisheries. NORMA is also expected to provide technical advisory assistance to State agencies in matters relating to oceanic resources.

234 Oceanic surveillance and enforcement activities are carried out by the Maritime Division of National Police but NORMA has overall responsibility for this important component of oceanic fisheries management. Active enforcement is vital to the framework of oceanic fisheries management and this requires both national and regional strategies. Participation in regional strategies for the operation of Vessel Monitoring Systems (VMS) is another agency obligation jointly shared with the Police Maritime Division.

iv Critical Issues for Implementation

235 NORMA is a technically specialized agency with a requirement for a highly skilled, organized and motivated work force. There is a need to ensure staff levels are maintained and that suitably skilled individuals are quickly recruited when vacancies arise. This is particularly apparent in senior positions across the organization.

236 It must be stressed that there are factors influencing the level of access fee income which are beyond the agencies control. Fluctuations in annual access fees cannot be ruled out, especially in regard to the migratory nature of the resource, climatic impacts on areas of fish aggregation and market price fluctuations.

f Strategic Goal 5: Oceanic resources are exploited in a manner that assures optimum economic benefit to FSM.

i Policy framework:

- Investment in fisheries is actively encouraged;
- Commercial efficiency in public fisheries enterprise is encouraged;
- National participation in fisheries activities is supported and encouraged;
- Regulatory constraints to effective commercial activity are identified and reviewed;
- Economic and social benefits are prioritized in considering strategies for oceanic resource exploitation;
- Opportunities for value-adding are encouraged and promoted;
- Domestic basing and transshipment by foreign licensed vessels is encouraged;

ii Outcomes

- A suitable climate for investment in the sector is in place;
- Government owned infrastructure is commercialized and profitable;
- FSM national participation in commercial activities related to fisheries is increased;

- Opportunities to add value to fisheries resources are identified and implemented;
- FSM ports are favored as transshipment locations;

iii Analysis and Justification

237 This goal reflects the fisheries application of the five strategic goals of the private sector development strategic planning matrix. Improving the investment climate and promoting investment from experienced international operators are vital steps to the further development of domestic capacity in oceanic fisheries. This theme has been a mainstay of fisheries policy since 1996 and continues to be a major priority.

238 The formation of the FSM Offshore Fisheries Association in 2002 has provided a collective voice for industry operators. However, there is no clearly defined Government agency to address industry issues in a comprehensive manner. Matters relating to the investment climate and the role of Government in business are multi-sectoral and not confined to fisheries. A holistic approach to dealing with these issues is required.

239 2002 was a poor performing year for oceanic fisheries. While landings in the FSM zone increased in 2003, domestic industry continued to decline. The closure of longline transshipment facilities in Yap, Chuuk and Kosrae, the withdrawal of foreign domestic based longline vessels and the continued operation of infrastructure by Government agencies are symptomatic of a crisis point in the domestic industry.

240 As a result of this generally poor performance, the domestic investment climate is depressed. A focus on improving the investment climate through improving investment and promoting incentives is proposed. While this implies a multi-sector approach, there are fisheries specific actions to be taken. However, there is no clear agency assigned this task and National agencies will be required to work with the private sector to progress improvements to the investment climate.

241 The challenge to commercialize the business operations of SOE's is an area that has had considerable attention and rhetoric but produced no results to date. Despite the privatization study and various commercial negotiations, there has been no successful privatization of National or State assets. The focus of the proposed activities in relation to SOE's is not on privatization in the sense of ownership or divestment of assets but on commercialization. The challenge is to seek out business partnerships and relationships that allow for the commercial operation of facilities and infrastructure. Joint venture or lease arrangements would allow for commercial use and provide an investment focus. At the State level, the immediate challenge is to work through the business options for the

SOE's and identify possible opportunities for new business relationships. The major challenge is to revitalize the national transshipment infrastructure and re-boost the numbers of domestic based vessels.

242 The challenge to increase national participation in commercial fisheries activities requires a commitment to technical training and improved awareness in relation to opportunities in the sector. In the main, activities in relation to improving employment levels in the sector reflect those of Goal 1. Improved awareness in schools and committed support to the Yap Marine and Fisheries School and the College of Micronesia are fundamental to raising national awareness and contributing to technical skill development.

243 Consolidation of the FSM Offshore Fishing Association as a national representative organization has potential impacts in fisheries management consultation and in providing links to investment opportunities. This agency also links to a new regional association formed in 2004 to promote regional approaches to domestic industry development.

244 The continued focus on identifying opportunities for value adding to by-catch and not export tunas is representative of the potential value of successful activities in this area. This is particularly relevant in relation to joint venture or investment based opportunities and links to international technical expertise and development capital. An assessment of niche markets for specialized products and possible technical partnerships for production will assist to identify strategies to move forward with value adding opportunities.

245 Realization of improved value adding opportunities is underpinned by revitalizing transshipment commitments for foreign longline vessels. From more than 200 vessels in 1996, the domestic based fleet has shrunk to less than 30 operational vessels (domestic and foreign). Improving the environment for domestic transshipment and the expanded provision of transshipment services are key contributors to economic development and must remain a priority for the sector.

246 Improved facilities for Purse seine transshipment will also add economic value to FSM and could also be a source of raw material for value added production. Ensuring that FSM ports are favored locations for purse seine transshipment simply requires a commitment to consistent and available services.

iv Critical Issues for Implementation

247 The major challenge is to generate sector development through the establishment of an improved investment climate and commercialization of infrastructure. Development in the sector cannot move forward without sound investment from skilled and well resourced business partners. Failure to give attention to these matters will undermine potential national economic benefits.

5 Tourism

5.1 Tourism Sector Review

5.1.1 Review of current situation and sector performance

1 In emphasizing the potential that tourism holds for the FSM, the 1st Economic Summit established a visitor target of 100,000 persons per year from a base of 22,500 in 1996. Data supplied for the purposes of drafting this chapter show that arrivals of tourists, visitors, business visitors and those arriving for employment (the latter cannot be separated from the "business & employment" group but are relatively small in number), in the FSM were 17,252 in FY 2003, a marginal decrease from the 17,792 recorded in FY 1996. The 1996 figure represented the peak year in the 1996-2003 period. Although there is some doubt about the accuracy of these figures, there is no doubt that the FSM continues to under-perform as a tourism destination (Table 1), both relative to global trends and to those in the Pacific islands. The FSM has made little progress in achieving its targets. The reasons for this are discussed below.

2 Even based on current hotel capacity, the FSM is far short of reaching the 42,000 visitors it requires to achieve a successful (65% occupancy) utilisation of the hotel capacity it currently has (as set out in the National Tourism Marketing and Promotion Action Plan - Final Report, based on the nation's 476

Table 1: Index of international tourist arrivals worldwide, in the Pacific and in the FSM, 1996-2003 (1996 = 100)

	Worldwide	Pacifica	FSMb
1996	100.0	100.0	100.0
1997	103.5	107.4	94.3
1998	106.3	111.5	78.3
1999	108.6	117.5	82.2
2000	114.7	84.0	99.4
2001	114.2	114.1	85.7
2002	117.3	na	97.7
2003	115.9	123.2	97.0

a comprising Cook Islands, Fiji, French Polynesia, Kiribati, New Caledonia, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu

b Financial years

Sources: World Tourism Organization; Tourism Council of the South Pacific/South Pacific Tourism Organisation; Department of Economic Affairs, Federated States of Micronesia

hotel rooms capable of receiving international visitors).

3 The embryonic tourism sector of the FSM has found it difficult to move forward and has in reality done little more than hold its own over recent years. At the level of the individual states, according to the tourist arrivals figures supplied for this chapter, arrivals in the FSM as a whole are still below 2000 levels, as they are for Chuuk and Kosrae. There has been a marginal improvement in Pohnpei and Yap, although tourist arrivals to both states are below 1996 levels.

4 Global tourism has experienced the most turbulent period in the sector's history. From a boom year in 2000 when global tourist numbers and expenditure reached an all-time high, the international industry has suffered from world economic slowdown as well as the fall-out from September 11, the SARS outbreak, a number of other major terrorist incidents and, most recently, concern over Asian flu. The on-going threat from random terrorism continues to depress demand for some types of travel in some markets. For the second time in its history and twice within three years, world tourism declined in 2003. Nonetheless, foreign visitor arrivals in the Pacific islands rose by 23% from 866,000 in 1996 to 1,069,000 in 2002, demonstrating again how the FSM has under-performed.

5 The FSM's two dominant markets, Japan and the USA which, according to the National Tourism Marketing and Promotion Action Plan - Final Report, together account for over two-thirds of all arrivals, have been among the worst affected by the problems facing the international industry. The Japanese market has still not fully emerged from the economic difficulties it has been suffering since the late 1990s, and this market has been severely constrained by threats of terrorism and health concerns. In line with declines elsewhere, Japanese arrivals in the FSM declined by 5% between 2000 and 2003. Likewise, the US market has not recovered from the slowdown begun before 9/11 and arrivals to the FSM are down by nearly 8% over the three year period. The European market, by contrast, is steadily growing in importance for the FSM and over the 2000-2003 period increased by almost 11%.

6 However, the recent difficult climate for the tourism sector apart, it is apparent that the FSM has so far failed to break the mould and move forward to become an internationally "recognised" destination in the way other small destinations such as Palau or the Cook Islands, for example, have begun to make their mark. The FSM appears to remain in limbo, with tourism affected by a "closed circle" in which tourism under-performs due to a lack of infrastructure, quality and promotion, providing a weak case for additional public or private investment in the sector, creating unfavourable word-of-mouth recommendations from those who do visit the FSM and thus perpetuating its under-performance.

7 The key issue for tourism in the FSM is to determine how best to break this circle - by investment, by promotion, by the creation of appropriate institutions, by stimulating private investment, by using public investment to leverage an acceleration of activity or by any other means?

5.1.2 Tourism's development potential

8 Much has already been written on this subject and there is no need to repeat the same arguments at length here.

9 In a nutshell, the FSM has much to offer the leisure tourist, and considerable development potential. This potential lies both on the main islands (and especially in Pohnpei and within the Chuuk lagoon), and also perhaps in the outer islands in the longer term (although it is obvious that the initial development effort should be focused on the main islands).

10 The FSM clearly offers a range of physical attractions, and especially a very high quality marine environment for divers and non-divers alike. Much of the interior of the main islands offers attractive possibilities for those interested in scenery, jungle, plant and birdlife (the absence of common tropical risks such as malaria and poisonous reptiles is an advantage here).

11 In addition, the traditional lifestyles, social structures and cultures of the FSM offer a range of interests to the visitor. It should also be emphasised that the unspoilt nature of the FSM is attractive to tourism markets that are increasingly seeking un-developed destinations (although there are also constraints in this context - see 1.3 below)

12 In considering the development potential for tourism, however, there are some key questions that need to be considered.

5.1.3 Is there a market for what the FSM has to offer in the leisure tourism field?

13 The FSM primarily offers the potential for eco-tourism, cultural tourism, water-based tourism, diving and various special interests (e.g. birdwatching, social anthropology, traditional plant medicines etc.). Sophisticated and experienced tourism markets are increasingly looking for something different, and especially for environments that are clean, pristine and unspoilt by over-development. The FSM's very isolation and remoteness and the (mainly) high quality physical environment that it offers have the capacity a priori to attract visitors with the above interests.

14 More positively perhaps, the FSM offers one of the finest diving environments on earth (and already exploits this asset to some extent in leisure tourism markets). It also offers exceptional physical beauty in some of the islands,

deep-rooted and unique social cultures, historical interests and an opportunity to relax far from the more pressured parts of the world.

15 While it is never possible to prove market potential categorically in advance, there is a strong case for stating that what the FSM could in theory offer to the world of leisure tourism represents a range of attractions to which tourism markets are highly likely to respond.

5.1.4 Can the FSM achieve the volume and value of tourism that would meet its apparent economic objectives for the sector?

16 The current hotel stock would be filled to an acceptable average occupancy rate if some 46,000 visitors staying for five days on average came to the FSM annually. This represents a short-term objective of increasing current visitation levels by around two and a half times.

17 Globally there are approximately 700 million international tourism arrivals a year at present. Simple arithmetic indicates that the FSM currently has a world market share of three thousandths of 1% and that it needs to raise this to seven thousandths of 1% to reach this target. This is unquestionably achievable given the appropriate actions set out in this chapter.

18 On the value (economic contribution) side of the equation, the small physical size and limited absorption capacity of the FSM as a tourism destination means that, even at this early stage, planning must take into account the ceilings to growth in tourism that will apply in future. Even with steady product development and expansion of accommodation and other tourism facilities, islands such as Kosrae and Yap proper, and most of the out-islands in all states, will only ever be able to absorb small numbers of visitors (the volume potential for Pohnpei and the Chuuk lagoon is higher, but still limited).

19 It is therefore crucial that the "high end" characteristic of tourism is kept in mind at all times, and also that product development is focused on capturing and retaining tourists' expenditure to the maximum degree possible.

20 The FSM certainly can achieve its objectives for tourism. However, in order to do so, a wide range of actions need to be taken simultaneously and in a planned and co-ordinated manner.

5.1.5 What key actions are necessary to achieve tourism's development goals?

21 These are set out in detail in this chapter. However, there is one general point that should be emphasised at the outset.

22 For tourism to play its full part in the development of the nation, a clear commitment to the sector needs to be made by all those involved - social and political leaders, traditional leaders, the general populace. Adequate resources -

financial and personnel - need to be devoted to the sector's long term development. Extraordinary efforts need to be made to present and promote the nation in such a way that its attractiveness to visitors is enhanced in parallel with raising the living standards but safeguarding the lifestyles of its residents.

23 This chapter sets out a comprehensive program for the long term development of tourism. This program implies:

- the tourism sector will require influential "champions" at the highest level of government to ensure that the proposed program is pushed through;
- concerted action on all fronts simultaneously; it will not be enough to take action in one area (e.g. product development), but fail to take action in another (e.g. marketing and promotion);
- real investment resources will be required over a sustained period that will demand that a higher priority should be given to tourism than hitherto;
- product development and diversification will be needed to attract visitors;
- an overall plan for these actions will be required; and
- in order to gain the desired economic benefits, a special effort will be required to develop genuine inter-sectoral linkages.

5.1.6 Issues, problems and constraints

24 The FSM is physically a small nation. Even with optimum tourism sector development, it is unlikely ever to become a high volume destination for leisure tourists. Nor should it seek to do so. As the 2nd Economic Summit makes clear, the goal for tourism is to develop "high end, low impact" tourism. In an economic sense, this translates into a need to ensure that each visitor contributes as much financially to the FSM economy as possible.

25 A key issue in this regard is the maintenance of traditional values and lifestyles. Residents of each state are rightly concerned to ensure that tourism does not despoil or damage social and cultural sensitivities. While tourism will inevitably have an impact, a careful balance needs to be struck between sector development and sustainability in a social and cultural sense.

26 By the same token, tourism's impact on the physical environment needs to be carefully assessed and managed, although at present most of the environmental damage originates from within the FSM itself.

27 Also the FSM offers only a limited range of activities and opportunities for the visitor. Product development is a key area requiring attention as the industry develops. For example, potential activities such as walks/trails within the main islands, or easy access to a beach from which the non-diver can enjoy the

marine environment have in most cases not been developed. There are no public transport services other than taxis, few maritime transport services, and no sidewalks to attract the visitor or for the visitor to use. Visitor information is patchy in availability and quality (e.g. a visitor to Pohnpei could leave without being aware of the existence of Nan Madol, one of the Pacific's most important archaeological sites). There are very few urban/retail centres, restaurants or cafes providing the type of products and services, and the typical points of interest/assembly that appeal to most international visitors.

28 The FSM is also isolated and, crucially, does not lie on any of the major long-haul air routes. Air access is both limited and expensive - the latter primarily due to inter-island routes that are costly to operate and carry limited traffic volumes, in addition to the nation's reliance on a single carrier. Perhaps most crucially for the development of a national tourism "product", the State of Yap cannot be accessed directly from any of the other three States.

29 While short runways preventing direct services from key Asian origin markets such as Japan and Korea certainly make tourism development a challenge, access from North America and Europe, though still expensive, is perhaps less of a problem given the absolute distances involved. Because the FSM has set its face against high volume tourism and is geographically remote, many of those who do elect to visit the country in a sense expect access to be relatively costly because of its very remoteness. Correctly managed, this could be turned to advantage.

30 In addition to access issues, the FSM has a number of other constraints to developing a vibrant tourism sector. These include:

- Poor infrastructure, both in terms of national services such as power, safe water and health services and within the tourism sector itself. For example, some hotels do not meet international standards.
- Airport facilities and immigration/emigration procedures are poor and unwelcoming; in particular, the time required to pass through the airports and board a departing flight is grossly excessive relative to the volumes of traffic handled at any of the four main airports.
- Visual and actual environmental standards are poor, damaging one of the key motivations for a foreigner wishing to visit the FSM in the first place.
- Generally there is poor knowledge and ineffective international promotion of the FSM as a tourism destination, resulting in a low profile for the FSM and in a lack of competitiveness in terms of "brand recognition" compared with many other island nations in the Pacific with which the FSM nominally competes.

31 Remediating these difficulties requires a concerted effort, although it should be emphasised that many of the basic infrastructure issues address first and foremost the interests of the residents - e.g. power, water and health services. Improvements in these basics, while unquestionably helpful in promoting the FSM as a tourism destination, rest primarily for their justification on national and residents' interests. Even improvements to transport infrastructure, notably to airports, are justifiable in part by raising the efficiency of the system for all users, not just for tourists.

32 One further apparent constraint needs to be mentioned. There is far from unanimity of commitment to tourism across all States. At the level of the general public, the importance of tourism needs to be made clear. At leadership level, full commitment to the sector's development needs to be made. At present, some of this commitment is patchy. The sector is unlikely to reach its full potential without widespread support within the nation.

5.1.7 The adequacy of the private sector regulatory environment as it relates to the tourism sector

a Introduction

33 A general conclusion of the Private Sector Development chapter is that much remains to be done to create a dynamic and supportive environment for private investment and enterprise. This has implications for the tourism sector in a number of ways. In particular, the statement that "... the private sector can expect little insulation from inevitable shocks to the economy.." and therefore that factor markets need to be very flexible is especially important in a tourism context, since international tourism demand is susceptible to external shocks and influences as the experience of the last few years has demonstrated.

34 Several other key points in the Private Sector Development chapter also have importance for tourism, notably:

- the need to raise rewards to labour in the private sector relative to government employment;
- the need to avoid too much bureaucratic interference in markets while at the same time ensuring adequate protection;
- the understanding that a successful private sector needs reliable and cost-effective infrastructure; and
- the fact that foreign investment laws, other than in Yap, are unclear, inconsistent and un-transparent in their application.

35 In this context, the key issues regarding the private sector and tourism relate to :

- the hotel sector; and
- small business support.

b *The hotel sector*

36 The hotel sector is one of the two sectors within tourism most likely to involve (relatively) large-scale investment. (The other is aviation where, for the purposes of this analysis, it is assumed that the FSM is unlikely to invest in air-line services, either privately or through government intervention, in the foreseeable future.)

37 Development of hotel capacity - new or refurbished - is the area within tourism most likely to attract foreign investment. In this context, the need to make the process of foreign investment appraisal consistent and transparent is important, but so also is the need to set any investment project in the context of national and state planning controls and environmental protection. The proposal (in Strategic Goal 9) that an environmental impact assessment should be mandatory for any new tourism sector investment is clearly vital for any new hotel.

38 Attracting foreign capital to the hotel sector in the FSM will be integral to the future expansion of tourism, but this might well be in two separate ways. The first relates to design and construction of the hotel building. This is an area where all the required skills are unlikely to be found within the FSM and where the attainment of standards appropriate to the hotel's grade will be essential in reaching the required quality levels.

39 The second is in the area of hotel management, not least because of the marketing skills of foreign hotel companies that a local, independent hotelier would find hard to match. A foreign investor in a hotel building may well (a) not be a hotel operating company and (b) insist that professional hotel management is brought in as part of the deal. Hotel management companies will expect a contract of perhaps 15-25 years' duration and will be remunerated from a combination of a percentage of turnover and a percentage share of operating profits.

40 Thus in both cases, the climate for and attitude towards foreign investment will be key in expanding the nation's hotel capacity when the time comes to do so. It is important that the provisions discussed in the Private Sector Development chapter are implemented with these considerations in mind.

c *Small business support*

41 With the exception of hotels and aviation, most private sector activity in the FSM's tourism industry is likely to be built around small, locally-owned and mainly independent businesses. This is the key area within the FSM for spreading the beneficial impact of tourism widely across the economy, and is a positive advantage in that it will create and sustain jobs, secondary demand and linkages to other sectors.

42 Small business support is currently confused in the FSM and it is proposed to rationalise and improve it under the private sector policy program proposed. Also relevant is the diagnosis in the Private Sector development chapter that the banking system in the FSM - commercial and development banking - has "a surplus of loanable funds".

43 Support to the small business community is likely to focus on several areas: business management, financing, marketing being the three most important. The proposed national tourism body should have a signposting function to help small tourism businesses to gain access to such support as is available, but should not seek to acquire the skills required to provide that support itself. For example, small business management and financing issues are likely to be dealt with most effectively by the banking system and by specialists in small business management techniques.

44 In the area specifically of small business financing, it may be desirable for the FSM Development Bank to develop a "small loans window" for the tourism sector, possibly as part of a wider small loans operation, in order to assist in the financing of basic capital equipment (e.g. taxis or tourism boats). However, this falls outside the scope of this sector review.

d The adequacy of the regulatory environment

45 The broad principles of private sector development and support as set out in the Private Sector Development chapter apply as fully to the tourism sector as to any other.

46 The essence will be to achieve what is proposed - transparency, support without excessive intervention, rational and balanced macro-economic management and the provision of effective infrastructure. From the tourism sector's viewpoint, there are two key questions:

- does the proposed approach to private sector management help the FSM's tourism industry to be competitive on an international basis?
- does the environment for private investment in tourism present encouragement to investors, especially to those from abroad?

47 On the face of it, as an international tourism destination, the FSM is uncompetitive due to high access (airfare) costs. There is no doubt that local tourism industry operators regard this as a factor mitigating against the sector's rapid development. However, as argued above, air access costs are just one element in a more complex equation.

48 In the longer term, the FSM will face tourism capacity constraints and thus competitiveness has to be defined in the context of the country's attractions and limitations.

49 The *National Tourism Marketing and Promotion Action Plan* advanced the proposal that the FSM should work towards a position of creating a premium tourism destination - in effect a destination that is capacity-limited and is capable of attracting only high-end tourists who will pay a premium for the privilege of coming to the country. While such a position is still a long way off, the issue of competitiveness should be seen in this light.

50 From the investor's point of view - national or foreign - the competitiveness position of the industry will be determined by the return achievable on investments. Provided that the reforms of the private sector environment are implemented as planned, there seems no reason to fear that the tourism industry will not be competitive in this sense.

51 As the range of fiscal instruments available to the government's macro-economic management expands, there is the possibility that differential fiscal incentives to encourage growth in specific sectors of the economy could be introduced. For example, provisions for accelerated depreciation of certain types of investment or tax breaks on corporate profits might be considered to be justified. Such incentives could be used to encourage accelerated development of a sector such as tourism, but the ability to do so successfully will obviously depend on the progressive expansion of fiscal options open to government. At this stage, it is necessary to do no more than bear such longer-term possibilities in mind.

5.1.8 Infrastructure Development Plan - implications for tourism

52 The successful development of the tourism sector in the FSM is dependent in large measure on the development of public infrastructure across the nation. Although infrastructural improvements affect the lives of, and are naturally of primary importance for, the residents of the country, there are minimum levels of public infrastructure below which it is impossible for the tourism industry to flourish. In particular, tourists demand at least adequate standards of utilities, transport and health services in their holiday destination. While it is for the residents of each state that satisfactory hospital facilities are essential, visitors to

the islands will expect to have available at least basic standards and services to cope with illnesses when they are away from home. Improvements will be needed if the image of the FSM as a destination is not to be damaged irreparably by bad word-of-mouth reports.

53 The Infrastructure Development Plan 2003-2017 has outlined the major infrastructural developments that are necessary or will aid the development of the tourism sector within the FSM. The report notes that "much of the basic infrastructure that should be in place to provide a foundation for growth of the tourism industry (and related industries) remains "on the drawing boards". Major public sector infrastructural investment and development are thus integral to moving the tourism sector forward.

54 At the same time, with very few exceptions no public infrastructure proposal is dependent solely on the tourism industry for its justification. (A possible exception in the FSM would be the construction of specific harbour facilities for cruise ships - the IDP mentions this as a possibility in Kosrae, Pohnpei and Chuuk). In nearly all cases - transport infrastructure, power, water, waste disposal and treatment, health services, education - the primary justification for investment is the public interest. The Infrastructure Development Plan Volume IV deals with "Infrastructure *Support* for Tourism" not "Infrastructure wholly-dependent on or exclusively intended for tourism". This is a key difference.

55 That said, there are many important infrastructure projects that will have a direct bearing on the feasibility of developing a successful tourism sector. In summary, the Infrastructure Development Plan notes the following areas as of particular importance:

Air transport

- Rehabilitation of the runway, taxiway and apron pavement at Pohnpei airport is urgent and the airport is arguably unsafe. In terms of tourism to the FSM (quite apart from other considerations), a major air incident would bring any chance of developing the industry to a complete halt for at least five years.
- Passenger terminals in all four States need to be expanded and improved, with new baggage handling and flight security equipment installed.
- The question of runway extension in all four states is an ongoing one - although runways are currently adequate (in terms of numbers) for current levels of visitor demand.
- The lack of a service between Yap and Chuuk makes intra-state travel difficult and inconvenient.

- Only Ulithi of the outer islands has a satisfactory airstrip and service. Most of the FSM outer islands are effectively excluded from hosting tourists or reaching them by air "entails acceptance of a significant risk".

Roads and road transport

- Circumferential roads on Chuuk, Kosrae and Pohnpei are incomplete and in some cases in bad repair. Completing these would create a significant additional attraction for visitors, providing round island access with sea views and opening up new areas to visit.
- Few roads have pedestrian or bicycle routes and there is a lack of pavements in the main towns. Visitors generally prefer to walk or cycle when they are exploring a holiday destination; at worst, the roads are unsafe.
- There are virtually no boardwalks through mangrove or taro swamp areas, again hampering access for visitors.
- There are only unpaved circumferential roads in Tonoas and Fefen, islands in the Chuuk lagoon with considerable tourism potential. Other islands have no roads.
- There are virtually no public transport services, nor are tour buses available.

Sea transport and marine facilities

- There are no maritime transport services to the outer islands suitable for tourists. Most boats are in poor repair, or not operating at all.
- For privately owned boats, the FSM government does not undertake seaworthiness inspections nor does it ensure that vessel crews are qualified to operate passenger transport. According to the IDP a number of these private boats are "accidents waiting to happen".
- Dock facilities in the lagoon islands, particularly in the Chuuk lagoon, are inadequate. This hampers exploitation of tourism opportunities.
- Marine recreational facilities like tourism piers with direct access to vessels offering marine tourism services, and including shops and restaurants, are almost entirely lacking.
- Cruise terminals are entirely lacking. Should this be decided to be an appropriate sector for the FSM to develop, a main feature would be the opportunity provided to cater to the cruise ship passenger on local cruises and marine activities.

Public utilities

- Electric power services do not generally provide a constraint to tourists at the current level. However, there are some areas of Kosrae and Pohnpei that do not have power and there are considerable shortages in Chuuk. Expansion of tourism will require services to be extended in the main islands and provided to many of the lagoon and outer islands.

Water

- Sewerage systems and treatment plants are generally inadequate and/or inoperative, causing surface water pollution, damage to the mangrove swamps and lagoons, and the possibility of water-borne illnesses.
- The position regarding water/waste water is one of the more serious deterrents to tourism development throughout the FSM.
- Potable water is not universally available.

Health facilities and services

- Hospitals in all four States require renovation, are generally badly maintained and the services provided are limited.
- Failure to make progress in all these areas will undoubtedly reduce the possibility of success in developing a modern tourism sector in the FSM.

5.2 Strategic Goals, Policies and Outcomes

5.2.1 Strategic Goal 1: Make tourism the leading economic activity in the FSM

a Analysis and justification

56 In addition to reflecting the characteristics of many other island nations - an open economy, slender resource base, small and fragmented domestic market and dependency on international transport services over which it has no control and which can achieve few economies of scale - the FSM has to contend with a history of near grant-dependency under the terms of the Compact of Free Association with the USA.

57 As an integral though physically isolated part of the US economy, the FSM has no control over monetary policy. Macro-economic management is restricted to fiscal measures and variations in government spending, with the former offering few options given the very low tax base and narrow range of taxes applied.

58 Compact funding has reduced the incentives to self-sufficiency and made it harder to engender proactive development of the private sector. There is

little commercial agriculture, a history of subsistence cropping, no significant manufacturing sector, and few modern service industries. The rich fisheries of the north western Pacific are indirectly exploited through licences granted to foreign commercial fishing fleets. While this latter sector provides a vital source of revenue, arguably its growth prospects are very limited as is the potential for raising the level of local value added. Some processing takes place, but there is pressure to export raw fresh fish to the major market of Japan which again limits the prospects for expanding local value added activities.

59 Against this background the FSM has limited development options. Yet it is vital for the nation's future that rewarding jobs are created and maintained to retain the most talented young people. This is a task made infinitely more difficult by the FSM's automatic labour rights in mainland USA and other US territories in the Pacific such as Guam, which attract young people to live and work abroad in return for better living standards.

60 Tourism offers one of the best - arguably the best - opportunity to develop the national economy. Although it has its dangers in terms of potential environmental damage and an adverse impact on island traditions, tourism's natural labour intensity, ability to stimulate other sectors (e.g. agriculture, construction, local services etc.), and to create revenue potential for the public sector through taxation appears to meet some of the key development imperatives of the nation.

61 Perhaps even more persuasive is the counter-argument which asks what alternative economic activities capable of similar beneficial effects are open to the FSM? It is hard to think of any other sector that offers the prospect of the widespread potential benefits that a well-balanced tourism sector could contribute.

b Economic policy implications

62 Fiscal policy is the area over which the national and State governments have most control. A key objective therefore is to set taxation levels applied to the tourism industry and/or to visitors directly that achieve an acceptable yield to the public sector without unfairly penalising the industry or, more important, that are out-of-step with comparable destinations with which the FSM may compete.

63 Other key areas are:

- ensuring that the labour market is fluid and responsive to market realities;
- ensuring that foreign investment laws and practices are welcoming, respectful of FSM interests and transparent in their application;

- giving priority to public investment in services and infrastructure that benefit both residents and support tourism development (e.g. the provision of safe water in all main islands,);
- adopting planning practices that enhance the physical environment, facilitate new development and open up new opportunities for activities and points of interest for visitors (e.g. enhancing urban townscapes, creating retail centres that tourists will also find interesting); and
- providing incentives to raising standards and skills levels across the industry.

c Critical issues for implementation

64 In order to give effect to a policy of setting tourism as a high priority, appropriate resources will have to be made available to those organisations responsible for developing the industry.

65 Most areas of public investment have some relevance to tourism - such as health, infrastructure, education etc. Specifically, however, there are two important issues that arise:

- the creation and funding of an appropriately-structured national tourism body; and
- the provision of tourism training services.

d Outcome measures and justification

66 Specific outcome measures are proposed to support this Strategic Goal. These relate in broad terms to :

- doubling the current number of visitors by 2008 and increasing visitors by 5% a year thereafter;
- generating gross income from tourism of \$25 mn by 2008 and raising this total by 7 % a year thereafter;
- achieving year round occupancy rates in hotels of 50% by 2008 and 65% by 2010;
- sustaining 1,250 jobs primarily by demand from visitors from abroad by 2008 and raising that total by 5% a year thereafter; and
- formally positioning the FSM as a premium tourism destination by 2012 and ensuring that \$250 per day is spent on average by each foreign visitor by that date.

67 Other measures can progressively be developed, relating to, for example, the performance of individual States and the support of other specified economic activities by the tourism sector. The above are national goals that should form the basis for initial planning of the re-vitalisation of tourism to the FSM.

5.2.2 Strategic Goal 2: Integrate tourism sector into national economic planning and development

a Analysis and justification

68 Strategic Goal 2 is directly related to Strategic Goal 1 but separated from it by the need to focus the attention of economic planners, national, State and community leaders, and to integrate tourism into the heart of the nation's development effort.

69 Thus, as part of raising tourism to a place among the most important economic activities of the country, it is essential that economic planning and budgeting accept that the sector's profile has been raised. In the longer term, the ability of the FSM to invest in, for example, physical and social infrastructure will in part depend on its ability to generate more of its own resources through taxation, rather than simply rely on grant-finance under the Compact. The case has already been made that tourism is one of the best ways of doing this.

70 Strategic Goal 2 is therefore partly concerned with embedding tourism into the priorities of economic planners. It implies the specific analysis of the impact on and needs of tourism in all appraisals relating to public investment projects. The question needs to be asked "what will the impact be on the tourism sector and what does the tourism sector need in this area" when considering investments in infrastructure, education, health, agriculture etc. In some cases there may be no direct impact, but in most cases tourism will be affected to some degree because tourism and its effects cover, or have implications for, a wide variety of supporting economic activities.

71 In addition to involving tourism in all such investment proposals, this Strategic Goal also proposes that each State, and ultimately the national government, should produce a detailed tourism development plan. Ultimately the FSM will need a framework for the development of the tourism sector nationally in order to set sectoral investment priorities.

b Economic policy implications

72 Few additional economic policy implications flow from this Strategic Goal that are not already set out under Strategic Goal 1, other than to ensure that tourism is given a suitably high priority in the planning process.

73 Achieving that priority will, nonetheless, have implications for the budgetary processes of the national government, in order to ensure that tourism is adequately resourced.

c Outcome measures and justification

74 In practical terms a minimum level of government funding for the tourism development effort should be established as soon as possible. Clearly there are many priority areas for investment in the FSM, especially in basic infrastructure and services, and it would be unreasonable to expect tourism development to take an unbalanced priority position in this process. On the other, hand, the longer-term ability of the national and state governments to invest in the nation will partly depend on increasing the tax base, a process to which tourism can contribute.

75 By 2006 it should have become automatic that tourism's interests are reflected in all relevant investment proposals, as argued above.

76 By 2007 the national government should have in place both a policy paper on tourism and a list of tourism sector investment priorities, based on the state and national tourism development plans.

5.2.3 Strategic Goal 3: Create an attractive and supportive environment for private sector tourism industry investors

a Analysis and justification

77 Businesses in the FSM that supply and support the tourism sector are mainly private sector operations (the principal exceptions being the management of sites and attractions - such as the Walung Marine Park in Kosrae, and Nan Madol in Pohnpei) which come under public sector control and responsibility. The central objective of the development of tourism is to expand that business base, create viable jobs and thereby maximise the capture of visitors' expenditures within the FSM.

78 In assessing what the government can do to promote and encourage the private sector, it is appropriate to distinguish between small businesses (for example, owner-managed operations employing fewer than ten people), and larger enterprises.

79 In the latter case, most larger tourism enterprises will tend to be in the accommodation sector, establishing and running hotels, live-aboard dive boats and other forms of accommodation (informal guest houses, however, are more likely to come into the small business category).

80 The proposals relating to private sector policy and to the environment for foreign investment are those most relevant to larger businesses. In these

cases a supportive and welcoming environment for investors, as discussed above, are important. Government support can be provided in areas such as assistance with staff training and, in the longer term, the introduction of fiscal incentives to encourage expansion of the accommodation stock and potentially of other, larger-scale tourism businesses.

81 The small business sector in tourism encompasses enterprises such as restaurants, taxi and car rental operations, local maritime transport for visitors, the handicrafts sector and retail centres and outlets designed to attract the visitor (e.g. the proposed waterfront development in Pohnpei that will combine a base for tourist boats offering transport services within the Pohnpei lagoon with a specialised retail/café development selling souvenirs and refreshments to visitors - including domestic visitors).

82 Small businesses in most countries and sectors make use of publicly-promoted support mechanisms in a variety of ways. These can include advisory services, assistance with training and the provision of training courses, help with business management and finance, marketing support and so on.

83 There is scope for such services within the FSM, built upon existing organisations and programs, and clearly also a need for assistance to raise standards and skills within the tourism sector, whether related to vehicle operations, handicraft production, restaurants standards or any other activity that depends to a significant degree on demand from the visitor.

84 At the same time it is important to make clear that support to small businesses does not mean "subsidy". The objective is to encourage the development of small business networks that are self-sustaining, financially viable and offer rewards to labour that are adequate to recruit and retain good quality, well-trained staff.

b Economic policy implications

85 Beyond the general policy related to the encouragement of the private sector in all activities across the FSM, discussed in the Private Sector development chapter and summarised for tourism earlier in this chapter, there are few tourism-specific policy implications here.

86 The key will be to provide the organisations and frameworks within which private sector support can operate.

c Critical issues for implementation

87 Implementation priorities arise in two areas - at the level of national government and state government policy towards private sector support, economic management and the climate for foreign investment to put into place the tourism-specific support required.

88 General private sector development policy is dealt with in the Private Sector Development chapter prepared for the 3rd Economic Summit.

d Outcome measures and justification

89 A number of practical steps need to be undertaken in order to create the supportive environment for private sector tourism businesses.

90 An early task is to provide an information and signposting service to the tourism sector to assist businesses to gain access to support available from elsewhere in the public and private sectors. This signposting function is both straightforward to develop and involves little investment.

91 Supporting this will be a more pro-active program to assist the States to identify and work up proposals for new tourism sector investment (at least one a year for each State is envisaged), to provide information, and to promote investment opportunities.

92 Sector representatives by 2008 should therefore have developed an active tourism project promotions arm, in conjunction with more general investment promotion offices within the FSM, with the specific aim of introducing projects to investors and vice-versa.

5.2.4 Strategic Goal 4: Invest progressively in tourism product development in order to diversify and expand the range of attractions and activities for visitors.

a Analysis and justification

93 This Strategic Goal deals with tourism-related infrastructure as opposed to general public infrastructure which affects the tourism experience. Tourism-related infrastructure includes natural and man-made visitor attractions, hotels, restaurants etc.

94 One of the major limitations of the FSM at present is the lack of a well-developed range of activities and opportunities for the visitor. In most islands there is not enough for leisure visitors to do other than those whose stay is only a few days, and what there is to do is often difficult to access and poorly publicised. While new investment is hard to justify when visitor numbers are static or falling, product development initiatives are nonetheless an essential element in stimulating the market.

95 In the realm of natural visitor attractions such as waterfalls, beaches, or marine parks, the FSM broadly is deficient in the standards of access and on-site facilities that it achieves (again there are exceptions, such as the Walung Marine Park in Kosrae, although in most such cases further improvements are always possible). Investment in such facilities need not be costly. For example, simple

signage, car parking facilities, information points and the opening up of trails and footpaths can all make a big difference to the visitor experience and to the ease of access.

96 Historical sites, whether archaeological in nature such as Nan Madol and Leluh, or purely historical, such as various World War II sites and ruins, likewise require investment in access, presentation, tidiness, visitor information and so on.

97 In some cases these sites - and this could include some of the FSM's key coral reef areas, should be susceptible to World Heritage Site designation, which brings with it a powerful marketing message to the world at large and of itself creates a demand to visit. However, not all of the FSM's many natural attractions would qualify for such an international status, but that does not prevent the FSM itself establishing a designation such as "FSM Site of Special Interest". This could be designated with special signage, be built into tourism marketing and promotional programs, and bring with it certain requirements for minimum standards of presentation and facilities. Many tourism destinations around the world make use of their own internal designations of this kind to attract visitors (for example countries such as Costa Rica make much of the very large proportion of their country which is designated as national reserves or national parks, combined with a clear message to the visitor about the importance the country attaches itself to conservation issues).

98 The built environment also has an important part to play in expanding the range of activities and points of interest open to the visitor, and thus expanding the product on offer. This is especially relevant in providing improved marine recreations facilities and access to them. For example, there is a proposal to provide a small boat base (a series of pontoons) and associated craft, retail and café centre on the waterfront in Pohnpei. Similar opportunities exist in Weno on the waterfront, where small boat transport to adjacent islands could be combined with market facilities selling both fresh produce from the nearby islands and providing outlets for local crafts. Small boat services could, for example, provide glass bottom boat tours, tours around and within the main lagoons, access to beaches within the lagoons and so on.

99 The overall tourism objective in such matters should be to offer the visitor plenty of things to do and places to visit. Visitors to the FSM, other than those who come primarily for diving, are likely to want to mix relaxation with activities, such as visiting interesting sites, taking a round-island tour where relevant, going on walks, exploring urban centres on their own and so on. In so doing they both spend more money and are likely to prolong their average length of stay. Under current circumstances most islands make little attempt to meet these objectives and often even fewer attempts to inform and make it easy for

the visitor to engage in the activities available. Developments in these areas is fundamental to achieving tourism's full potential.

100 In the hotel sector, while some existing properties could be said to meet international expectations within whatever grade they aspire to, others do not. In the latter case, re-investment will be required to bring them up to standard, although such investment can only be justified when there is judged to be a reasonable chance of achieving steadily rising visitor numbers. (Service standards are dealt with under Strategic Goal 11 dealing with training).

b Economic policy implications

101 Planning issues and policies are at the heart of this type of development, and highlight the need to deal with land ownership issues and to ensure that landowners understand the importance of tourism to the nation as well as its potential to generate revenue. (An example is to be found at the Kepirohi waterfall in Pohnpei, a site frequently visited by nationals and foreigners where the landowner makes a nominal entrance charge). Planning policy should be used in similar situations in all of the states to encourage this type of visitor activity.

102 In more major areas for investment, such as the hotel sector, in the longer term fiscal incentives could be provided to encourage hotel owners to upgrade their properties, although this would require a broader tax base than exists at present. In due course also, such incentives could be tied in with quality standards and operating licenses.

c Critical issues for implementation

103 An important task will be to initiate activities in conjunction with the State visitors' bureaux to carry out co-ordinated censuses of facilities and prepare prioritised plans for improvements and to co-ordinate the identification of the 3-5 leading visitor attractions, activities or points of interest that will help to define the development plans for the tourism sector in each of the four states.

104 Appropriate sector representatives should also take responsibility for developing tourism-related input to two national areas for action - the designation of sites as "FSM Sites of Special Interest", (which may extend beyond those sites of interest mainly to visitors and may also depend on other arms of government, national or at state level, for implementation). These representatives similarly should provide the tourism industry perspective for applications for World Heritage Site status, and would liaise with international organisations, companies, print media etc. with an interest in such matters, such as the US National Geographic organisation and specialised television channels in North America, Asia and Europe that might wish to make use of such designations in program making or in key publications.

105 The national and state planning authorities should take primary responsibility for the built environment, again with input from tourism sector interests. The Infrastructure Development Plan (IDP), for example, recommends that attention be given to sidewalks and bicycle tracks, both areas of direct potential for visitors but which also cover other arms of government and other interests, including those of residents, within the country.

d Outcome measures and justification

106 Several measurable outcomes are proposed under this Strategic Goal.

107 Comprehensive inventories of tourism sites, attractions and services are to be produced by each state by 2006. This activity should be relatively simple to accomplish but would also require the design of standardised forms of reporting so that the results may be comparable and data collected in a consistent manner.

108 By 2007 this process should lead to the production of outline and prioritised plans for future investment that will form part of the longer-term tourism sector planning process (Strategic Goal 1) as well as providing each state with a better understanding of its key selling points for the visitor and of what is required to bring these up to standard.

109 Practical issues such as the establishment of proper signage can be achieved by 2006 (some states, notably Yap, are further advanced in this regard than others), in 2008 there should have been established a national register of "Sites of Special Interest" with a view to formalising the system, erecting suitable signage and integrating the SSI designation fully into national tourism promotion and marketing initiatives.

5.2.5 Strategic Goal 5: By the progressive introduction of national quality standards, establish the FSM's tourism sector as of a sufficiently high standard in dive, eco- and cultural tourism to command a premium in global markets

a Analysis and justification

110 There are three fundamental reasons why the objectives of the FSM's tourism development should be focused on quality and the creation of premium destination status.

111 First, the States of the FSM are home to some of the richest and most deeply-embedded social and cultural traditions in the Pacific. While this is of considerable interest for visitors, it also gives rise to understandable concerns among residents that tourism could damage societies, practices and standards. The FSM therefore has some key social and cultural "capacity limits" in the context of becoming an international tourism destination. These traditional values

must be safeguarded as tourism develops since they represent a major reason why visitors wish to come to the FSM in the first place.

112 Second, the FSM is both physically very small and, by and large, offers one of the most pristine environments available to international tourists anywhere on earth. The pristine nature of the FSM is already under threat from poor environmental practices within the nation itself (this issue is addressed in a separate chapter). On the assumption that general environmental standards can be raised to deal with these local problems.

113 This includes the reality that, ultimately, there will need to be a volumetric capacity limit placed on international visitor numbers to all of the FSM's islands - large and small - given the almost infinite potential supply of global international tourists. Tourism for the FSM represents the best option for raising living standards, creating employment, helping to retain talented young people within the nation and meeting the aspirations of residents for a better life. Therefore, the economic yield from tourism needs to be maximised.

114 Since absolute capacities are limited, it follows that each tourist must be encouraged to spend as much as possible within the FSM, which in turn leads to the conclusion that, eventually, tourism has to become an "up-market" activity - attracting only high-spending visitors that respect the country's environment and its social and cultural characteristics. In order to achieve this, the FSM needs to become a destination capable of charging a premium for the right to visit it, and in order to do that, standards must be high.

115 Third, in order to be competitive, standards in any case need to be comparable to those within competing destinations. Generally, this is not the case at present. It is important to recognise, however, that this does not imply that all accommodation and services need to be of a "5-star" standard, but it does imply that quality has to be guaranteed at all levels. Eco-tourism hotels, for example, by no means need to reflect the high-tech standards of city centre 5-star hotels, but they do have to deliver their products and services at the highest professional and quality levels relative to their chosen market position.

116 The same applies to tourism services. To take a simple example, many tourists to the FSM will make use of local water transport to reach places that they wish to visit. It is imperative that the standards of such services reach acceptable international levels, in areas such as safety equipment on-board, operating competencies of the boat-owner or captain, technical standards of the boat and its engine(s), and so on.

b Economic policy implications

117 Most of the activities to be carried out under this strategic goal call for administrative rather than policy measures. However, in order to deliver a pro-

gram of raising service standards across the board in the tourism sector, a key area of policy will be:

- to ensure that the resources available to the training/educational institutions of the FSM are raised sufficiently to ensure that vocational and other training programs for tourism can be effectively carried out.

c Critical issues for implementation

118 Implementation of the components of Strategic Goal 5 requires that the national body responsible for tourism take on a co-ordinating role and also take the initiative in developing a range of quality standards.

119 The specification of standards in some cases is straightforward. Dive operations already have recognised global standards (PADI for example), and it should be a simple matter to make such standards compulsory throughout the FSM.

120 In other sectors such as hotel grading and the award of quality standards to service industries, it will be up to a national body with whatever specialist assistance is required, to design and introduce standards across the nation. Hotel grading will probably require international assistance (there is ample methodological guidance available from North American and European sources).

121 The successful completion of certified training programs at all levels in the industry require initially the development and design of suitable courses and course modules, a role which should be led by the relevant educational bodies and especially the College of Micronesia.

122 Enforcement of tourism industry standards will require as a minimum the development of a compulsory licensing system. This may require legislation.

123 With the exception of dive operations whose standards can be imposed soon, Strategic Goal 5 envisages that the compulsory licensing and accreditation schemes discussed under this heading will not be fully implemented until 2008-2010, giving ample time to develop the various components. It is, nonetheless, worth emphasising that quality standards are key to achieving the longer-term goals of establishing the FSM as an up-market destination and enabling it to deliver what it promises.

d Outcome measures and justification

124 Two key dates are proposed for measurable results under this Strategic Goal - 2008 and 2010. In the longer term, it is envisaged that by 2012 plans will be implemented to establish the FSM as a premium destination.

125 There are several measurable outcomes under this heading:-

- a hotel grading system is designed by 2007 and implemented by 2008;
- tourist transport services and vehicles meet defined safety and operational standards from 2008 onwards;
- all dive operations meet PADI standards by 2006;
- the national body should establish a tourism business inspectorate in 2008 to implement the proposed quality standards across the sector;
- the national body should implement a policy as soon as is practicable after 2008 that only accredited tourism businesses will be included in official FSM marketing and promotional campaigns; and
- full industry accreditation schemes will be in place and operative from 2010.

126 The justification for these measures has been set out in 2.5.1 above. The assumption being made in proposing these measures is that, for the reasons explained, the FSM has no real alternative in tourism but to work towards the attainment of exclusivity and high standards, in order to maximise the benefits from tourism under circumstances where high-volume, continuously-expanding tourism cannot reasonably be accommodated.

5.2.6 Strategic Goal 6: Promote inter-sectoral linkages and maximise use of local produce and services

a Analysis and justification

127 Identifying tourism as a national development priority implies that tourism can help to stimulate activity, wealth and job creation. However, a noticeable feature of the FSM to the visitor at present is the narrow range of local produce, products and services on offer, and the extent to which imported food, drink and artefacts are offered in hotels, restaurants and retail outlets. Perhaps the main exception is in Chuuk where a very active fresh produce market exists in Weno based on produce brought by boat from adjacent islands every day, even though the market physically is rudimentary .

128 The better hotels in the FSM strive to make use of local produce, to offer menus based on local creativity, to use local products and styles in the design of buildings and generally to capitalise on the great potential of the nation to supply the tourism sector in these areas. At present, while it is inevitable that some items of food and drink will always have to be imported, the fact remains that:

- there is often an absence of local fruit and vegetables available in hotel restaurants;
- supplies of local fish in hotel restaurants appear to be irregular;

- artificial flowers are commonplace in a country generously endowed with a wide variety of natural flowers and plants;
- there are few good quality handicrafts available for sale;
- there are few visitor-related outlets or retail centres in which to sell them;
- there are relatively few cultural centres to visit;
- there is relatively little emphasis on the promotion and consumption of local goods and services; and
- there is relatively little information available automatically to the visitor to promote local goods and services.

129 The implications are twofold. First, an active program is required, in conjunction with those authorities concerned with agriculture and fisheries policy, to raise the selection of local goods and services available to the visitor, and to improve the reliability of supply. Second, the attitude of many FSM residents to the provision of locally-produced goods needs attention.

130 It is important for the tourism sector to understand that few visitors come to a unique country such as the FSM in order to eat standard international, imported and often preserved food, to buy imported goods or to have their hotel rooms decorated with imported artificial flowers. Thus, in addition to the obvious economic case for maximising the value that tourism can add to the domestic economy by internalising the supplies of goods and services that visitors consume, there is also a strong case for promoting the understanding of where the interests of visitors lie and in facilitating their access to local products. A key starting point in reversing this situation will be to change the mindset of those working in the tourism industry and serving the needs of visitors.

131 The requirements under this Strategic Goal imply more than merely promoting the consumption of local produce. Development is also required in the production of handicrafts to increase the supply of locally-produced products, such as clothing, which can be over-printed locally to add value. The essence of this area of tourism development is to make positive efforts to create a range of goods and services that visitors will want to buy as part of their visit, and thus maximise local expenditure.

b Economic policy implications

132 In the area of local fresh produce development, there are important policy implications for agriculture, horticulture, fishing and farming which extend far beyond the tourism sector and fall outside the scope of this chapter. The policy areas most likely to be involved to the benefit of the nation as a whole include developing incentives to local production, the development of marketing co-operatives and of inter-island transport services.

133 In the development of arts and crafts and the production of artefacts for purchase by visitors, training and small business support services will also be relevant.

c Critical issues for implementation

134 In addition to any initiatives that might be taken within other key sectors such as agriculture and fishing, the interests of the tourism industry must be identified, developed and promoted by a representative body. It will need to maintain close liaison with the State visitors' bureaux as well as with other arms of national and State governments.

135 The most important first step is to identify opportunities within the tourism industry for the supply of, for example, fresh produce, and to co-ordinate the volumes involved. It is to be expected that the majority of such supplies will come from within each of the four States, although it may be that the regular air services between Chuuk, Pohnpei and Kosrae could be used to develop an air freight component (the position of Yap is far more difficult in this regard since trans-shipment in Guam would be required, and it may be that Yap would be better advised to extend its established marketing co-operation with Palau to the fresh produce area as well).

136 Nonetheless, the national body has an important role to play in identifying and promoting opportunities, and in undertaking positive consultation with government departments on how such opportunities can be turned into reality. At the very least, agricultural and fishing authorities need to be made aware of the tourism industry's needs and potential. Marketing issues could be eased by the creation of purchasing consortia by groups of tourism-dependent businesses in order to smooth the flow of supplies and reach volumes of interest to a regular commercial supplier.

137 Sector representatives may also need to develop a program with the tourism industry itself, such as identifying opportunities for the training of kitchen staff in the use of local produce and the development of menus suitable for visitors as well as in helping hotel and restaurant operators to understand the requirements of visitors.

138 In the area of crafts and artefacts, again a national body may need to act as catalyst. For example, it could analyse the range of products available to visitors in other Pacific islands states and develop diversification proposals for the crafts industry and its advisers to work on. Such an initiative would also help to identify any specific training and/or resource needs that could also be handled by the specialised business support agencies responsible.

d Outcome measures and justification

139 Specific targets should be set in each state for the proportion of fruit, vegetables, fish, flowers and other consumables that should be sourced locally by 2008. It may ultimately be that this element could be one of many included in hotel and restaurant grading criteria and/or industry standards awards, but even prior to that, targets would help to focus the minds of the tourism industry and the nation as a whole on the economic purpose of the tourism sector.

140 Encouragement should also be given to use local building techniques and materials in the construction of infrastructure such as hotels, restaurants, visitors' centres etc. that visitors will use, and a target should be set and monitored that each visitor to the FSM should spend at least \$50 on locally-produced artefacts and souvenirs on each visit.

5.2.7 Strategic Goal 7: Involve FSM residents in tourism sector development

a Analysis and justification

141 Tourism can only become one of the main drivers of growth in the economy of the FSM if its development carries the backing and support of its residents. To achieve this, it is essential that there is a broad understanding of the advantages that tourism has to offer in terms of employment, income generation and economic development. At the same time, tourism's negatives need to be recognised and, in this context, the population must feel able to have a voice in the type of tourism that develops and the limits that need to be imposed.

142 To engender support for the tourism sector among the local population, the contribution it can make to bettering their lives has to be made apparent. It is important that residents understand that a successful tourism industry will bring in revenue from abroad, including foreign exchange, which will enable the government to improve social conditions, education and health facilities, and develop necessary infrastructure that will improve living conditions. In terms of employment generation, it can be demonstrated that tourism offers the advantage of a high employment ratio and employs up to 100% more in indirect employment; it will provide much needed jobs close to home, encouraging young people to stay on the islands rather than go abroad to find work. At the same time, much employment is in SMEs based within local communities; these have the advantage of allowing a significant degree of local participation, as well as employing local labour. Tourism's ability to stimulate cross-sectoral linkages means that it generates related jobs in other sectors, often also within the local context.

143 No development comes without disadvantages and these too need to be publicly addressed. On the potential downsides of tourism, residents are rightly concerned about environmental damage and adverse impacts on their traditions

and lifestyles. It is important, therefore, that they recognise that tourism comes in many guises and that they understand that there are choices to make on the types of tourism that best suit development within each individual state.

144 Each of the four States of the FSM is deeply aware of their individual social and cultural identities and the need to preserve these. They are equally concerned that an influx of tourists could dilute and damage local cultures and bring in standards of behaviour and characteristics alien to them. Such concerns are rightly held and can only be alleviated by bringing them into the open and addressing them. There is little doubt that the proposed high revenue, small scale form of tourism development is the best way to create a sustainable industry that will be acceptable and provide minimum impact on ways of life. It is also significant that these traditional values are what attracts visitors to the FSM in the first place. An understanding of this will lead to a greater likelihood of gaining the people's support.

145 An awareness of the ways in which tourism can help to preserve local skills and crafts, dances and festivals, (while at the same time creating employment), is an important factor in developing an understanding of tourism's advantages. It can also help the populations of the FSM to develop a pride in their own cultures, and stimulate greater interest in retaining and perpetuating local skills and knowledge.

146 The issue of land ownership is a crucial factor in developing tourism throughout the FSM. Access to sites of interest, the opening up of forest walks and trails, and the availability of land for new development, for example, will be needed as the industry expands. New tourism products have to come on stream to provide additional attractions to make visits worthwhile and provide for longer lengths of stay. This can only happen with the willing consent of those involved. Expansion and progress is thus largely dependent on the co-operation and consent of those involved and can only be achieved if tourism is embraced as a legitimate and worthwhile mode of development.

147 In particular, tourism within the FSM which commands a premium in global markets will not succeed unless it has the backing of the country's residents, the traditional leaders and the church; high end tourism cannot be successful unless there is a ready welcome to tourists, a pride among the local population in their society and culture, a willingness to share this with visitors, and a destination that is environmentally sustainable. This can happen only if the residents of the FSM have an understanding of the sector, what they can do to promote it, what it can contribute to the development of the country, what they need to beware of and what it offers them in personal terms. Public support is crucial to moving the industry forward.

b Economic policy implications

148 Administrative rather than economic measures per se are needed to address the crucial issue of public awareness. Programs and courses need to be developed, plans put in place for public consultation and meetings arranged, and publicity undertaken.

149 Such activities cannot be undertaken without the financial resources to develop these programs, as well as materials for them, and sufficient staffing levels to devote the required time to put them in place.

c Critical issues for implementation

150 Critical to the implementation of Strategic Goal 7 will be the ability of a national body to work closely with State education authorities, State VBs and the College of Micronesia to design and implement programs which explain the benefits, opportunities, pitfalls and choices that can be made in tourism development. Guidance from international organisations such as PATA and the experience of other small island states will be crucial in putting together appropriate programs and assessing the best ways to get the messages across.

151 The strategy for a public awareness campaign will fall into a number of different components. Information programs for adults, educational courses for secondary level children (and possibly primary level), consultation with community leaders, traditional chiefs and the church, and general publicity campaigns will all have a part to play. The first step will be to design supporting educational material and follow this with an ongoing program of public information dissemination and regular educational classes in schools. The overall program should be started in 2006 and be fully operational, including a tourism awareness page on a website, by the end of 2008. Public awareness campaigns are never finished, however, and such activities need to be regarded as an ongoing and important means of involving those whose lives are affected and keeping them informed of new developments and plans.

d Outcome measures and justification

152 The key steps to implement Strategic Goal 7 will be to:

- design a tourism awareness program and prepare the required educational material for both adults and children by the end of 2007
- hold public awareness campaigns, including information meetings in all main settlements and media publicity, beginning in 2007 and held annually thereafter
- hold consultation meetings on tourism development strategies with key leaders, beginning in 2007 and continued regularly thereafter

- set up tourism awareness programs for students which enter the secondary school curriculum by 2008 and include at least one class per term devoted to the topic
- Such measures will form the first steps towards an ongoing program that will be required to gain the understanding of the people of the FSM of the implications of tourism, their participation and acceptance of tourism development plans and their ability to respond to the needs of tourists.

5.2.8 Strategic Goal 8: Promote the FSM in appropriate markets and market segments to realise the sector's potential

a Analysis and justification

153 International marketing and promotion of the FSM as a tourism destination raises the problem of the "closed circle". There is an argument that marketing and promotion would be premature if the tourism product on offer is not properly developed. It is suggested that visitors who come to the FSM may be disappointed and thus pass on adverse word-of-mouth recommendations, making it harder to develop the sector. The argument continues that it is necessary to invest fully in raising the quality standards, range of activities, accommodation stock and all the other aspects of the tourism industry that require attention, before money is spent on promotion.

154 While this argument in some ways is logical, there are also a number of serious risks and pitfalls. The greatest risk is that the investment undertaken would fail to attract the planned number of visitors, or would be of a type inappropriate for the market. This would cause investment projects to fail and the credibility of the tourism sector would suffer. As discussed at the beginning of this chapter, it is preferable to take action on ALL fronts so as to move the tourism sector forward progressively. Provided that the required political and financial support is given, there is every reason to believe that this approach will succeed.

155 The primary role of a national body would be to promote and market the FSM as a leisure destination to key international tourism markets. The National Tourism Marketing and Promotion Action Plan identified these as North America, Japan/North East Asia, and Europe. Despite the upheavals in global tourism of the recent past, there is no reason for changing these priorities.

156 The most important element in this international marketing is to get the best value for money that can be obtained by acting on a national rather than a state basis. Marketing and promotion should be very carefully targeted, based on the appointment of marketing agents in each of the three key regions whose activities and performance should be carefully controlled and who will be required to carry out a range of very specific tasks.

157 At the centre of this program, a national body would have a range of key tasks. These will include:-

- overseeing the role and performance of the regional marketing agents;
- co-ordinating all national collateral and associated marketing material;
- establishing a national photo library;
- maintaining and developing a website as an active tool in the country's tourism marketing and promotional program;
- monitoring the results of marketing initiatives and modifying subsequent programs accordingly.

158 At the regional level the marketing agents will provide the interface between the FSM and the customer - either directly or through the travel trade in each region, or both. In particular, they will maintain regular contact with key actual and potential user groups, be responsible for the active representation of the FSM at key trade shows, and maintain and develop contacts with regional media who can assist in disseminating information about the FSM to the market.

159 In essence a national body would be the central player in a targeted and detailed marketing program. However, this chapter demonstrates that a national body would also play a key role in the wider development of tourism in the country. To that extent, the promotional function now extends to embrace a wider range of tasks than just the marketing of the country as a destination.

b Economic policy implications

160 The success of the tourism marketing and promotion program depends on adequate funding. This relates both to the funds made available to pay for promotional activity, and those made available to finance a national body. In the longer term, a successful tourism industry can be expected to create expanding tax revenues to justify this commitment

c Critical issues for implementation

161 The appointment of suitable marketing agents for each of the three main regions is a crucial element in the successful execution of marketing campaigns themselves, as are the specific terms of their appointment. The National Plan set out in detail the performance targets that these agents would be required to meet and the quantifiable activities they would have to perform. The recommendations of the National Plan in this regard remain valid and should be used as the basis for negotiation with the people concerned as part of their employment contracts.

162 Finally, timing is also critical for success. The tourism industry in the FSM and the process of accelerating its development should now be seen as an

urgent priority in the context of the reducing and eventual termination of Compact funding. The commencement of marketing and promotional programs aimed at increasing the flow of visitors to the country is a vital and overdue step towards reaching tourism's potential.

d Outcome measures and justification

163 Several measurable outcomes are indicated under this Strategic Goal. Visitor expenditures should rise by at least 7% a year from 2008, and visitor arrivals by at least 5% a year, as evidence of the success of the promotion and marketing program. Visitor satisfaction ratings should reach and be maintained at a minimum of 85%.

164 In the specific realm of attendance at trade shows, a return worth at least ten times the costs of attendance should be demonstrated in order to justify future attendance at the same show. It is likely that, as the FSM becomes better known, that ratio should be raised by a national body to ensure that continued attendance (the costs of which are usually relatively high) can be justified.

165 With the move towards greater use of the Internet for travel information and reservations, a website should be seen as an important part of the promotional and marketing effort. The number of "hits" on this site should be counted as a proxy measure of its success (hits do not necessarily equate to the volume of business done), and a rate of increase in website traffic should be negotiated and agreed as a further performance measure related to the promotional and marketing effort.

166 A guiding principle of the marketing and promotional program should be that its results should always be open to measurement and question. A national body should always be prepared to modify or change fundamentally its activities in this area. It should remain responsive to market changes, and develop its own expertise in the marketing and promotion of the sort of niche market activity that best suits the FSM. Accurate measuring and reporting of results of specific campaigns and initiatives is important in this process, as is the provision of regular feedback to the tourism industry itself of the success of specific initiatives.

5.2.9 Strategic Goal 9: Ensure that tourism is developed in an environmentally-sustainable manner and contributes actively to environmental conservation and cultural protection

a Analysis and justification

167 Strategic Goal 9 addresses the very essence of the FSM tourism "product". The country's tourism is based on the unique environmental and cultural attractions that it has to offer the tourist through its forests, coastlines, islands,

lagoons, reefs and the varied cultures of the peoples of the four States. With tourism in an embryonic state, the country is largely unspoilt by tourism in the way that so many destinations have become; it has the advantage of representing a relatively clean sheet from which tourism can be developed. As such, it can assess developments elsewhere in the world, in Guam or the Maldives or Palau for example, and take from their experience the factors that will help to move tourism forward in an environmentally sustainable way.

168 During the research phase for the *National Tourism Marketing and Promotion Plan* it became apparent that although there was a universal acknowledgement in all four States that the nation's attributes need to be preserved, there was a general lack of understanding of what forms of tourism would best protect the environmental and cultural characteristics of the nation. Strategic Goal 9 (together with SG 5) addresses this issue.

169 It is important to create an awareness among the community of the importance of preserving the natural attractions that the tourist enjoys and of conserving community skills, and that if this does not happen, assets, once destroyed, cannot be replicated. Already the FSM has ceased to become "pristine", with sewage in the lagoons, wrecked cars at the roadside, etc. It is essential, therefore, that all current activity and new development takes on the mantra of sustainability as its guiding light. At the same time, it is also important to ensure that crafts and local skills are passed on from one generation to the next; activities such as demonstrations within schools at primary and secondary level and the formation of handicraft associations can help perpetuate local crafts.

170 Even if for no other reason, this makes sound business sense. Markets are increasingly demanding the reassurance of environmentally-friendly practices and evidence of conservation in destinations that purport to be eco-friendly. There is a growing number of tourists, particularly in Europe and North America, of the kind that the FSM is hoping to attract, who are actively concerned about protecting the environment. They look to tour operators to demonstrate environmental credentials and to destinations to demonstrate sustainable practices.

b Economic policy implications

171 Developing and maintaining an environmental program does not take great investment but it does require organisation, commitment and the involvement of a variety of different organisations and government bodies. It extends to those working within the industry and those outside it. It may also mean that additional legislation is required to ensure strict environmental impact assessments specifically aimed at tourism developments and enhanced national building controls for new tourism structures.

172 In essence, what will be required will be considerable time (ie staffing resources), and some financial reserves to implement the quality control, monitoring and awareness programs that will be necessary. Input will be required from government environmental authorities as well as private sector environmental organisations, education authorities, the COM, the state VBs and community leaders in order to deal with the wide range of areas that need to be included in a conservation program.

c Critical issues for implementation

173 Activity will fall into a number of distinct areas. Existing tourism businesses will be encouraged to follow environmentally friendly practices, if they are not already doing so, and a program of ongoing monitoring will be introduced. New undertakings will be required to demonstrate the environmental probity of the project and will have to undergo strict national environmental impact controls.

174 At a community level, actions to engender a sense of local pride will need to be undertaken. Courses on sustainability, environmental protection, cultural traditions, etc, with secondary school children will need to be put in place. Liaison with community leaders to bring them on board and training and persuasion among industry operatives on the wisdom of following protection measures will also be required.

d Outcome measures and justification

175 Measurable outcomes for this Strategic Goal fall into four distinct areas - regulation, monitoring and training, accreditation and awareness.

176 Regulation will require that EIAs with specific provisions relating to tourism activity are carried out on any new development and strictly followed as from 2008 and that all existing tourism businesses comply with national standards designed for the tourism sector by 2010. An ongoing program of guidance and monitoring will lead to the introduction of an annual audit to ensure sustainability and require compliance by 2010.

177 Environmental and cultural awareness, in the hands primarily of a national body and the State VBs, is crucial to the success of this Strategic Goal. Much of the current environmental degradation comes from the population of the FSM rather than the tourist; only one aspect of this - trash, dumped cars, etc. - can be dealt with under the tourism program, however, since the far more pressing problem of sewage and waste-water falls under public infrastructure control (see Section 1.5). Some beautification programs are already under way (Kosrae, in particular, has worked hard on this) but greater efforts are required and it is recommended that each State has in place and enforces anti-litter legis-

lation, as well as taking the initiative to remove all wrecked boats, cars, etc., by 2006.

178 On the other side of the coin, it will be helpful to encourage environmental and cultural awareness among tourists to the FSM by developing local guide books on the flora, fauna and marine environment and information on the culture and lifestyles of the people of each of the four States. This should not be difficult to put together and it is envisaged that a national body, working with the State VBs, will have this prepared by 2006.

179 Two forms of accreditation are designed that will encourage tourism businesses to think in a sustainable way and help to develop their environmental awareness and compliance. A national "Green" award scheme should be introduced and a register drawn up of accredited tourism businesses such as boat operators, tourist guides, hotels, etc. This may take some time to develop since training and guidance to businesses and personnel may well be required. However, such a register will be useful for marketing purposes and it should be possible to produce by 2012. At the same time, the FSM and States should aim to gain global recognition and awards as prime eco-tourism and cultural destinations as sustainable practices become established across the tourism sector.

5.2.10 Strategic Goal 10: Put in place a reliable system of measuring tourism activity in the FSM to enable progress to be monitored accurately

a Analysis and justification

180 At present in the FSM there is no definitively accurate source of data on visitor arrivals, length of stay, expenditure and other key measures of the tourism industry. For example, data on visitor arrivals provided by the Department of Economic Affairs for the preparation of this chapter differ fundamentally for the same years from data that were approved for use in the National Tourism Marketing and Promotion Action Plan. The latter showed that arrivals had fallen by 20.1% (4,317 fewer visitors) in 2000 compared with 1996. Data supplied for this chapter for leisure + business visitors show a decline of 0.4% (106 visitors). It is thus not possible to say with certainty whether visitor numbers are rising, static or falling.

181 It should be a simple matter to devise a reliable and accurate system able to identify the nature of a foreign trip to the FSM. This could initially be done by means of well-designed immigration cards, and ultimately by inter-linked immigration computers capable of producing data on a real time basis. The key is that the FSM government needs to know how many individuals come to the FSM, what is their primary trip purpose (leisure, business, visiting friends and relatives etc), how long they stay and which states they visit. Only then will

it be possible to monitor accurately the progress of the sector against agreed targets.

182 Further knowledge on international visitors would also be very useful, such as expenditure levels, satisfaction ratings, hotel occupancy trends etc. These can best be addressed by a combination of data submitted by the hotel sector, compiling financial data from within the banking system (although this is difficult in the FSM since it is an integral part of the US dollar zone and therefore balance of payments data are not available for the vital US visitor segment who are "domestic" travellers in currency terms), or by the conduct of regular sample surveys, usually exit surveys carried out at the end of a visit.

183 Accurate basic measures of visitor arrivals are needed urgently and should be regarded as a high priority. The responsibility lies with the immigration and statistical authorities, not with the tourism industry, although a national body should advise on the nature of the data needed to monitor the industry's performance and inform future policy decisions.

184 However, it is the responsibility of a national body to determine other data needs and to set in motion the process of regular surveys and other statistical reporting methods in areas that fall outside the responsibility of others such as the immigration service and the financial authorities.

b Economic policy implications

185 There is a need for an explicit expenditure provision to be made as soon as possible to fund the design and implementation of an immigration system that meets the requirements set out in the previous section. Although additional data on tourism are also required, accurate data on arrivals, lengths of stay, purpose of visit and national origins are essential building blocks for tourism planning. This should be regarded as an urgent issue and funded accordingly.

186 Otherwise, this Strategic Goal is more to do with informing policymakers than in setting a policy agenda. There are no other direct economic policy consequences from putting in place reliable tourism information systems, except that economic policy is likely to be mis-informed in their absence.

c Critical issues for implementation

187 The urgent need under this Strategic Goal is for the immigration and statistical authorities to design and put in place a system for recording international visitors that meets the defined needs. The current FSMVB and the Department of Economic Affairs will be able to advise on the basic needs of the tourism industry for accurate basic data.

188 In the longer term, the same authorities should plan for the introduction of a fully integrated real-time computer system at all the FSM points of entry

that would enable arrivals and other key data to be input continuously and thereby enable up-to-date data to be available. The FSM is at an advantage in this regard compared to many other countries, in that arrivals volumes are small and likely to remain so and ports of entry relatively few. A computer based system should not therefore be very costly nor complex to commission, and would have other advantages such as those related to security and general immigration issues as well as serving the growing tourism sector.

189 One of the responsibilities of a national body should be to prepare regular and timely reports on the tourism sector's progress, and to issue information bulletins on key statistical indicators. It should also be staffed in such a way as to permit the preparation of regular reports to State and national governments as a means of informing and adjusting tourism and other related policies.

d Outcome measures and justification

190 By 2006 the bulk of this Strategic Goal should have been achieved. The new, accurate arrivals data system should be in place, a national body should have established a reporting system from the nation's hotels on occupancy rates via the State visitors' bureaux and should have initiated the regular reporting of the sector's performance to government, the industry and the general public (e.g. through a national tourism website).

191 The extent to which a national tourism body, as opposed to the nation's statistical office, should be responsible for preparing and publishing these data should be negotiated between the parties concerned, but it is imperative that accurate data are made available as soon as possible after the close of the period (monthly data reporting should be the aim). As a performance measure there is no reason why the arrivals data for month 1 should not be assembled and made public by the end of month 2.

192 From the start of 2007 there should be a comprehensive and regular report issued by either a national body or the statistical office on all aspects of the tourism sector, which implies that there should be a regular sample survey, probably based on departing visitors, in place and operative by that date.

193 By 2012 the FSM should have converted all basic tourism statistics collected on arrival into a real-time computer system capable of producing immediate raw data to the public plus analysed data reports automatically within a very short space of time after the end of the period (again within a month of the period's end).

5.2.11 Strategic Goal 11: Progressively develop tourism services that are acceptable to the international tourism market through structured training programs

a Analysis and justification

194 As discussed earlier, tourism in the FSM has so far failed to make the necessary "quantum leap" to enable it to move forward on two fronts at the same time - to develop as a destination that is of an acceptable standard for an international market paying a high price to reach the FSM on the one hand and, on the other, to attract visitors in sufficient numbers to move the industry forward.

195 Integral to the first part of this equation is the welcome visitors receive and the standards of service they experience within the FSM. At present, staff in almost all segments of the industry are, for the most part, inadequately trained. If the FSM is to develop premier destination status by 2012 as is proposed, or even if it is to achieve standards to enable it to compete with similar destinations elsewhere in the world, the levels of achievement of workers within the industry need to be increased.

196 In a few establishments within the FSM, notably the hotel sector, in-house training has brought staff up to acceptable levels. Training is required by a host of service sector segments which include front and back-office staff in the hotel sector, food and beverage operatives, visitor bureaux staff, customs and immigration staff, tourist guides, etc, many of whom are without any form of training at all.

197 Although there has been a recent decline in numbers, Japan remains the single most important individual source market for the FSM. Efforts have been made in some States to cater specifically for this market, but it is important that specialised training is more widely introduced to produce Japanese-speaking guides, front-desk staff, restaurant staff and so on.

198 International tourism is a global business and the international tourist - particularly one that is likely to visit the FSM - is generally an experienced traveller who is familiar with a wide variety of destinations and types of service.

199 It is for these reasons that Strategic Goal 11 is designed to address what is a fundamental weakness in the system. In most segments, this means starting from the most basic levels but over time the program is designed to advance training levels to provide mandatory certification by 2012. With such a program in place, it is envisaged that the visitor will meet appropriately qualified people ranging from immigration and customs staff as they enter the country, to hotel personnel and trained guides, through to qualified staff providing services such as hire cars or boat hire who can help to make their visit a pleasurable experience.

b Economic policy implications

200 The relatively large-scale training program that is required to raise the tourism industry's skill levels across the board, will necessitate a dedicated budget and should be regarded as an urgent area for action. Initial training courses for a variety of sectors will need to be designed and implemented, intermediate training introduced and, in due course, more advanced courses and accreditation and certification requirements put in place.

201 A number of different agencies will need to be involved in the design of training programs and with putting them into action. With the variety of sectors involved - hotels, restaurants, car hire, taxis, retail, boat operations, customs and immigration, visitor bureaux staff - a range of specialised bodies will have input for specific sectors (taxi driver training and accreditation, for example, will require, in addition to these core bodies, input from the department of transport). The experience of other destinations outside the FSM will also be helpful and their expertise should be sought in the design of different programs.

c Critical issues for implementation

202 The most important first step for setting up improved training standards will be the design of a training program for each different sector, set out in an operational plan to cover a three year period, 2006-2008. Before this can happen, however, a national body, in collaboration with educational authorities and the COM needs to undertake an audit, defining the activities that require tailored training programs and identifying the different training delivery agencies, and their capacities, that already exist within the FSM. An issue of particular concern to small businesses is the need to provide on-the-job and special short course vocational programmes, since owner-managers and key staff cannot be spared for extended periods to attend lengthy training sessions

203 Once these assessment tools are in place, an increased program of basic level training for hotel and other tourism sector staff can be set in motion through appropriate establishments in each of the four States. The intention is gradually to increase skill levels, introducing intermediate and advanced level training over time. Training accreditation will, in due course, lead to a system whereby only businesses employing appropriately trained personnel will be accredited by a national tourism body and thus qualify for their "seal of approval". When tourism has developed to a sufficiently high standard, envisaged by 2012, only those establishments accredited by a national body will qualify for inclusion in their promotional activities, national website etc.

d Outcome measures and justification

204 The focus on improving the levels of service and training among all those who will come in contact with the tourist is an essential element in ena-

bling the FSM's tourism sector to compete in an international industry and in moving it up-market. Several stages are envisaged by which progress can be monitored:

- a tourism industry training operational plan and a staff training program prepared by 2006;
- a study to identify special needs (eg language training) completed by 2006;
- new/additional training programs introduced over the period 2008-2010;
- national accreditation schemes become operative and transport service approval licences required by 2008;
- mandatory employee certification for all key tourism employees by 2008; and
- introduction of certified training achievements by 2012

5.3 Activities and Outputs

5.3.1 Commentary on Strategic Planning Matrix

205 The mission statement to "progressively develop the tourism sector to become the leading sustainable economic activity in the nation and establish the FSM as a top quality, premium-priced international tourism destination by 2020" is both ambitious and contains several key concepts.

206 It suggests that tourism becomes a **leading** economic activity in the country, a radical change from the current position. It proposes that the FSM becomes a **high quality**, premium-priced destination for international visitors within the next 20 years, demanding an equally radical change.

207 The Strategic Planning Matrix (SPM) sets out a range of activities and tasks that will help to bring these changes about. Before describing how the specific outputs are linked to the strategic goals and considering the issues of risk and potential weaknesses, it is important to emphasise the need to take action on all the issues mentioned in the SPM.

208 It is widely recognized that the FSM's tourism potential will only be realized if investments are made in the tourism product, in infrastructure, in promotion and in service standards. While the country's potential is clear, much remains to be done on all aspects of the tourism sector to bring the country up to standard and to ensure that promotional efforts are not undermined by adverse visitor reactions and word of mouth recommendations.

209 Thus all of the 11 strategic goals are themselves inter-linked. What is proposed in the previous sections is a fully integrated program, all elements of

which have to be tackled. This will be the only way to achieve the objectives set out in the mission statement and to enable the FSM to operate as a premium destination, thereby maximizing tourism's contribution to the nation.

5.3.2 The Strategic Goals

a Make tourism a leading economic activity in the FSM

210 Specific targets are given for the scale that the tourism sector should reach within the next few years, leading to a position in 2012 where visitors' daily expenditure reaches US\$250 and the FSM is seen as a premium destination.

211 The process of achieving these measurable objectives relates in policy terms to the need for careful planning and execution. Each state should develop a tourism plan that identifies investment needs and priorities in order to provide a framework for developing its tourism sector. This will be amalgamated at national level into a national plan that will provide the guidelines for the medium-/long-term development of the sector.

212 Each plan, national and state-level will be updated according to progress made and will result also in the regular development of investment project proposals and identified priorities that should be used to promote investment in the sector.

213 The most important element in this process is to establish a clear link in the minds of community leaders between tourism and their economic development prospects, a link that should reach national level as well. The central proposition of the tourism development plan is that the sector should take a leading position in national development plans and should become one of the most important sources of employment, government revenue and economic growth.

214 In this context, Strategic Goals (SG) 1 and 2 are very closely linked.

b Integrate the tourism sector into national economic planning and development

215 As an integral part of achieving SG 1, SG 2 proposes to raise the profile of the tourism sector in the planning and financial management of the nation. Specifically it is proposed that up to 17% of the recurrent national budget, when balanced against the needs of other sectors, may be devoted to this sector by 2006, and that tourism sector interests should explicitly be included in all project investment proposals from the same date, including carrying out cost-benefit analyses of the impact on tourism sector interests of all relevant investment projects.

216 The national government (Department of Economic Affairs) in collaboration with the State governments and State visitors' bureaux, should produce a policy paper outlining the ways in which government will support the tourism industry, and setting out guidelines for the sector's development. This will assist in identifying the needs of the tourism sector, including those relating to more general physical infrastructure.

217 Thus in this set of tasks is embodied the principal planning elements that will set the industry's direction in the years to come. This process will involve national and state governments including agencies and departments with responsibilities in areas that are not tourism-specific (e.g. health services) but that have an impact on tourism and on the FSM's ability to be an international tourism destination. This process will involve a wide cross-section of interests and will play an important role in integrating tourism into the national planning and development process.

c Create an attractive and supportive environment for private sector tourism industry investors

218 Important though the role of government is in stimulating tourism sector expansion and setting the policy goals for the industry, much of the actual investment is likely to come from the private sector. As the under-developed private sector in the FSM expands generally in response to broader private sector stimulation, private businesses will provide most of the services consumed by visitors. Such businesses will represent the bulk of both value-added and employment created and sustained within the tourism sector.

219 This Goal indicates specific outcomes in terms of the growth of the private sector, the emergence of new projects and the creation of employment. While these goals are relatively modest in absolute terms, they should lay the foundation for future expansion. The private sector development initiatives proposed generally for the FSM and covered in a separate chapter also apply to tourism, and the assumption is made that these linkages are understood by those advancing private sector reform.

220 There is a need for sector representatives to identify, co-ordinate and perhaps also to assist in the preparation of such projects and in advertising the opportunities that arise to private investors at home and abroad.

221 In parallel, a national body should support the creation of industry associations by providing specific membership categories and benefits, and promote debate through an annual conference.

222 The central proposition of this Goal is therefore that, while the tourism sector sits within the broader private sector development framework, a national body should be responsible to ensure that its own characteristic needs are met

and understood. (This Goal might also be seen as integral to and part of the broad sectoral objectives set out in SG 1 and SG 2 above).

d Invest in tourism product development in order to diversify and expand the range of attractions and activities for visitors

223 The lack of activities and facilities for visitors to the FSM is marked and there is general agreement that investment will be required to improve these.

224 As an important contribution to each state's tourism plan this Goal relates to raising accommodation capacities, preparing full inventories of existing tourism sites and facilities, and their state, and identifying the top 3-5 attractions or sites on which the future development of tourism at the state level will be based. State visitors bureaux and a national body together have much to do to deliver these outcomes.

225 The logical starting point is to list exactly what exists in the FSM and to indicate its physical state. This should include all accommodation, vehicles, physical sites and attractions and issues of access. Each State visitors bureau should compile these lists for co-ordination by a national body.

226 However, this is not purely an exercise in developing an inventory. For the tourism sector in the FSM to succeed it will be important to increase the range of attractions and activities open to the visitor on a systematic basis over time. This Goal is intended to identify where investment is needed, and also to provide the basis for relatively economical actions that can be achieved without major cost in the short-term, such as putting up a reliable system of signage.

227 In the longer-term, it is suggested that, in addition to applying to UNESCO for designation of key sites as World Heritage sites, the FSM should develop its own domestic designation. This could apply either to man-made sites (e.g., some key World War II relics), to natural attractions such as waterfalls or coral reefs. Product development implies more than investment in new sites and facilities therefore; it includes improvement of existing ones.

228 Product development in terms of new facilities and attractions should mainly be led by private sector initiatives. The public sector should ideally provide the development framework, including perhaps some investment in physical infrastructure, that encourages the private sector to take the commercial risk.

229 By the introduction of national quality standards, establish the FSM's tourism sector as of a sufficiently high standard in dive, eco- and cultural tourism to command a premium in global tourism markets

230 The concept of establishing the FSM as a premium destination for leisure visitors rests on the understanding that capacities will always be limited, given the small size and limited resources of the nation's islands. Growth cannot

indefinitely be based on an expansion of tourist volumes therefore. In order to maximize the financial and economic yield from tourism, the sector needs to attract high-end tourists - those whose average daily expenditure is high in absolute terms. Following the experience of other countries with similar characteristics therefore, it is proposed that the ultimate goal should be to make the FSM into a premium destination.

231 It follows that quality must also be high in all aspects of the tourism "product". The specific outcomes of SG 5 include raising accommodation standards, dive standards, and standards of safety and quality in all aspects of the service industries used by visitors. The linkage between these outcomes and the outputs that are required is a direct one.

232 The FSM's tourism authorities, co-ordinated and managed by a national body, should put into place a series of quality assurance schemes. By 2008 these should apply to all hotel stock. Dive standards already mainly meet international standards, which can be imposed on all dive operators by 2006 and be subject to annual licences thereafter.

233 In broader terms at State level, standards need to be applied to taxis and water transport systems used by tourists. From 2010 it is proposed that all tourism facilities and services should require a formal standard/grading issued by national body. A key element in this process will be the introduction of a policy that only those businesses that meet these standards can be included in national marketing and promotional programs.

234 The system proposed also implies the creation of an inspectorate/licensing system that will be run by a national body. It is important to stress that such a system should be impartially operated and result in the issuance of appropriate certificates, licenses and quality/grading marks as appropriate. International best practice in the design and implementation of such systems is likely to be required.

e Promote inter-sectoral linkages and maximise use of local produce and services

235 This Goal relates specifically to the process of ensuring maximum economic yield to the FSM from international tourism. If tourism is to become a leading economic activity then local value added is the key issue. This applies not only to the creation of employment but also to the consumption of local produce and services.

236 In order to achieve this direct action will be required to facilitate the commercial supply of goods and services to the tourism industry. It will also require close liaison with activities in other sectors, notably in agriculture, horti-

culture and fishing, but also in the development of handicraft design and quality, and of cultural activities.

237 Positive action will be required to identify demand for specific goods, consumables and services in each State by the tourism sector. It will also possibly be necessary to facilitate the regular commercial supply of items such as fresh produce and fish to the tourism sector by means of purchasing consortia or co-operatives.

238 Local supply policies should also encompass the encouragement of local designs and materials used in tourism buildings, the encouragement of local cultural centres and groups to include tourism as part of their development process, and assistance provided to handicraft producers in areas such as design, techniques and quality. All these issues will help to create and sustain an "FSM ambience" capable of attracting visitors, encouraging them to spend their money on locally-produced items, and meeting the target that each visitor spends at least \$50 per visit on handicrafts and locally-made souvenirs, in addition to consuming local produce in hotels and restaurants.

239 The most important linkage under SG 6 is to ensure that the tourism authorities take the initiative on behalf of the nation and the tourism industry to promote local consumption actively. It will not be sufficient to be reactive; proactive action will be needed to reach the goals set out under SG 6.

f Involve FSM residents in tourism sector development

240 Developing international tourism in the FSM requires that the concerns of residents are taken fully into account. While this is a requirement in most tourism destinations, in the FSM it is especially important because of the deep-seated religious, social and cultural characteristics of the country. FSM residents are rightly concerned that international visitors do not place unsustainable strains on traditions and established practices, whether these relate to access to private land, observance of local customs, respect for the environment or any other similar issue.

241 At the same time many people in the FSM are not well informed about the benefits that tourism can bring. In particular, the capacity of international tourism to create jobs, incomes and additional business is not fully understood. For these reasons SG 7 sets out a series of outcomes related to raising the awareness of tourism among FSM residents as a means of gaining support for its development.

242 In order to achieve this the FSM tourism authorities at State and national level need to take positive action to promote the sector among residents and to raise awareness of the issues, potential and risks involved. Campaigns to

achieve this should be carried out among adults and also in schools, since awareness and education in this context are very closely linked.

243 It will be especially important to introduce the subject of tourism's potential to young people and to impress upon them both what is expected of residents in dealing with visitors from abroad and the opportunities for worthwhile careers that tourism can offer. Peer example in the FSM encourages young people to consider working in the USA instead of making their careers at home. In order to avoid a situation where the best and brightest leave the country for what they perceive to be a better life elsewhere, the FSM has to provide better opportunities at home. The tourism sector can be part of creating these opportunities.

244 Similar attention needs to be given to introducing to traditional and community leaders the concept of tourism's potential. Traditional leaders in the FSM have an important role in leading opinion; their support for tourism, and their advice on how tourism should be developed while avoiding the adverse impact that some are concerned about, will also be important.

g Promote the FSM in appropriate markets and market segments to realize the sector's potential

245 The National Tourism Marketing and Promotion Action Plan dated April 2002 sets out the detailed case for a more effective approach at national level to the marketing of the FSM as a leisure tourism destination. This plan focuses attention on the most promising national and regional markets for the FSM, proposes the establishment of a national tourism administration and sets out the logic for conducting marketing and promotional initiatives on a national basis in order to achieve the best possible economies of scale, as opposed to each individual State acting independently.

246 The outcomes expected from these initiatives are both specific and measurable, relating to the increase in visitor expenditures, arrivals and satisfaction, addressing the rate of new tourism business achieved and to the coverage of the FSM as a destination in key media.

247 The outputs required to achieve these outcomes are extensive and complex, but the essential element is again focused on the creation and actions of a national body. It is expected that regional agents will be appointed in each of three countries/regions - USA, Japan and Europe. In order to deliver the rising level of business required to make the FSM a success as a leisure destination, specific actions and targets are required of each agent. This is an especially important aspect within SG 8. International representatives acting on behalf of the FSM need to demonstrate their effectiveness. In order to do so, they will have a series of measurable tasks set out for them, and their re-appointment will ultimately be dependent on those targets being met.

248 Any national body will also have a set of targets to meet in its primary role as the agency responsible for the marketing and promotion of the FSM abroad. These will include the development of on-line facilities and services, aimed both at the travel trade and the consumer, the production and dissemination of suitable collateral material, the active (and also measurable) promotion of the country at key travel trade fairs and marts, and the provision of library material for journalists to back up the use of travel media in the marketing effort.

249 Although marketing and promoting the FSM is far from the only role to be carried out by a national body, it is central to the process of raising the number of visitors and the value of in-coming tourism. A national body may be seen as having wider responsibilities than purely promotion, but the promotional function is a very important activity; one of its primary roles is to generate demand from key markets for leisure visits to the country.

h Ensure that tourism is developed in an environmentally-sustainable manner and contributes actively to environmental conservation and cultural protection.

250 The environmental quality of the FSM, albeit under threat from some actions within the country, is one of the main reasons why tourists will wish to make a visit. As Section 2 of this chapter makes clear, the many natural advantages and attractions that the country offers are an important resource for tourism, not least the lack of over-development that already afflicts many other tourism destinations, some of which may be direct competitors to the FSM.

251 The tourism sector must therefore play its part in conserving the natural environment. Moreover, given the absolute lack of resources for environmental investment within the FSM, tourism offers a valuable potential source of income to pay for conservation measures. It also offers the prospect of providing an income stream to support other aspects of the FSM's attractions for the visitor, such as the maintenance of cultural practices and skills. Thus the "environment" in this context should be seen as something much wider than the physical attributes and landscape. From the visitor's point of view, the "environment" that he or she visits in effect means the whole range of attractions, activities and interests that enrich a visit to the country.

252 The measurement indicators under SG 9 include the requirement to put in place active protection measures within the tourism industry, such as ensuring that tourism businesses meet environmental standards and that environmental impact assessments are carried out for any new tourism investment project.

253 Linking the outcomes under this Goal to the measurable outputs will once again be the primary responsibility of a national tourism body. On behalf of all four States and the tourism industry itself, this body will develop and impose

the appropriate environmental standards on all tourism businesses, linking the achievement of these to the quality assurance procedures under SG 5.

254 At the same time a national body is not itself likely to include the skills needed to define and design the environmental standards themselves, and it will therefore be required to act on behalf of the tourism industry through liaison and co-operation with specialised environmental agencies and individuals. It is proposed that any national body will introduce a national "Green Awards" scheme, and that each State visitors bureau will take responsibility to ensure that at least 30% of tourism businesses qualify for this by 2007, in addition to providing a regular audit to ensure that the necessary standards are maintained.

255 The tourism industry is not solely responsible for environmental standards of course, and so under SG 9 there is a provision to promote beautification programs and anti-litter laws to give concrete expression to the principles of conservation. This also represents a very important point under SG 9 - that environmental responsibility and conservation, in the interests of tourism, is more than just the payment of lip-service to a worthy concept; it demands positive action to give these principles effect.

256 As with tourism awareness, the actions required in promoting environmental responsibility from the point of view of the tourism sector include the introduction of awareness sessions in schools, emphasising the importance of a high quality environment to tourism as well as to broader issues of quality of life and social responsibility.

257 There is an important cross-over between tourism and planning in seeking to apply high environmental standards to tourism infrastructure, especially to buildings. A national body should therefore actively liaise with the planning and building authorities to ensure that tourism's voice is heard in the establishment and management of environmental regulations in the building sector.

258 Given the importance of the environment as an attraction and trip motive for visitors, a national body will also seen as being responsible for producing guidance for visitors on the environmental standards and sensitivities that they will find on their visit, and to disseminate these to all visitors through collaborative programs with the State visitors bureaux.

i Put in place a reliable system of measuring tourism activity in the FSM to enable progress to be monitored accurately

259 While it is clear that the FSM has under-performed as a tourism destination in recent years, there is a lack of clarity in the statistical data available of the precise evolution of the market. This partly reflects the federal nature of the country. One visitor who goes to all four states could be registered as arriving four times at least in the nation, giving a potentially misleading picture of visitor

volumes. Also, it is not always clear which travellers come from outside the FSM and which are in effect domestic travellers - residents of one State visiting another for example.

260 The need for clear and reliable statistical data on the development of the tourism industry is vital, especially since it will be necessary to monitor progress against targets more directly in future as the volume of investment devoted to the sector increases. These are some of the reasons why SG 10 focuses on a radical improvement in the statistical recording of tourism.

261 SG 10 contains specific outcomes, such as ensuring that tourism statistics are fully reliable and comprehensive from 2006 onwards, and that the nation as a whole puts in place by 2012 a system based on computer technology that will permit both accurate tracking of visitors and timely reporting of results. The size and limited entry points of the FSM will be an advantage in this area of action.

262 In addition to national statistical collection by agencies such as the immigration authorities, regular surveys of visitors need to be carried out to estimate, for example, expenditure levels (the usual recourse to balance of payments figures via a central banking function is not open to the FSM since it is part of the US dollar zone), and also regular data on hotel occupancies.

263 In short, SG 10 address the need for a reliable database in which policymakers can have confidence and which permits adjustments to be made to tourism policies and investment plans in the light of progress made.

264 The tasks associated with these goals are practical. The tourism authorities should work with those responsible for immigration and national statistical procedures to design a paper-based immigration form that is capable of supplying the data required in the form specified. By 2007 this system should be able to produce regular and timely reports accurately charting the development of the sector, permitting monthly tourism reports to the general public and more widely via the a website. In the longer term these reports should be automatically compiled by the immigration department's computer systems, supported in their specification by a national body and State tourism authorities in order to ensure that the data are produced in the appropriate style and with the required coverage.

265 A national body would take the initiative in designing and organising tourism sector sample surveys among visitors, and also in assisting the hotel sector to report on a monthly basis on occupancy rates and other key operational statistics as appropriate.

266 An important function of any national body will be to present its annual report to the Congress and the President; this improved statistical system will be

essential in informing that report and providing a reliable source of information to monitor the industry's progress.

j Develop tourism services that are acceptable to the international tourism market through training programs

267 As part of the drive for quality in the tourism industry, staff training is vital. This applies not only to hotel staff at all levels, but to all those who have direct dealings with visitors - restaurant, retail, car rental, immigration and customs staff and so on. The outcomes under SG 11 are focused on ensuring that an across-the-board standard is achieved that directly contributes to the creation of a premium destination in the long term.

268 To achieve these ambitious aims, specific training programs are indicated for hotel staff in all four states, who should have completed basic level training by 2008, as should also be the case for other tourism-related businesses. Intermediate and advanced level training should then be provided in the following years for selected staff members.

269 Training and quality standards are closely allied, and the introduction of accreditation schemes for tourism sector workers will assist in this process. As the FSM moves towards becoming a premium destination, it will be desirable to incorporate training certification into the positioning of the FSM within global tourism markets.

270 The execution of these programs will involve the educational establishment, and notably the College of Micronesia (COM), as well as the tourism industry. The State visitors bureaux have an important role to play in preparing training plans and in assisting in the scheduling and management of local training programs. It is also important to note the need to ensure that training programs should be designed to make provision for small business owner/managers who will not be able to leave the running of their businesses in order to attend formal courses. This implies the need to prepare for the delivery of on-the-job training programs.

271 This goal also implies that the resources available for training in the tourism sector should also be increased and appropriate skills provided, especially in the COM. Where necessary, additional tourism industry skills may have to be imported from outside the FSM if they are lacking within the country.

272 In general, tourism industry training should be given a high priority within the industry, with the first certificates of competence being issued as early as 2006. However, it is envisaged that it will not be until 2010 that the full programs will have been completed, and thereafter there will be a continuing need to ensure that new entrants to the industry receive the appropriate training as they join.

6 Environment

6.1 Environment Sector Review

6.1.1 Background

1 Prior to 1999, environment was considered as a crosscutting sector by the FSM National and State governments, and was dealt with as such. However, planners for the 1999 FSM Economic Summit agreed to consider environment as a stand-alone sector. During the Summit, about thirty representatives of State and National government, non-profit organizations and community representatives, developed an Environment Sector policy matrix that included the following policy elements:

- Encourage States to establish and support a system of conservation areas where special measures are taken to conserve biological diversity
- Create sustainable financing mechanisms for environmental and sustainable resource initiatives
- Expand and Promote Environmental Ethic
- Support the Development of Environmental NGOs (non-government organizations) and CBOs (community-based organizations)
- Create Strong Regulatory Climate when and where appropriate
- Improve cooperation and coordination between different levels of government
- Develop technical support for existing and future environmental programs

2 The Environment Sector was further recognized and supported when the FSM JCN and the US Government agreed to establish environment as one of the six focal sectors during negotiations for the new Compact of Free Association in 2000. A tentative budget of \$2 million/year was agreed on in principle, which has since then been made more flexible.

6.1.2 Assessment of the Environment Progress since 1999 FSM Economic Summit

3 Since the 1999 FSM Economic Summit, government agencies, NGOs, and other key players in the environment sector have made significant progress. The following section presents an assessment of the current situation and sector performance and an analysis of problems, issues and constraints for each of the policy elements identified during the 1999 Economic Summit.

a Encourage States to establish and support a system of conservation areas where special measures are taken to conserve biological diversity

i Assessment of the Current Situation and Sector Performance

4 Over the last four years since 1999, the number of protected areas in the FSM has doubled from 15 in 1999 to 31 in 2003 (Conservation International 2003). This demonstrates a substantial improvement in both government and community awareness and support for conservation in the face of growing environmental degradation. Another milestone was the completion of the National Biodiversity Strategy and Action Plan (NBSAP) project by the National government, in partnership with the State governments, NGOs, and community leaders, in April 2002. Funded by the UNDP-GEF, the NBSAP strongly advocated this policy element through adopting the development of protected areas as a major goal (NBSAP Theme 1 - A full representation of FSM's marine freshwater and terrestrial are protected, conserved, and sustainably managed). The Nature Conservancy produced a two year study which compliments the NBSAP and involved over one hundred experts representing the national and state governments, The Nature Conservancy and other non-profit conservation organizations, the US Forest Service, college and university scientists and local experts (TNC, 2003). The study identified 130 Areas of Biological Significance (ABS) within the FSM, of which 24 sites were identified as high priority Action Areas for immediate conservation action.

5 Since under the constitution, State governments have jurisdiction over all land and marine areas within 12 miles of their respective islands and reefs, the successful implementation of this policy element has depended heavily on action by the State and Municipal governments. Pohnpei State made the most significant progress in establishing and supporting conservation areas with the passage and implementation of the 1999 Pohnpei Sanctuary Act (SL 4L-115-99), which designated 11 sites in Pohnpei State as sanctuaries for conservation purposes. In 2001, the State hired four Marine Conservation Officers to enforce the reserves, and added a lawyer at the Pohnpei Attorney General's Office to focus on conservation activities. Rules and regulations for the Sanctuary act were drafted and approved, and several successful prosecutions of violators in the marine sanctuaries have occurred. The Conservation Society of Pohnpei, working with the Pohnpei Divisions of Marine Development and Forestry and Marine Surveillance, has worked intensely with the communities in the vicinity of five of the marine sanctuary communities to strengthen local management and monitoring, with successful results both in increased local compliance and assistance in enforcement, as well as an increase in fish populations within the reserves.

6 In 2001, the Pohnpei Legislature provided \$120,000 to survey and mark the legal Pohnpei Watershed Forest Reserve (WFR) boundary (which had been

designated in 1987 by the Watershed Forest Reserve and Mangrove Protection Act – SL 1L-128-87) and subcontracted the Conservation Society of Pohnpei (CSP) and a private surveyor to carry out the work. Although legally designated in 1987, the reserve has been suffering from heavy encroachment by commercial sakau (*Piper methysticum*) growers, mainly as a result of the lack of a clear boundary and approved rules and regulations. The Department of Lands cooperated with Pohnpei AG office, CSP, and the island's five Municipal governments to develop rules and regulations for the act, which were approved in 2003. To date, 14.5 miles of WFR boundary line have been surveyed and marked. CSP and the Municipal Governments carry out quarterly monitoring of activity within the WFR, and provide survey findings to leaders at all levels of government and the traditional chiefs for action.

7 In other States, the community of Dalipebinaw in Yap set aside a 40 hectare tract of privately owned land as a school forest reserve in 2002, and four communities have committed to establishing community-based marine protected areas as part of a SPREP-sponsored International Waters Programme (IWP) project being undertaken by the State of Yap. The Kosrae Development Review Commission (DRC) has worked closely with the USDA Forest Service in Kosrae to document the biology of the unique Yela Terminalia Swamp Forest and develop alternatives to alleviate damage from the proposed completion of the circumferential road. In addition, DRC has proposed several stream watersheds as protected areas in the State's recently revised Kosrae Island Resource Management Plan, and the development of the Utwa-Walung Marine Park as both a conservation and recreational area continues under the supervision of Kosrae Division of Commerce and Industry.

ii Analysis of Problems, Issues and Constraints

8 While the State governments have made significant progress developing conservation/protected areas, the National government, mainly out of respect for State jurisdiction and to a lesser extent, due lack of staff resources and expertise, have not moved forward to develop or implement guidelines for the selection, establishment, and management of protected areas in the FSM. Also, while each of the States have adopted and are implementing various monitoring programs, the National government still needs to adopt a standard monitoring protocols to allow roll-up of resource and threat data on a national and regional level. Last, except for minor exceptions (ecotourism in all States, sponge farms and wood-carvings in Pohnpei), the National and State governments have not been able to successfully work with the private sector to support benefit-generating activities in conservation area communities.

b Create sustainable financing mechanisms for environmental and sustainable resource initiatives*i Assessment of the Current Situation and Sector Performance*

9 The major accomplishment under this policy element was the creation of the Micronesia Conservation Trust (MCT), the region's first conservation trust fund, in 2002. Beginning in February 2001, in response to a recommendation from the 1999 Economic Summit, a group of 18 private and public sector leaders from the four FSM states—collectively representing the national government, state and municipal government agencies and legislatures, private businesses, local NGOs, and traditional leaders—formed a steering committee to develop a sustainable source of funding for the nation's environment strategy. During deliberations, the steering committee met with representatives of two other trust funds in the region—the Foundation for the Philippine Environment, and the Papua New Guinea Mama Graun Conservation Trust Fund. In November 2001, the steering committee agreed on a final draft of articles of incorporation and by-laws for MCT. The steering committee also authorized a public invitation for applications to serve on the first board of directors of the Trust Fund. Nominations were received for directors, and, in April 2002, a selection committee appointed the founding board of MCT. In a May 2002 board meeting, a 3-year strategic and financial plan and a comprehensive fundraising plan were completed and approved. The MCT is set up as a private non-profit corporation with a governing board that include members from national, state, and municipal governments, NGOs, business, and academic institutions. It works to mobilize funding from a variety of sources to build an endowment from which to provide long-term support for sustainable natural resource management in FSM. Recently, interest in the trust has been expressed by a number of donors, including the European Union, the US Department of the Interior, and several private foundations. The Trust places special emphasis on building the capacity of Micronesian organizations to design and manage conservation programs. In addition, the MCT will provide a forum to bring together the national, state, and local governments with private enterprises and non-government organizations to collectively address the challenges of natural resource management in FSM, form public-private partnerships, and share experiences and best practices.

10 Other national accomplishments include the development a draft database/spreadsheet of all existing and proposed environmental projects by the President's Council on Environmental Management and Sustainable Development (SD Council) to encourage coordination and identify gaps. This database still needs to be expanded to include State activities.

11 Two States made some progress on improving access to conservation funding. In Yap, the Yap Community Action Program (YapCAP) recruited a fundraising specialist (Australian volunteer) to assist State and community environ-

ment fund-raising. Pohnpei State is also working to establish a royalty fee on all dredging and sand mining activities to support resource management. The Conservation Society of Pohnpei (CSP), a new NGO in 1999, is leading the nation in NGO fund-raising with a current staff of 19 and a budget of \$300,000/year, and has been assisting NGOs in the other States to improve their fund-raising capacity.

ii Analysis of Problems, Issues and Constraints

12 The Micronesia Conservation Trust's status as a private, rather than public, entity has created some confusion amongst certain sectors of the government. The National and State governments' strong support will be needed to get the MCT capitalized, and the government role in identifying and facilitating effective access to external sources of funding (bilateral, multilateral, international) is essential. Coordination between the government and the MCT needs to be further improved. Much more also needs to be done to develop in-country capacity (government and non-government) to identify financial needs, prepare proper funding proposals, secure funding, and manage budgets effectively. The MCT will be focusing on this capacity issue as they grow the trust and begin to give grants to the nation's conservation NGOs and community groups. None of the States made progress on the development of sustainable conservation funding mechanisms to cover the recurrent costs of conservation, although Chu'uk did initiate a dive fee and Pohnpei is working on the coral and sand dredging royalty fee. The National government needs to build their capacity to better assist the States in this regard.

c 1.2.3. Expand and Promote Environmental Ethic

i Assessment of the Current Situation and Sector Performance

13 The States, especially Kosrae and Pohnpei, have led the way on expanding the nation's environmental ethic. On Pohnpei, the Conservation Society of Pohnpei (CSP) is taking a major role in environmental education at all levels of society. CSP has pioneered a program, Youth to Youth in Island Conservation, with several State government partners that connects school children with environmental projects on the island. Sixth grade classes spend the year working alongside local environment agency staff monitoring coral reefs, planting lowland kava, or establishing local medicinal plant gardens, and then come together to report their experiences at an Island-wide Science Fair at the end of the year. CSP also launched the "Green Road Show" last year, a mobile program bringing environmental issues to elementary schools around the island through skits, songs and discussions. Two Environmental Educators (EE) visit all primary schools in Pohnpei (public and private) four times during the school year, covering the 4 environmental topics selected: Watershed, Mangroves, Coral Reef, and Pollution and Waste Management. CSP also targets out of school youth with

their Youth Conservation Corps (YCC) program. The YCC features a six-month conservation training, featuring an intensive training during which the youth visit and camp at all officially recognized Marine Protected Areas (MPA) and Reserves around the Island of Pohnpei. The participants for the YCC program are selected by leaders in their communities on the basis of being “at risk” for not completing their education and participating in unsustainable fishing practices.

14 CSP, College of Micronesia Land Grant Programs, Pohnpei State government, The Nature Conservancy, and other local partners are also targeting the island's adult population to address the major cause of island deforestation – the commercial cultivation of sakau in the upland forest. The successful “Grow Low” education campaign teaches sustainable methods of lowland sakau cultivation through workshops, demonstration farms, advertisements, videos, posters, and t-shirts. The program has reached more than 600 farmer participants and more than 150,000 plants are now growing in the field. Also on Pohnpei, the State EPA has actively sponsored island-wide clean-ups, publishes a regular newsletter, and through their Mr. Mwakelekel campaign, promote environmental education in the island's schools.

15 In Kosrae, the Development Review Commission has made a substantial contribution to environmental awareness building through publication of a newsletter and numerous community consultations on various local and nation issues. The DRC also conducted a one year multimedia RARE campaign focussed on the Tuhram or Kosrae White-eye, the island's State bird. Chuuk, through the College of Micronesia, and Yap, through the Yap Environmental Stewardship Consortium (YESC) and the Division of Marine Resources, also carried out one year RARE campaigns on their State birds, the Uwaw (Chuuk Monarch) and the Gigiy (Yap Monarch). The RARE campaigns are especially effective because they reach all levels of society and build pride in each island's unique biological resources. The sponsoring agencies also learn and master various forms of environmental awareness raising. A local NGO on Chuuk, GATA (Guide and Assist through Awareness), has sponsored a touch football league on the State center of Weno through which they have raised young people's awareness and appreciation for the environment and social issues.

ii Analysis of Problems, Issues and Constraints

16 Although much has been accomplished in improving environmental education in the nation's schools, neither the National nor any State government has been able to develop a full environmental curriculum. Efforts are now being made, at least in Pohnpei, to partner the education departments with local NGOs and resource management agencies to develop a curriculum grade by grade. Some progress has also been made in increasing the local capacity to convert technical environmental information into easily understandable materials that

can be widely disseminated, however, many efforts are still being undertaken by outside consultants/volunteers with local counterparts. Public access to resource data and information (e.g., putting environmental laws on the Internet, creating WebPages for environmental agencies and organizations) is still in beginning stages. Hopefully the new NBSAP clearinghouse mechanism, funded by UNDP-GEF, will improve this deficiency. Environmental library resources are still inadequate, although COM-FSM central library has made a tremendous effort to gather and preserve environmental information published in and/or about the FSM. A conservation corner project currently being undertaken by the Conservation Society of Pohnpei and Peace Corps promises to improve environmental resource material in elementary schools.

d Support the Development of Environmental NGOs and CBOs

i Assessment of the Current Situation and Sector Performance

17 Since 1999, the FSM National Government has made a substantial effort to more fully involve the NGO sector in policy development and projects, seating NGO representatives on the SD Council, Climate Change Country Team, and the NBSAP Task Force. They have also employed various NGO staff as local consultants on the nation's environmental reports, including the Climate Change communication, NBSAP, WSSD report, etc. State governments have also followed suit and Yap (Yap Stewardship Consortium) and Pohnpei (Pohnpei Resource Management Committee) have set up joint government/NGO/private sector consortiums to improve coordination and eliminate redundancies. Pohnpei has contracted the Conservation Society of Pohnpei and a local private surveyor to survey and mark the island's Watershed Forest Reserve, and are working closely with CSP to train the State's Marine Conservation officers and improve compliance and community involvement in the State's Marine Sanctuaries. In Kosrae, the DRC and Commerce and Industry are working closely with the Kosrae Conservation and Safety Organization to improve public awareness and management of the long-standing Utwa-Walung Marine Park.

18 To further develop the nation's conservation NGOs and improve NGO-government relations and coordination, the Nature Conservancy launched the Micronesia Leaders in Island Conservation (MLIC) network in Sept. 2002 to "strengthen the organizational and technical skills of conservation leaders and their organizations so they can better protect and manage important natural areas in Micronesia". MLIC is a peer learning network, and founding members were selected from a pool of government and non-government applicants from the Federated States of Micronesia and Palau on the basis of their demonstrated commitment to leading conservation activities in Micronesia. MLIC members attend leadership retreats, participate in learning exchanges and mentoring programs, carry out facilitated self-assessment of their organizations, and consult

with top conservationists working outside of their islands. Through these various programs, the participating organizations will be able to rapidly share successes and lessons learned, identify and address common needs for technical assistance and other support, and work together on local and national issues.

ii Analysis of Problems, Issues and Constraints

19 Environmental NGO growth in the FSM in the last four years has been impressive, and the National and State governments have been very supportive in that growth. The governments still, however, need to develop some type of tax-exempt status for NGOs, perhaps using Palau's NGO tax exemption law as a model. Also, while the National and State government have begun to make better use of NGOs and contractors, trainers, and general project partners, there is still a lot of room for expansion.

e Create Strong Regulatory Climate when and where appropriate

i Assessment of the Current Situation and Sector Performance

20 Over the last four years, a number of accomplishments have been made in improving the regulatory climate. Kosrae State updated the Kosrae Island Resource Management Plan (KIRMP) through a highly participatory process. Pohnpei has pioneered a joint law enforcement agreement with the State's Municipal governments to allow them authority and provide support to enforce State laws, including those governing resource conservation. Pohnpei also hired on four Marine Conservation Officers to enforce State laws, especially those pertaining to the Marine Sanctuaries. The State also added a full-time environmental conservation lawyer in Attorney General's Office, and promulgated rules and regulations for the 1999 Sanctuary Act and the 1987 Watershed Forest and Mangrove Reserve law, allowing the two acts to be fully enforced for the first time. The State is also using \$250,000 from a fishing violation fee shared with the National government to further improve marine enforcement within the State's 12 mile zone. Chuuk State has increased surveillance for dynamite fishing, a major problem, and police are inspecting all fish for signs of dynamite damage before allowing fish to be exported. In Yap State, the Yap Environmental Stewardship Consortium (YESC) introduced legislation to incorporate environment and community input into the development review process and other improvements to existing legislation that is currently awaiting action by the Yap Legislature.

ii Analysis of Problems, Issues and Constraints

21 The National government has not yet established a national environment/natural resource management agency, and has not encouraged States to do so either. As a result, the environment sector straddles a number of agencies and divisions of agencies, which leads to problems in coordination and cooperation.

The National government still has not updated key legislation existing Title 25 to remove citations to Trust Territory Administration and clarify National Government's authority to set minimum standards for air and water quality, sanitation, and toxic waste management for States to follow, in furtherance of the National Government's authority to safeguard the public health. Neither has the National government adopted national legislation regulating bioprospecting (now known as genetic resource access and benefit sharing), although some progress has been made on drafting such legislation. Much work still remains to assist the States to develop legislation supporting the national commitments brought on by the various environmental treaties and conventions the FSM has succeeded to over the last decade.

f Improve cooperation and coordination between different levels of government

i Assessment of the Current Situation and Sector Performance

22 After the 1999 Summit, the Sustainable Development Council was reconstituted and revitalized (including NGO participation for the first time), and the SD Secretariat was established in the Department of Economic Affairs. However, in recent years, the Council has met irregularly and has also suffered from a lack of credibility with the States due to transportation and communication challenges of getting State representatives to actively participate. When funding has been available, the National government has made efforts to send State government representatives to international meetings or training with or in behest of the National government. The most successful example of cooperation and coordination amongst different levels of government as well as NGOs and the private sector was the recent completion of the nation's National Biodiversity Strategy and Action Plan. To develop the NBSAP, a national task force partnered with State task forces and through two national workshops and intensive state consultation processes, produced a truly national action plan. The State governments and NGOs are now undertaking to develop State BSAPs to specify how the States will implement the national goals set out in the NBSAP. Through the NBSAP Add-On project, the National government is now partnering with the States to set up a clearinghouse mechanism to improve communication mechanisms to ensure information is broadly disseminated to all governmental and non-governmental agencies in the environmental sector.

ii Analysis of Problems, Issues and Constraints

23 Although a Secretariat was established for the National SD Council, no budget was created for Council activities. The SD Council needs to meet more regularly (at least quarterly), and be funded at least for basic costs, including one dedicated staff member. There was a recommendation from the Economic Summit to convene a National Environmental Conference to review and revise the

1992 NEMS (National Environmental Management Strategy) and update other key policies and legislation, however this never happened. The National government needs to work with the States and NGOs to find a way to bring the nation's Environment Sector players together on some sort of regular basis (every 2 years) to review progress, and reconfirm and prioritize goals. The Education and Health sectors have successfully accomplished this over the last few years, and the Environment Sector players should learn from their example. Last, communication mechanisms to ensure information is broadly disseminated to all governmental and non-governmental agencies in the environmental sector needs to be further improved - hopefully the proposed clearinghouse mechanism will effectively serve this purpose.

g *Develop technical support for existing and future environmental programs*

i Assessment of the Current Situation and Sector Performance

24 The National government has improved cooperation with the States and international donors to improve the availability of training opportunities and the participation of State agency staff. The National and State governments have also on occasion extended training opportunities to NGO and the private sector. However, overall training/capacity building in the environmental sector remains generally opportunistic, relatively uncoordinated, and severely under funded.

ii Analysis of Problems, Issues and Constraints

25 The 1999 Summit recommendation to conduct an assessment of technical training needs in the areas of waste management, environmental monitoring, chemical safety, resource management, emergency preparedness, and other areas has not been carried out. As a result, training for existing staff in the nation's environment sector remains uncoordinated and less effective than it could be. Although increasing graduate educational opportunities was a strong recommendation from the 1999 Economic Summit, little if any progress was made in making National and State education resources available to fund graduate and undergraduate scholarships in environmental studies. Also, the several students with environmental/resource management degrees that have returned to the FSM in search of employment opportunities have had a difficult time finding work in the government due to limited budgets and hiring freezes. Some of these students have since returned to the US to pursue other opportunities. The National and State government need to prioritize the development of technically competent environmental/resource management staff and the integration of these people into key government positions on their return to the FSM in order to ensure the continued building of the nation's environmental capacity.

iii Summary of problems, issues and constraints

26 The lack of a central environment/resource management agency at the National and State levels has limited government effectiveness and coordination in the sector. The relative irregularity of meetings and lack of credibility at the State level of the SD Council has not improved the situation. The National government is trying to build better mechanisms to encourage the States to meet national guidelines and minimum standards in environmental areas, without exerting too much pressure on the States, but so far effectiveness has been limited. Because of the importance of a healthy environment to the basic social and economic welfare of the nation, the environment may be one area in which the National government needs to take a stronger stand in relation to the States. The nation has improved natural resource and threats monitoring, but there is still no standard protocol in place and roll up at the national level is difficult or impossible, leaving key decision-makers with less than adequate information on the state of the nation's environment.

27 Privatization, as in other sectors, has also been slow. The National and State governments need to build stronger partnerships and make funding available to the NGO and private sector to carry out the environmental protection and resource management functions that these groups can perform more effectively and efficiently. The National government still has to legally establish some sort of tax-exempt status for NGOs to help them raise more resources from local private sources. Although government/NGO/private sector relations have improved considerably in the last few years, some distrust and lack of support still exists.

28 The recurrent cost of environmental protection and natural resource conservation (management, monitoring, enforcement, maintenance of facilities/infrastructure) continues to rise, but neither the National nor the State governments have been able to divert current sustainable funding streams (e.g., airport taxes, fines) or develop new sustainable funding mechanisms to offset these costs. The Nation must prioritize the mechanisms that tax resource users/developers/those who benefit from the resource for environmental protection and resource management costs of maintaining and preserving those resources. In addition, the National and State governments need to build their and their partners' capacity to access outside funding sources, and as well proficiently manage and report on projects at all levels.

29 Public awareness of the importance of the environment, and their role in sustaining it still needs to be improved considerably. A national environment curriculum would help, as would more environmental materials in local languages. Public access to information resources is still insufficient, including environmental materials available at libraries in the nation.

30 Both National and State government need to continue to update existing laws and fill in current legal and policy gaps, e.g., the lack of a national bio-prospecting policy. Coordination for enforcement between National and State governments needs to be further improved, and the National government needs to increase its role both in creating minimum standards for all areas of environmental protection and resource management, as well as improving training for enforcement officers nation-wide.

31 Technical training programs need to be better coordinated with national priorities and actual staff needs, and the nation needs to improve support for technical graduate education and improve entry-level opportunities for returning youth.

iv Assessment of the sector's development potential

32 Overall, the Environment Sector, established as a separate sector only in 1999, has come a long way in the last four years. A number of the recommendations put forth by the delegates to the FSM Economic Summit were accomplished, and significant progress has been made on others.

33 Problems, issues and constraints are well-documented and understood by key agency staff in the sector, who are addressing these issues within the current government and funding framework. With the new funding currently available through Compact II and the strong emphasis international and bilateral donors are placing on the environment and poverty reduction, the Environment Sector is well-poised to move forward strongly in the next planning period.

6.2 Strategic Goals, Policies and Outcomes

34 The *Environment Sector Strategic Plan* outlines the rationale and the need for a holistic approach to conserving and protecting the nation's natural environment. The purpose of this plan is to guide policy makers in allocating funds to support the development of environment initiatives, projects and programs deemed necessary to conserve and improve the natural environment and promote sustainable natural resource management. This Environment Sector Strategic Plan identifies nine areas as its strategic focus (strategic goals) on which environment sector funds will be based and allocated and clearly identifies specific outcome measures and suggested activities and outputs.

35 The FSM's environment has been steadily degraded as a result of:

- population growth and migration;
- over-harvest of fish and wildlife resources brought on by increasing economic expectations amongst the island populace;

- human activities such as land clearing, logging, dredging, mining, agriculture, uncontrolled disposal of wastes, burning, reclamation, and coastal/near-shore degradation;
- natural hazards such as those associated with extreme weather events, climate change, high tides and sea-level rise; and,
- competition with or predation by introduced alien species.

36 This degradation has had serious impacts on both the natural environment as well as health and economic prosperity of the FSM's inhabitants and the nation as a whole. These threats are further magnified in the FSM due to the following factors:

- inadequate technical capacity of National, State and local governments, NGOs, and communities;
- inadequate financial resources, both from internal and external sources, dedicated to the sector;
- inadequate monitoring programs and other feedback to decision-makers; and,
- outdated National, State, and local laws and policies and insufficient enforcement.

37 Current indicators suggest that the current government environmental agencies, partnerships, and policies are failing to adequately address these environmental challenges. It is anticipated that focusing on the nine strategic areas will bring about change in the sector as measured by the identified outcomes and output measures. The nine strategic goals that have been identified to improve the environment of FSM are:

- mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities;
- improve and enhance the human environment (improve waste management and pollution control);
- reduce energy use and convert to renewable energy sources/minimize emission of greenhouse gases;
- make FSM's genetic resources accessible for utilization and ensure benefits derived are equitably shared amongst stakeholders;
- manage and protect natural resources/protect, conserve, and sustainably manage a full [functional] representation of the FSM's marine, freshwater, and terrestrial ecosystems;

- improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources;
- establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect the FSM's biodiversity from impacts of alien invasive species;
- create sustainable financing mechanisms for environmental and sustainable resource initiatives; and,
- enhance and employ in-country technical capacity to support environmental programs.

38 These strategic goals will be reviewed annually but are unlikely to change, whereas the activities and outputs which are recommended in this document may change based on achievements, variations in environmental problems and political will. The FSM has adopted a performance-based budget and departmental resources will be assigned to achieve these goals, activities, and outputs.

39 The long-term vision for the FSM's environment sector has been stated best in the nation's recently completed National Biodiversity and Action Plan (2002):

40 *The FSM will have more extensive, diverse, and higher quality of marine, aquatic, and terrestrial ecosystems, which meet human needs and aspirations fairly, preserve and utilize traditional knowledge and practices, and fulfill the ecosystem functions necessary for all life on Earth*

41 Further, the recommended sector goals and activities have been developed based on the following basic principles developed during the NBSAP consultation process in all four States:

- **Sovereign Rights** - The people of the FSM hold the sovereign rights over their biological diversity
- **Community-based Approach** - The community is the basic management unit for biodiversity in the FSM – they have the right and responsibility to manage and sustainably develop their biodiversity resources for their benefit and that of future generations
- **Traditional Heritage** - We will build upon and utilize the rich traditional knowledge and experience of our ancestors to devise and implement strategies for the sustainable stewardship of our rich natural resources
- **Ecological Integrity** – We will strive to maintain and improve the diversity and quality of our ecosystems, conserving our biodiversity in-situ while enhancing our ecosystems' capacity to adapt to change

6.2.1 Strategic Goal 1: Mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities

a Analysis and Justification:

42 The key to sustainability of resource management and long-term environmental health is through the integration of environmental considerations and safeguards in economic planning and decision-making. This is a complex task that needs to be addressed at all levels of government. Lack of institutional capacity at all levels, limited infrastructure development, lack of coordination and integration of environment and conservation activities, limited economic alternatives, lack of political support and limited funds pose major challenges to both economic development and environmental management and conservation in the FSM. Traditionally, environment and conservation have not been a national priority in the FSM, as they have not been part of the economic equation in FSM's development plans. Addressing basic needs such as alleviating poverty, food security and earning money for survival are often a more immediate priority. However, FSM and the other nations of the Pacific have become increasingly aware that as small island nations with limited resources, both the direct commercial exploitation of the nation's fisheries, tourism, and agriculture, and other important economic considerations like import substitution, subsistence, and general public health, depend on a healthy natural environment. There is a tremendous urgency to slow the rapid rate of resource extraction and environmental damage occurring in the FSM and neighboring countries. Environmental protection and conservation must become a priority for the National and State governments if we hope to maintain and improve our quality of life. Mainstreaming conservation recognizes that a successful conservation strategy will improve quality of life through a vibrant economy, a prosperous society and a healthy environment. Mainstreaming is defined as "making conservation everyone's responsibility. It makes conservation part of all aspects of managing the economy and society. It integrates conservation into all activities of individuals, government, private enterprise and civil society at local, national, regional and international levels" (SPREP, 2003).

43 An effective conservation strategy must involve all sectors in development through strong partnerships between conservationists and Governments, private sector and civil society. There must be participation from all levels of society. Mainstreaming also recognizes the three pillars of sustainable development and addresses all sectors in development:

- ENVIRONMENT: Biodiversity and the natural environment
- ECONOMY: Economic activity

- **SOCIETY:** People, their cultures, traditions, social situations and attitudes.

44 The identification and establishment of alternative resource uses, including promotion of market based alternatives with environmentally friendly or sustainable development business enterprises, and other innovations offer additional opportunities. Existing environment and conservation international conventions, effective private sector participation, and community based initiatives through effective participation and utilization of local authorities and churches are other options available in the FSM.

b Economic Implications

45 Mainstreaming environmental considerations, including climate change, in national policy and planning, will not involve additional costs as the strategy calls mainly for better coordination between existing departments and levels of government as well as with traditional leadership, private sector, and local communities. Mainstreaming environmental considerations and climate change into economic development activities may involve increased up-front costs to governments, especially in developing infrastructure like roads, causeways, etc. to be more environmentally "friendly", e.g. less impact on the natural environment, and climate-proof, e.g., taking into consideration the future impacts of climate change. However, properly designed infrastructure will generate real benefits to the local population from the continued functioning of the natural ecosystems on which the people depend as well as the avoidance of the costs of having to rehabilitate the natural systems degraded by poorly planned infrastructure. The costs of "climate-proofing" government buildings and other infrastructure will also be more expensive in the short-term. However, these additional costs will eventually be off-set in the long-run by future savings in maintenance and replacement costs.

c Critical Issues for Implementation

46 The degree to which environment, conservation, and climate change considerations have been mainstreamed into the policy, planning and economic development activities varies considerably within the National government and between the States. However, the ability of governments to deal with resource management and environmental protection has generally decreased since the step down of funds for the first Compact. With flat or declining economies, the State governments have redoubled their efforts to develop economic infrastructure and opportunities, often with little regard for the environment. This has led to a refocus of government departments and resource management staff on economic development, as well as serious cutbacks in staff numbers and training opportunities, which have led to low morale within government resource man-

agement/environment departments and a loss of confidence in the agencies by the communities they serve. The recognition of environmental protection and sustainable resource management as a priority for State governments needs to be encouraged by the National government through various approaches such as long-term planning, tying development funding to sustainable development priorities, and long-term capacity building.

d Outcome measures, justification, and linkages

47 National environmental functions centralized in an office/division to better coordinate and assist the states in all aspects of the protection and sustainable management of the nation's ecosystems and natural environments by 2004

48 National and State government agencies responsible for implementation of the environment sector are currently located across several departments and divisions. In several cases, the host agency's mission is not in line with or is actually contradictory to environmental protection and sustainable resource management. This has led to an overall lack of coordination between environmental functions within and between levels of government as well as relegating environmental as a relatively low priority in National and State policy. Further, some important areas of resource management, e.g. wildlife management, are not represented at all in the current National and State government structure. The development of a national environment/resource management office/division will allow the nation to set broad policy goals and strategies, coordinate and assist environmental health and natural resource conservation activities, and otherwise assist states address their environmental implementation needs.

49 National Sustainable Development Strategy completed by 2005

50 The Commission on Sustainable Development, created as a unit under UN Department of Economic and Social Affairs (UNDESA) the 1992 Rio Earth Summit, has urged all nations to develop National Sustainable Development Strategies. The FSM has recently conducted and completed a national assessment report of the Barbados Plan of Action +10 which will be submitted in Mauritius at the Small Island Developing States (SIDS) meeting later this year. This document will serve as a template to create the National Sustainable Development Strategy, along with State inputs through the soon to be completed State Biodiversity Strategies and Action Plans.

51 State BSAP/sustainable development plans developed and implementation begin by all States by 2005

52 Because of the strong State authority over resource management within State jurisdictions (12-mile zone), the National Biodiversity Strategy and Action Plan completed in 2002 is only framework within which States can determine

their biodiversity conservation actions. With NBSAP Add-on funding from the UNDP-GEF, each State is currently undertaking participatory processes to develop State Biodiversity Strategies and Action Plans to mirror the NBSAP. These should be completed by the end of 2004.

53 Land-use and zoning master plans developed and implemented for all four state population centers by 2006

54 Development in the States' urban centers (Lelu/Tofol, Kolonia, Weno, and Colonia) has been haphazard at best, and increasing pressures as rural populations move to "town" for employment, education, and other opportunities currently represents a major threat to the natural environment and human health in these areas. Large percentages of urban populations are without access to sewer systems, sanitary latrines, and safe drinking water. Further, improper drainage, disposal of solid wastes in yards, streams, and shorelines, development of pigeries, stray dogs, and other environmental hazards combine to make urban living in the FSM unsafe. Each State should prioritize the development and implementation of land-use and zoning master plans for the State urban center, and then effectively enforce it.

55 100% of National and State financial assistance to municipalities for infrastructure and economic development promotes environmentally sustainable development practices by 2006

56 Municipal governments serve as the front-line decision makers in sustainable resource management and economic development matters. With assistance from the National and State governments, each municipality should be encouraged to develop a long-term sustainable development plans and all funding from higher levels of government should focus on the implementation of these plans.

57 Environmental Impact Assessments (EIA) carried out for 100% of all government and non-government development activities to minimize adverse impacts of development on the nation's environment from 2005 onwards

58 The National and State governments have all enacted legislation requiring Environmental Impact Assessments (EIA) for development activities. However, EIA legislation is only randomly enforced, and in some cases, especially for large government projects, has been waived or ignored in the past. Often the cost of doing a development project the right way costs more than the government has available for the project. This situation frequently leads to decisions to go ahead with projects anyway, leading to unacceptable negative impacts on natural ecosystems and loss of ecosystem benefits to local communities in the vicinity of development projects. The real costs of environmental impact must be fully assessed for all projects, private and public, and decisions made based on the real costs of the development, both current and future, in terms of its impact on the

natural environment. All four State EPA Boards and staff, who currently review and make decisions based on EIAs, need to be fully trained in EIA, environmental protection and sustainable development. Existing State development review processes (including foreign investment permitting) should be revamped to take into account environmental considerations and community input at all stages of project review .

59 100% of environmental violations successfully prosecuted by 2010

60 Laws are only as effective as their enforcement. Although the National and State governments generally have a comprehensive set of legislation protecting the nations' environment, lack of enforcement is a major problem in all jurisdictions. Experience over the last four years in all jurisdictions has shown that the most effective enforcement efforts have been those that combine community/traditional authority with that of the government, e.g., Pohnpei's marine protected area system. To ensure compliance with legislation protecting the nations environment, State government agencies need to increase efforts to educate resource owners/users on their scientific justification. In addition, on islands where traditional leaders have authority, the State governments need to continue and increase cooperation with them to integrate traditional and modern approaches to the sustainable management of natural resources. Communities should continue to be the front line of defense for sustainable resource use. However, experience in the FSM has also shown that the State government also needs to be willing and able to step in when a community cannot handle a situation either because the illegal action is too culturally or economically controversial or the violator is too powerful. For these situations, the State environment protection agencies and natural resource management agencies must be strengthened to better enforce and prosecute offenders. Environmental Protection and Conservation Officers need to be designated and/or increased in all States, and trained in legal procedures, evidence handling, and case development. The State governments should also designate at least one lawyer/prosecutor within the government structure to focus fully on environmental cases.

61 Climate change adaptation strategies that address unacceptable risks to the natural environment and built assets, including those arising from natural hazards such as weather and climate extremes, variability and change developed and implemented (climate-proofing) in all states by 2010

62 Global climate change is a proven phenomena, and in the small islands of the FSM, this will mean increased extreme weather events (tropical storms, typhoons, and drought), high tides, and sea-level rise. Each State must work with the Municipal governments to develop and implement long-term plans for dealing with the impacts of climate change, including the development of integrated environmental and resource management objectives that enhance resilience of coastal and other ecosystems to natural hazards; identification of structures, in-

frastructure, and ecosystems at risk and explore opportunities to protect critical assets; "climate proofing"

63 existing facilities and infrastructure; and integration of considerations of climate change and sea-level rise in strategic and operational (e.g. land use) planning for future development, including that related to structures, infrastructure, and social and other services.

**6.2.2 Strategic Goal 2: Improve and Enhance the Human Environment
(Improve waste management (reduce, recycle, reuse) and pollution control)**

a Analysis and Justification

64 Pollution from the improper disposal of both solid and liquid wastes, mainly from domestic sources are a serious and growing threat to coastal and marine inshore areas on all islands. This is especially true for population centers where people live in over-crowded conditions with only minimum sewage treatment. Existing sewage treatment and disposal systems were constructed during the Trust Territory government, and are mostly poorly constructed and were not designed to service the current population in the fast-growing district centers. There is also inadequate attention to, and insufficient funding for routine maintenance of water systems, including monitoring. Coliform contamination of surface and ground waters is common, presenting a continued health hazard to populations with no other source of water for drinking and food preparation. The provision of 24 hour potable water has not been achieved except in a few urban areas and surrounding communities. Outer islands are particularly vulnerable as the presence of a freshwater lens makes it unwise to use septic systems for waste disposal.

65 Inadequate disposal of solid waste and lack of suitable landfill sites are also a major pollution issue in urban centers, and to a growing extent, in rural areas. The adoption of western food, beverages, and other products (cars, refrigerators, computers, air conditioners, etc.) on all islands has created concentrations of solid wastes that are major eye-sores, sources of continued pollution, and breeding grounds for rats, flies, and mosquitoes. Existing dumpsites are not adequately maintained, nor do any sites, with the exception of Pohnpei, have specific practices in place for dealing with hazardous materials. In rural areas garbage is dumped along roads, in streams, or in lowland marsh areas. On some high islands, solid waste is dumped in the mangrove zone to create land for community or private use, causing human health hazards from water pollution and reducing the health of the mangrove forests and their function as fish nurseries and nutrient regulation.

66 The existence of persistent organic pollutants (POPS) is another pollution problem faced by the FSM. In 1992, the FSM signed the Basel Convention on

Transboundary Movement of Hazardous Wastes and Their Disposal, and has also signed the Waigani Convention to Ban the Importation of Hazardous and Radioactive Wastes. The nation also signed the Stockholm Convention on Persistent Organic Pollutants. SPREP, under the "Persistent Organic Pollutants in Pacific Island Countries (POPs in PICs)" project, estimated that approximately 130 tons of PCB liquids and 60 tons of pesticides (although only about 3 tons of POPs pesticides) are currently in the FSM (SPREP, 2003). Many other hazardous wastes were also identified as well. In addition, quite a large number of contaminated sites were discovered, including six locations of buried pesticides. POPS are characterized by persistence in the environment, resistance to degradation, and acute and chronic toxicity. The lipophilic character of these substances causes them to be incorporated and accumulated in the tissues of living organisms leading to body burdens that pose potential risks of adverse health effects. The continued existence of these hazardous wastes in the FSM poses a serious health risk to the FSM population and natural environment.

b Economic Implications

67 Overall, improving the management of environmental pollution and hazardous wastes will require a larger investment of funding than that currently made by State governments. Activities to reduce the importation of potential pollutants and wastes are the exception, and the only costs would be an increase public education activities. Government savings in the long run in terms of reduced solid waste problems and pollution would more than offset any costs. The private sector may be negatively affected over the short-term by having to import less polluting alternatives to banned products, but these costs could be passed onto consumers. Handling wastes and pollution that are already in the nation, e.g., establishing and/or upgrading, and managing safe waste disposal sites, recycling, improving sewage treatment systems and promoting sanitary latrines, and improving drinking water quality in rural areas will be more expensive in terms of both human and financial resources. The agencies to handle these tasks already exist in each State, but they will need to be upgraded in both budgets and technical capacity. However, the alternative is to slowly be taken over by our own waste! Of all the investments the Nation can make, the pay-off on this strategy in terms of improved human health and quality of life is the highest.

c Critical Issues for Implementation

68 Currently, the National agency that oversees the improvement of the human environment is the Department of Health and Human Services. National legislation exists (1984 Environmental Protection Act), and the National government coordinates foreign assistance and sets minimum standards for air quality, water quality, and waste management. States have Environmental Protection

Agencies (although in Kosrae the agency is named the Development Review Commission) that are responsible to see that national standards are met or exceeded, and provide development review and permitting function. Previously, these agencies were linked with the USEPA, but since the Nation's independence, the State EPAs have been integrated into the State government structure. As result, State government leaders thus exert varying degrees of control over each State EPA, including appointing the State Boards. This has sometimes hindered the effectiveness of some State EPAs. In order to address this strategic goal, EPAs will need to further strengthened in terms of staff capacity and budgets. In addition, they should be more closely aligned with and supported by the National government to assure their objectivity in assessing State development decisions.

d Outcome measures, justification, and linkages

69 Ratification of the Stockholm POPs Convention by the FSM National Congress by 2004

70 The FSM government has not yet ratified the Stockholm Convention, which requires actions at the national level aimed at managing and eliminating POPs. One specific obligation for countries is the development of a National Implementation Plan (NIP). This activity has already begun for the FSM through assistance from SPREP. Given that POPs are used and emitted in a variety of economic sectors, including industry, manufacturing and agriculture, the development of appropriate responses is a complex undertaking. It will require a comprehensive approach and actions at various levels.

71 Importation of POPs into the FSM reduced by 70 % by 2010

72 The most effective way to deal with POPs in a small island nation like the FSM is to never allow them into the country in the first place. Therefore, the frontline of defense against pollution is to reduce imports of these substances. Both the National and State governments must strengthen and enforce laws and regulations controlling transboundary pollution and transport of hazardous substances. Also, in keeping with the nation's obligations under the UNFCCC, all imports of ozone-depleting substances (CFCs, etc.) should prohibited as soon as possible, including all motor vehicles manufactured before 1996. National and State legislation is needed to ban the further import of POPs. The National and State governments also need to consider limiting or banning other non-biodegradable packaging and other materials, e.g., glass (1 million year life), Styrofoam (500 year life), and plastic bags (10-50 year life).

73 Solid wastes reduced by at least 10 % in all states, through reduced imports, recycling, and other methods by 2010

74 State governments need to establish and encourage waste reduction initiatives and the effective use of recycling programs for aluminum, glass, and paper in all state centers, as well as supporting the development of other alternatives, e.g., composting of organic wastes, etc. Some states (Pohnpei and Kosrae) have already begun charging a tax on aluminum can imports to help subsidize recycling costs. Opportunities also exist for other waste-reducing industries, e.g., a local handicraft/industry designing and developing shopping bags to replace disposable plastic bags, which could also be sold for tourists as souvenirs from an "environmental-friendly" FSM. The National and State government should lead the way by establishing a 100% recycling policy for all government offices throughout the nation.

75 Safe solid waste disposal sites designated, established and managed in 100% of State centers and 50% of rural municipalities by 2010

76 Each Municipality should designate, establish and/or upgrade, and manage easily accessible safe waste disposal sites on all populated islands, and encourage their effective use suitable. These sites should be conveniently located and well-prepared to prevent any run-off into surrounding water bodies or leaching into ground water. The dump sites should be set up to separate recyclable wastes for collection and recycling, organic wastes for mulching, and hazardous wastes (like petrochemicals, batteries, and other chemicals) for transport to a safe disposal site. If possible, Municipal governments should contract with private business to actually manage the sites. To maximize the dumpsite effectiveness, urban municipalities should also encourage and promote the development and effective use of solid waste collection systems.

77 At least 50% of households in urban areas served by effective public sewage treatment plants by 2010

78 State Governments in partnership with urban Municipal governments and semi-autonomous public utility commissions need to improve sewage treatment facilities in main population centers. The focus should be on increasing the number of homes with connection to sewage system in urban centers, and well as reducing the amount of untreated sewage discharge into lagoons in all States. Sewage outflows also need to resited outside the barrier reefs to limit negative impacts on the marine environment in all State centers.

79 100% of urban households and 50% of rural households with access to sanitary latrines by 2010

80 Currently, a large percentage of the nation's urban and rural population does not have access to sanitary latrines. During the cholera outbreaks in Chuuk and Pohnpei, both States made concerted efforts to provide sanitary latrines to all households, but since the outbreaks the situation has worsened again. State government, in partnership with Municipal governments, churches and NGOs,

must continue to provide and encourage the use of sanitary sewage disposal in all rural areas (septic tanks, water seal toilets, composting toilets, etc.)

81 Coastal marine water quality (measured by PPM fecal coliform) around urban centers improved by 100% by 2008

82 Coastal marine water quality in the vicinity of urban population centers in the FSM has declined greatly over the last few decades. Runoff from roads, runoff and leachate from dumpsites, trash, unsanitary latrines, and improperly sited sewage outflows are just a few of the contributors to this decline. Since the majority of the State's populations live near and make use of these waters for food and recreation, they represent a major health issue and environmental challenge. State governments need to work on improving coastal marine water quality by minimizing urban pollution sources outline above.

83 100% of FSM communities will have ample access to safe drinking water supplies by 2020

84 The FSM has a high incidence of water-borne disease, including alarming out-breaks of Cholera in Chuuk and Pohnpei in the last two decades. The Cholera outbreak in Pohnpei began in April, 2000 resulting in more than 2,400 hospital visits, 540 hospitalizations, and 19 deaths. At least 3/4 of the population lacks access to "safe" water, and water-borne diseases are the third largest cause of death in the nation. Similar threats to water quality from other types of non-point pollution are also common in the islands. For urbanized State centers, centralized water systems have been constructed and are slowly being improved. However, the given the low GDP, importance of traditional style of local governance, and physically fragmented nature of the nation all discourage costly centralized "solutions." State governments, in partnership with Municipal governments, churches, NGOs and others, need to improve management of forested surface catchments and aquifers to meet projected water supply demands and improve community water systems in rural areas to assure access to safe drinking water supplies. This includes the improvement of roof catchments, sand filtering and other low-cost, low-tech methods, and the construction of low cost, low-tech solar desalination pilot plants on atolls where drought is a possibility. State governments should work with local Public Utilities Commissions to allocate a percentage of water revenues to watershed management and improvement (e.g. reforestation and educational programs). The National government, in partnership with the States and the USGS, should also reestablish a hydrologic monitoring system for the FSM to monitor long-term surface water quantity and quality

85 Increase preparedness for pollution emergencies (oil spills, chemical leakage, etc.) in all States by 50 % by 2010

86 Pollution emergencies present a real threat to both human and environmental health in the small islands of the FSM. The State of Yap suffered two oil spills in the last two years (Ulithi and Colonia Harbor), and local and National government response was in both cases unsatisfactory. It's just a matter of time before the FSM suffers a major oil spill. Mobil/Exxon and Shell, the nation's two major petroleum importers, have developed emergency response plans for pollution emergencies caused in the course of their business, but as was evidenced in the Yap spills, for all other spills, the State government must be prepared to handle the brunt of the containment and clean-up efforts. All States must work to increase preparedness and skills/capacity of relevant government and private sector agencies to rapidly respond to pollution emergencies (e.g., oil spills, ship grounding, natural disasters, etc).

87 Reduce damage to natural resources and human infrastructure and health from local pollution emergencies (in terms of dollar loss) by 50 % by 2010

88 As above, through increased preparedness and upgrading of skills/capacity of relevant government agencies to rapidly respond to pollution emergencies, the overall economic, environmental, and health impacts should be decreased substantially over the next few years.

6.2.3 Strategic Goal 3: Reduce energy use and convert to renewable energy sources/Minimize emission of greenhouse gases

a Analysis and Justification

89 The FSM was one of the first countries to sign and ratify the United Nations Framework Convention on Climate Change (UNFCCC), and the nation remains concerned about the role that impacts of climate change may have for the natural and socio-economic well-being of the country. Even though the FSM is not a significant contributor to the global emissions of greenhouse gas (GHG), the nation recognizes its obligations to join with other responsible nations in a concerted effort to undertake reasonable source-oriented mitigation measures in order to control the emissions of GHG into the atmosphere. Under the UNFCCC each signatory country is obligated to:

- Develop, update and periodically publish and make available to the Conference of the Parties (COP), their national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol;
- Use comparable methods for inventories of GHG emissions and removals;

- Incorporate GHG Inventory results along with other requirements of the UNFCCC into a National Communication report to be presented to the COP

90 To fulfill these obligations, the FSM conducted the nation's first baseline GHG inventory in 1997 (for the year 1994) and then presented results at COP4 in 1998 (Furow, 1999). This study identified the energy sector (electricity generation, transport, industry, household cooking, etc.) as the principle source of GHG emissions in the FSM (99% of all emissions, which totaled 235.972 Gigagrams). The FSM has committed to maintaining at the same level or reducing GHG emissions, through response strategies combine both adaptation and mitigation benefits. One example is the conservation of critical terrestrial and marine habitats to improve their survival and continued health in the face of climate change (adaptation) while also potentially enhancing the nation's ability of sustain or increase its natural sinks for carbon dioxide (mitigation).

91 At present, a number of constraints still exist. States still continue to subsidize their respective utility corporations, although cost recovery and user pays is an emerging practice. No standardized technical and operational procedures exist due to the small fragmented nature of the nation's energy sector and the absence of an effective coordinating and oversight mechanism between the National and State governments and energy sector players. Existing alternative energy programs are not sustainable in terms of local expertise or sufficient funding for maintenance and replacement. Also, due to the relatively smallness and remoteness of the FSM as a market, the nation is limited in its' ability to negotiate with oil companies to take more responsibility for the collection, removal, and disposal of waste oil and other petroleum wastes.

92 The FSM's proposed approach to reducing energy-related GHG addresses three categories:

- **Demand-side management** - activities aimed at reducing energy consumption at the level of the user (e.g. energy conservation strategies, design and use of energy-saving appliances and technologies, various measures targeted at ground transportation, and education and training programs);
- **Supply-side management** - activities aimed at reducing the use of fossil fuels (e.g., increasing the efficiency of existing energy systems, increased use of renewable energy sources such as biomass, coconut oil fuel, solar and wind power); and
- **Sink Enhancement** - activities aimed at increasing local sinks for removing carbon dioxide from the atmosphere with particular emphasis on development of appropriate forestry management systems.

b Economic Implications

93 Since the largest import for the State governments currently is petroleum products, mainly for electricity generation, this strategy should reduce government spending over the long-term. However, at this point, renewable energy source technology like hydro, solar, wind, and solar-wind hybrids are still more expensive than diesel systems to install initially. However, long-term savings in terms of lowering the purchase and use of petroleum products as well as indirect benefits of reducing the chance of oil spills and other pollution emergencies and lessening the FSM's contribution to global climate change will more than pay back the higher initial investment. Lowering vehicle imports and improving public transportation would mainly affect the private sector, and the government would reap savings by not having to deal with improved transportation infrastructure for increased traffic or disposing of abandoned cars and related solid wastes. State governments in partnership with Municipal governments and NGOs are already undertaking improving the management and conservation of the Nation's natural forest and coral reefs, and the main need is for improved coordination. There will be some related costs for recurrent activities that the State governments are not currently sufficiently undertaking dealing with including regular coral reef monitoring and air photography/vegetation surveys, enforcement of current development restrictions and EIA, and public education.

c Critical Issues for Implementation

94 As a developing country, the reduction of overall energy use will be politically difficult given that many of the FSM's citizens do not yet have access to electricity, motorized transport, and other energy developments. However, with proper education and increased public awareness and eventual elimination of all energy subsidies, the reduction can be accomplished. The National and State governments will need to set a strong example to the other sectors by cutting down their own energy use first and promoting energy efficiency in their own structures and daily operations. The growing problems presented by the import of cheap Japanese cars into the nation could be curbed somewhat by adding an vehicle disposal tax, which could then be used by the government to collect and recycle the vehicles (perhaps to the Asian scrap metal market) once they are no longer operable. The improved management of forests and coral reefs will require National and State governments to better coordinate and work closely with Municipal governments, traditional leaders, and communities. Public awareness and understanding of the important roles of forest and coral reefs will also need to be improved.

d Outcome measures, justification, and linkages

95 Decrease the import and use of imported petroleum fuels by 50% by 2020

96 A large portion of the nation's import debt as well as most of the emissions of GHG from the FSM are attributable to the import and use of imported petroleum fuels. Therefore the most important action the Nation can take over the next two decades is to decrease the amount of petroleum fuels being brought into then nation through a coordinated program of reducing and eventually eliminating energy subsidies, converting to renewable energy sources, promoting energy efficiency in buildings, transportation, industry, and household cooking, supporting public transportation, and other means.

97 10% of electricity in urban centers and 50% in rural areas will be generated using renewable energy sources by 2020

98 The FSM abounds in possible sources of renewable energy - solar, wind and hydro - but these have only been minimally developed to date. The opportunity to make use of renewable energy sources, especially in the FSM's rural areas where electric power is only just being developed, are numerous. The National and State governments should take advantage of the latest renewable energy technologies and international funding programs like GEF and the EU to establish or convert existing electric power systems to renewable sources.

99 100% of new public and 50% of private buildings in the FSM will meet US standards for energy-efficiency by 2006

100 Many of the public and private buildings in the FSM have been designed and constructed without consideration for energy use efficiency. The National and State governments should improve energy efficiency of the house designs being recommended and funded by the USDA and state housing assistance programs, and provide other incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms in government and private sector buildings and development projects.

101 Private motor vehicle ownership/number of vehicles will decrease by 10% by 2010

102 Vehicle ownership in the FSM, especially in urban centers, has skyrocketed in the last two decades, mainly as a result of "dumping" of used vehicles in the Pacific island countries by Japan. Many of these vehicles do not meet minimum US pollution standards, are contributing to crowded and dangerous conditions on the nation's roads, and eventually end up abandoned on the roadside. The Nation, in partnership with the State government must institute minimum efficiency standards for all petroleum product consuming vehicles and equipment in the FSM. States, in partnership with urban Municipal governments also need to work with the private sector to improve public transportation in State population centers and discourage private vehicle use, including through educational programs. The establishment of a State or National vehicle disposal tax, which could then be used by the government to collect and recycle the vehicles

(perhaps to the Asian scrap metal market) once they are no longer operable, would be an important activity.

103 The FSM will have a net gain of area covered by forests between now and 2020

104 The US Forest Service carried out the last comprehensive vegetation survey in the early 1980's. Pohnpei State in particular was found to be suffering from rapid deforestation and conversion to agriculture, mostly sakau (*Piper methysticum*). Updated vegetation work carried out by The Nature Conservancy in partnership with the State government in 1995 and 2002 demonstrated a loss of more than 2/3's of the main island's forests in just 20 years. While other States have probably had lesser rates of forest clearing and conversion, the nation's remaining forests are in grave danger of being totally lost in the next 20 years. The National and State governments need to better monitor their remaining upland and mangrove forests, and undertake planning, regulatory, educational and other initiatives that will ensure the preservation of remaining native forests and agroforests for watershed protection and as a carbon sink. The States should also actively promote and encourage reforestation activities in degraded and deforested lands and undertake educational and other initiatives that will lead to the substitution of common secondary forest tree species for firewood for household cooking needs to protect remaining mangroves and native forests.

105 The FSM will have a net gain of area and health status of coral reefs between now and 2020

106 While the FSM has only 271 sq. miles of land area, the nation's coral reefs and lagoons make 10 times the amount of area (2,700 sq. miles) spread across 1,000,000 sq. miles of ocean. The nation's coral reefs are important resources for the nation's subsistence and commercial well-being, providing food, medicines, recreation, and tourism opportunities. In addition, the nation's coral reefs provide a largely unmeasured sink for carbon dioxide which benefits the entire world. The National government and the States should further expand educational and other initiatives that prevent the degradation and destruction of coral reefs

107 The FSM will remain a net importer of greenhouse gases through 2020

108 The national GHG inventory carried out in 1997 should be repeated every three years or so to monitor our emissions and report to the global community on our progress in meeting international requirements. To date, initial calculations suggest that the FSM is a net importer of GHGs - in other words our forest and coral reef sink store more GHGs than we produce through the burning of petroleum products, agriculture and livestock raising, etc (John Mooteb, personal conversation). The Nation's long-term goal should be to maintain this favorable balance both to retain our influence in the global climate change community and for the greater good of the future of our nation and planet.

6.2.4 Strategic Goal 4: Enhance the benefits of the sustainable use of the FSM's genetic resources and ensure benefits derived are fairly shared amongst stakeholders***a Analysis and Justification***

109 Genetic Access/Benefit sharing (ABS) is a contentious issue because of the split between developed countries who have the technology and the developing countries who lack the technology but own the resources. The notion prior to World War II was that genetic resources are a common heritage for all mankind, but at that time only developed countries were involved in formulating international law. The development of the Convention on Biological Diversity (CBD) and the larger participation by developing countries in developing international law brought to the forefront the notion of sovereign rights over genetic resources and also traditional knowledge. Traditional knowledge is a more intangible component, and recently the World Intellectual Property Organization (WIPO) has reached an agreement with UNESCO and CBD to handle this issue worldwide. Currently, the FSM does not have specific legislation specifically addressing ABS, however several existing laws pertain to genetic resources and traditional knowledge, e.g., Title 34 addressing consumer protection, Title 35 on copyright, Title 23 on Resource Conservation (endangered species), Title 25 on environmental protection, Title 32 regulating businesses, Title 26 on historical sites and Title 22 relating to quarantine (see www.fsmlaw.org for full details). The Department of Justice is reviewing the relevant Conventions and will draft resolutions for consideration by FSM Congress for ratification. Internationally, the World Intellectual Property Organization (WIPO) has reached an agreement with UNESCO and CBD to handle Traditional Knowledge. An intergovernmental Committee has been formed to address this issue. At the Pacific regional level, SPREP deals with biological and genetic resources while SPC and UNESCO handle cultural resources with the Treaty on Folklore being finalized by these latter partners. The FSM has already been subject to exploitation of its genetic resources and traditional knowledge, so this is an urgent issue for the Nation.

b Economic Implications

110 Assuring that FSM's genetic resources accessible for utilization and ensure benefits derived are equitably shared amongst stakeholders should not result in any additional expenditures by the State and National governments. The agencies that will develop and enforce access agreements already exist, and with training should be able to develop the capacity to deal with this issue. The main costs involved in this strategy are building the National and State capacity and political will to deal with this issue, and increased public awareness.

c Critical Issues for Implementation

111 Although the Nation must develop a national ABS policy covering the regulations on transfer and movement and procedures, the States actually control and manage the nation's genetic diversity and traditional knowledge pertaining to it within their respective 12 mile zones. In providing access, a number of issues will arise that the States may not have the capacity to deal with, e.g., negotiating with experienced collectors/pharmaceutical companies. Some terms that should be negotiated include purpose/use of the material, conservation guidelines, minimizing impact on non-target species, social and cultural considerations, and other administrative provisions such as duration and termination of agreement. Enforcement of material access terms (MATS) are usually difficult. Some benefits that may be negotiated also can include conservation, sample fees, milestone payments, royalties, capacity building or infrastructure. Royalties are currently usually about 2.5 to 3 % of profits. Resource owners or communities should ensure rights are clear and protected and that information is always available where possible. Therefore, the negotiation of MATS will need to be done in partnership between the National and the State governments to assure success.

d Outcome measures, justification, and linkages

112 Access to genetic resources in the FSM enhanced to support economic development and improved quality of life

113 The National and State government must develop complimentary national and state laws and policies on ABS which assure that the nation's genetic resources and traditional knowledge are accessible but benefits are equitable and accrue to the actual owners of the resources, the people of the FSM. The National government should also develop a model genetic access agreement in partnership with the States to prepare for foreign commercial interest in the nation's biodiversity.

114 Fully document traditional knowledge and practices pertaining to the FSM's genetic resources by 2020

115 The need to fully document the FSM's traditional knowledge and practices has been emphasized many times (FSM 2002, SPREP 1993), however to date, only some progress has been made. The strong cultural value and difficulty of collecting traditional knowledge and the fear that documenting this knowledge makes it easier to exploit are two reasons for the lack of progress so far. Still, every day, FSM elders die and take another bit of the Nation's collective traditional knowledge with them. To assure that the this valuable resource is preserved for the benefit of future generations and the world, the National and State Governments should allocate funding to collect traditional knowledge in whatever form is appropriate in some central location. Access to this information

should be accessible, but terms of accessibility need to be worked out between the government and the actual "owners" of the knowledge. WIPO (World Intellectual Property Organization) has established protocols for the collection and archiving of traditional knowledge that should be adopted by the FSM. The FSM National History and Archives Unit currently deals with this issue, but have not yet addressed knowledge relating to biological resources. To further the collection and preservation of traditional knowledge and support ABS efforts, all State Foresters, State Marine Resources and State Agriculture Chiefs should be trained in ethnobotany and genetic access and benefit sharing. Traditional knowledge databases should be established and maintained in all states. Other activities that can improve can promote and protect the process of passing down traditional knowledge through generations should also be implemented.

116 All research on the FSM's traditional knowledge and genetic resources is permitted and monitored to ensure that benefits are equitably shared by 2006

117 Currently, the FSM National Agriculture Unit of the Department of Economic Affairs issues permits for bringing plants, animals and plant products and animal products from outside FSM. The FSM States issue permits for interstate traffic. The Agriculture Unit also collaborates with the FSM National History & Archives Unit of the Department of Health, Education and Social Affairs in the research application process, especially if related to agriculture. Researchers apply for entry permits from FSM Immigration and include a research proposal that is reviewed by the Unit with a resulting recommendation to be returned to Immigration. In the past, most foreign researchers have worked in the areas of archeology, geology, geography and the social sciences. Recently, however, researchers in the life sciences have become more prevalent. The current research proposal load has begun to overwhelm the Unit, and this has led to increased collaboration with Department of Economic Affairs and the State governments to review proposals. The decision for approval now rests with the States. There are a lot of gaps in the current research approval process, and issues include the lack of expertise to review proposals and a lack of coordination between States and the National Government, exacerbated by the fact that visitors can come for 30 days without a permit. The review process also requires some improvement and monitoring after the permit is issued.

6.2.5 Strategic Goal 5: Manage and Protect the Nation's Natural Environment/Protect, conserve, and sustainably manage a full and functional representation of the FSM's marine, freshwater, and terrestrial ecosystems

a Analysis and Justification

118 The FSM's total area consists of 607 islands (total land area 271 square miles) and 2,700 sq. miles of coral reefs and lagoons located over more than 1 million square miles of ocean. These important resources are the foundation for the nation's long-term economic self-sufficiency. The geographic complexity and isolated nature of the nation's islands have led to the development of extremely high levels of endemism of flora and fauna. The biodiversity of the FSM is globally important, and includes over 1000 plant species (of which 200 are found nowhere else on earth), 119 bird species, and 27 native reptiles. Its reefs are the home to over 1000 species of fish and 350 species of hard corals (Smith 2001, Edward 2002). However, the extreme vulnerability of island ecosystems and species to impacts such as habitat destruction and invasive species has resulted in the FSM biodiversity being amongst the most endangered in the world. The FSM NBSAP (FSM 2002) identified the major threats to the FSM's biodiversity and natural environment are human induced and include invasive alien species, habitat alteration and loss, destructive harvest techniques and over-exploitation of natural resources. The impact of extreme natural events such as cyclones, drought and fire may also be significant at times. The future impact of climate change and sea level rise is uncertain at this stage but could be significant, especially on the low lying islands and atolls which could disappear completely.

119 Pacific island biotas are particularly vulnerable because the biota evolved in the absence of mammalian predators, grazing herbivores and many of the diseases that evolved on larger land masses. Furthermore, the small size and isolated nature of the FSM islands results in increased vulnerability to disturbances that may be relatively minor on a larger land mass. Threats to the nation's natural environment are on the increase. Although population growth has slowed due to heavy out-migration to the US (Hezel 2003), there is increasing commercialisation and globalisation of the FSM economy. Coupled with these changes in socio-economic systems has been an erosion of traditional knowledge and traditional systems of resource management.

120 The outcome of the combination of extreme fragility and increasing threat is that the biological diversity the FSM is one of the most highly threatened in the world. At the same time, there are a number of constraints to mounting an effective response to environmental threats in the FSM, including a low level of technical infrastructure and expertise, a lack of current information on the state of natural resources and biodiversity, a poor understanding of environmental

issues amongst the general population, and poor integration of environmental issues in national development planning.

b Economic Implications

121 Improving stewardship of the FSM's natural resources, including the establishment of special protected areas, will require a greater investment from both the National and State governments. The National government's role of assisting the States to improve general planning for sustainable land and coral reef management and to develop and implement guidelines for the selection, establishment, and management of conservation areas, while providing and/or facilitating technical and financial assistance, will require at least one full-time staff position at the existing Department of Economic Affairs or in a new Environment Department. The State government role continues to shift from the western model of resource "owner and manager" towards a partnership role with the local communities - creating a legal framework for community-based conservation and the development of protected areas, assisting with overall management coordination and monitoring, and provision of technical and financial assistance and capacity building. This will necessitate further reorganization of the existing or reinstating new State government resource management agencies, including adding more technical/scientific positions and eliminating activities and positions that are better undertaken by the private sector, e.g. plant and animal nurseries, provision of supplies, equipment services, etc.

122 The nation's communities will need coordinated National and State government support in terms of technical and financial assistance for design, planning, management, compatible enterprise development, and monitoring. While some funding assistance can be expected from the international community in the short term, the FSM and State governments must assess and help create long-term conservation financing mechanisms to support the recurrent costs of government, community, and NGO conservation efforts.

c Critical Issues for Implementation

123 According to the joint opinions of the National and State Attorneys General on National-State environmental responsibilities under the Constitution, the State governments have jurisdiction over all land and marine areas up to 12 miles out. Therefore, while the National government can provide overall coordination, encouragement, and facilitation of technical and financial assistance, the actual establishment of conservation areas will need to be undertaken at the State and Municipal level. The States also differ in respect to their actual control of terrestrial and marine resources (Table 1).

124 In Yap and Chuuk, terrestrial and inshore marine candidates for conservation areas will be located entirely on privately owned or community-controlled areas. Even in Pohnpei, where the majority of the “public” lands and waters are located, most areas are under some form of community or private control. An example is Pohnpei island’s extensive upland forests, which although legally designated as public lands, are claimed by the traditional paramount chiefs as “luen wehi” (left-over kingdom lands). To complicate the situation, most of the easily accessible “public” forest areas are actually controlled by residents of adjacent communities who use them for production of sakau (*Piper methysticum*) and hunting. This situation dictates that the State governments work closely Municipal governments, traditional leaders, NGOs, and community leaders in identifying, designing, managing, and enforcing conservation areas. The on-going development of State Biodiversity Strategies and Action Plans (SBSAPs) in co-

Table 1. Summary of Land and Marine Tenure in the FSM States

State	Terrestrial tenure	Marine tenure
Chuuk	All land is privately owned	Mangrove forests and inshore marine areas are privately-owned or controlled by communities, while outer reef and open lagoon areas are public property
Kosrae	Previously, all lands above 100 meters (Japanese line) were considered public watershed forest reserve, but 1996 Constitutional amendment returned all land to private owners	Mangroves and lagoon “below the high tide mark” are considered public lands
Pohnpei	Nearly 50% of the island, including most of the mountainous interior and large coastal swamps are considered public lands	Mangroves and lagoon “below the high tide mark” are considered public lands
Yap	All land is privately or clan owned	Mangrove and lagoon areas are village-owned and controlled

ordination with municipalities and communities may be the best vehicle to accomplish this, and the National and State governments should devote sufficient resources to this important undertaking.

d Outcome measures, justification, and linkages

125 A nation-wide system of community-led marine, freshwater, and terrestrial conservation areas where special measures are enforced to conserve biological diversity is developed and implemented by 2010

126 The continued health and functioning of the FSM's entire natural environment is imperative to the nation's sustainable future, and policy, planning and economic development efforts should focus on maintaining the nation's entire natural environment as well as rehabilitating areas that have been degraded in the past. However, experience from other countries has shown that in order to maintain the nation's biodiversity and long-term ecosystem health, the FSM also needs to move forward with the development of a national system of community-led marine, freshwater, and terrestrial conservation areas where special measures are enforced to conserve biological diversity. The State governments, in partnership with the National and Municipal governments, NGOs, traditional leaders, and local landowners, have established a number of conservation or protected areas over the years. Currently, 32 protected areas covering about 10 square kilometers of land and sea are legally designated (Conservation International, 2002). Although, the actual area under protection in the FSM compares favorably with other Pacific nations, the current sites are with few exceptions not well-enforced and their effectiveness (i.e. representativeness and functionality) is generally unknown. The Federated States of Micronesia's (FSM) National Biodiversity Strategic Action Plan (NBSAP) (FSM 2002) sets a clear conservation objective:

127 a full representation of the FSM's marine, freshwater, and terrestrial ecosystems are protected, conserved, and sustainably managed, including selected areas designated for total protection

128 As part of the NBSAP process, an ecoregional plan entitled "Blueprint for Conserving the Biodiversity of the Federated States of Micronesia" (The Nature Conservancy 2003) was also completed by The Nature Conservancy in partnership with the National and State Governments, UNDP-GEF, USDA Forest Service, and the USDOJ Office of Insular Affairs. The blueprint identifies and prioritizes 130 areas of biodiversity significance (ABS) in each State. These ABS contain the FSM's best remaining biodiversity and the critical habitats that sustain these island ecosystems, and are prime candidates for establishment and management as protected areas. Nearly all are highly threatened by over-harvesting, destructive infrastructure projects, or invasive species. Addressing

these threats depends on increasing awareness and action by the growing populations of Micronesians dependent on these resources.

129 The National and State governments need to facilitate the development of protected areas by developing and implementing guidelines for the selection, establishment, and management of protected areas, including appropriate educational programs. The National government should also further assist the States, Municipalities and communities to identify and further delineate high priority "areas of biological significance", and support the development and implementation of conservation management plans for these areas. Finally, the National government should assist the States to develop and implement programs/policies that recognize, promote, and support community ownership and stewardship of natural resources and natural areas in all states, perhaps through the development and implementation of the State Biodiversity Strategies and Action Plans (SBSAPs).

130 Conservation areas contribute at least 10% of the total national economy through successful compatible enterprises including ecotourism, non-timber forest products, and mariculture.

131 The establishment of conservation areas implies limited or no uses of the resources to which a community formerly had full access. Conservation area design therefore needs to consider livelihood security for the local populations living in or in the vicinity of the conservation area. If not, experience shows that support for conservation amongst the local population soon wanes and conflicts escalate. The State governments, in partnership with the Municipal Governments, NGOs, and private sector must assist local communities located in the vicinity of conservation areas to develop environmentally compatible economic development enterprises to increase community support for conservation and assure sustainable livelihoods.

132 At least 20% of the nation's coral reefs are protected as "no-take" reserves by 2020

133 Coral reefs are the mainstay of the FSM's subsistence economy, and provide a myriad of benefits to the nation's inhabitants. The State governments, especially Pohnpei, have already made efforts to set aside portions of their reefs as protected areas, both to allow for recovery of various species within the areas themselves, and for the spill-over effect into surrounding reef areas. The US Coral Reef Task Force has set a goal of protecting 20% of US reefs as "no-take" reserves by 2010 (USCRTF 2000). This percentage has been arrived at as an estimate of the amount of reef that needs to be protected to assure biological sustainability of the entire reef system. Since the Freely Associated States have the largest area of coral reefs of any U.S.-affiliated entities, there is a lot of interest amongst US Federal agencies in working with the FSM, Palau and ROMI

to develop marine protected areas. In neighboring Palau, US and Australian government agencies, in partnership with The Nature Conservancy, are working to design and establish biologically connected marine networks that are resilient to climate change-caused coral bleaching. The methodologies established in Palau will be highly applicable to the FSM. The National government should work with the State and Municipal governments, NGOs, the College of Micronesia, and local communities, to establish biologically connected marine protected area networks in all four states with the goal of protecting at least 20% of the FSM's reefs in no-take reserves. This will entail rapid marine resource assessments carried out in high island reefs and outer island reefs, as well as biological reef connectivity studies. State governments should also work with Municipalities to improve education and compliance related to marine protected areas. A large contribution to sustainable management of the nation's reefs could be made by effectively banning the use of destructive fishing technology, e.g., monofilament gill nets, underwater flashlights, SCUBA, fish poisons, etc.

134 Deforestation/Agricultural conversion rates are decreased to 0% by 2010

135 After centuries of human impact, the dominant vegetation types on most of the FSM's islands are now human induced or anthropogenic plant associations ranging from agroforests and secondary forest to grassland and savanna. Perhaps as much as three quarters of the original vegetation of the FSM has been damaged or destroyed. The forested area varies significantly from island to island but tends to be highest on the younger, steeper volcanic islands with higher rainfall such as Pohnpei and Kosrae. The most well documented case in the FSM is the conversion of 2/3's (~15,000 Ha >5,000 Ha) of Pohnpei's native rainforest mainly for the commercial cultivation of kava (*Piper methysticum*) in the last 20 years. The loss of native intact forest has led to plummeting bird and plant populations, e.g., the Micronesian Pigeon has experienced a 75% population decline since 1983 (Buden, 2000). Pohnpei State has led the way in the FSM with the legal establishment of the Watershed Forest Reserve, almost half which has been surveyed, marked and is now enforced. Other States, in partnership with Municipal Governments, NGOs, traditional leaders and communities need to increase public awareness of the role of forests in protecting the nation's water supply and terrestrial biodiversity and establish and enforce Watershed Forest reserves on all high islands.

136 No plant or animal species endemic to the FSM will go extinct, and endangered and threatened species status will improve between now and 2020

137 The preservation of all species is given high priority by FSM's NBSAP, for economic as well as cultural reasons. Many of the FSM's species have not been fully studied, and little is known about their biology, key threats, and manage-

ment needs. The National government, in partnership with the States, should take the lead in the establishing and periodically updating a national biodiversity database, followed by an update the national endangered species law, which is highly outdated and mostly ignored. The National government should work with the State Governments, NGOs, College of Micronesia and regional universities and research centers, and US Federal agencies like NOAA and the US Fish and Wildlife Service to identify endangered or threatened species in the FSM, promote research on their biology, and establish species recovery plans.

138 Comprehensive nation-wide biodiversity health and threat abatement monitoring program established and implemented by 2008

139 Monitoring is an integral component of natural resource management, and State governments and NGOs have implemented a number of marine and terrestrial monitoring programs. However, methodologies used are numerous and often non-compatible. Further, monitoring results and trends do not reach the key decision-makers on each island and State. The National government should work closely with the State governments, College of Micronesia, and NGOs to identify key ecological indicators to monitor trends and conditions of marine and terrestrial biota, and regularly assess their status. These should include at the very least standard fish and coral monitoring protocols, vegetation mapping using aerial or satellite photography, and forest bird surveys. To compliment this scientific monitoring and build community awareness and support, State governments, in partnership with Municipal governments, NGOS, and communities should

140 devise and set up community-based resource monitoring systems and, through education and training, assist communities to use this information for decision-making.

6.2.6 Strategic Goal 6: Improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources

a Analysis and Justification

141 Effective long-term environmental health and sustainable resource management in the FSM will require an informed and supportive citizenry. Although much has been done by all States in the last few years, there is still a need to continue and further increase environmental awareness at all levels, including school children, villagers and politicians. The need for increased awareness is particularly acute at the village community level. It is the resource owners that decide what activities will occur on their land, and it is therefore they that have the greatest impact on the FSM's natural environment. If such awareness raising does not occur, or is insufficient, the chances of implementing environmental health and resource management programs on the private lands and waters that

make up the majority of the nation's inshore natural resources are greatly reduced.

b Economic Implications

142 The improvement of school environmental curriculum, increasing community environmental awareness and participation, and involving communities and their leaders more fully in development decisions could involve added costs for both the National and State Governments, but the payoffs in terms of increased community support and involvement should more than make up for the cost. Also, current government staff and infrastructure with the help of existing and potential NGO and private sector partners can handle the majority of these activities. Non-government partners not only offer considerable expertise in many of these areas, but can also access funding not available to the government. The use of local consultants as much as possible will also help to minimize costs and further build the nation's capacity. Many excellent educational materials have been developed over the years, but the current funding situation is such that many have gone out of print and are no longer available. Funds must be made available to update and reproduce these materials, as well as develop new materials. Teachers must be trained to use the materials that exist - without training they will be reluctant to integrate environment into their regular class work. State government extension officers from Health, Land, Agriculture and Marine Resource Divisions also need to be trained in environmental considerations so that they can contribute not only to economic development but to the long-term sustainable management of the nation's natural resources.

c Critical Issues for Implementation

143 The vast distance across the FSM, coupled with the diversity of cultures and languages, create special challenges for public awareness building, information sharing, and citizen participation in environmental and development decision-making within the country. The National government will need to play an advisory and coordinating role, while the States take on the actual tasks of increasing public awareness and involvement in environmental management. States should better support environmental awareness and sustainable resource management through their departmental organizational structures, including increasing interagency cooperation and coordination. Teachers and government extension agents need to be trained to better deliver environmental messages in their daily interaction with a wide cross-section of the nation's population.

d Outcome measures, justification, and linkages

144 Resource management and environmental studies are integrated into all levels of the nation's education curricula by 2010

145 The children of today are the decision-makers of tomorrow, and as such children must be exposed to and informed about environmental issues from their earliest years. Some environmental education is already included in primary and secondary education curricula within such broad subjects as geography and science. The Conservation Society of Pohnpei and State government partners are expanding two innovative educational programs in Pohnpei schools, Youth to Youth in Environment and the Green Roadshow, that are already serving as models for the other States. Traditional knowledge should also better integrated into the environmental curriculum. These practices ensured the long-term protection of the islands' natural resources for centuries and are still highly relevant today. The National and State governments should work to bring together educators, representatives of State and National Departments of Education and local NGO and outside environmental experts to develop an appropriate environmental curriculum for the nation's schools.

146 Community environmental awareness improved and citizen involvement in conservation and environmental activities increased to 80% by 2010 (measured by public awareness surveys)

147 The State governments already have a number of community educators/extension agents working in such agencies as EPA, Health, Agriculture, Forestry, and Marine Resources. In addition, there are a number of other institutions in the FSM that are playing and could expand their role in community environmental education. For example, NGOs are contributing greatly to the building of public awareness and involvement in all States. The churches are also playing a growing role in shaping community attitudes on the environment and the use of natural resources. The State governments should coordinate more closely NGOs, churches and other groups to implement public educational programs that support good practices in environmental health, sustainable resource management, and waste management and disposal. In addition, all parties should work harder to educate and involve the FSM's traditional leadership in conservation activities in States where traditional leaders still exist.

148 Public awareness and understanding of the consequences of climate change increased to 80% by 2010 (measured by public awareness surveys)

149 The impacts of climate change will have a major impact on the FSM, however community awareness of the possible impacts of climate change as well as the actions that communities need to take to mitigate or adapt to these impacts is still very low. The National government should take the lead on and work closely with the State governments, NGOs, and the private sector to develop and implement public awareness and understanding of the consequences of natural hazards including those related to extreme weather events, climate variability and change and sea-level rise and the possible actions that need to be undertaken by the nation.

150 Sharing and transfer of environmental information between government, private sector, communities and NGOs improved 100% by 2008

151 Although information sharing in the FSM continues to improve as technologies such as the Internet, telephone, and television are adopted by and extended to a larger section of the nation's population, still more can be done. The National government should take the lead in developing a national clearinghouse mechanism (computer nodes, web page, etc.) with nodes in key locations in the States for disseminating and sharing biodiversity, climate change, and other environmental information and activities. The National and State government should also work with schools and private libraries to expand existing public library resource materials on environmental issues, for example, expand COM resource materials and collections on environmental issues. In addition, the National government should identify training opportunities and work closely with the States and NGOs to increase local capacity to convert technical environmental information into easily understandable materials that can be widely disseminated.

6.2.7 Strategic Goal 7: Establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect the FSM's biodiversity from impacts of alien invasive species

a Analysis and Justification

152 Invasive and alien species are arguably the major threat to Pacific biota and native ecosystems, and nearly all the globally threatened species in the FSM are threatened by alien invasive species. Ever since humans first colonized islands of the FSM up to 3,000 years ago, introduced plants and animals have had a significant impact on native biota. The early Micronesian colonists deliberately introduced a number of plants and animals for food, medicines, building materials and ornamentation. Some of these deliberate introductions, and other species that were introduced accidentally, became pests. Examples include pigs, dogs and Pacific rats (*Rattus exulans*). However, following European colonization from the mid 19th Century onwards, hundreds more species were introduced, many accidentally. Now, in the FSM, there are more introduced flora and higher vertebrates than native species and the nation is full of examples of alien species that have become serious pests.

153 The classic example of the impact of an introduced predator, is the brown tree snake (*Boiga irregularis*). In the past 40 to 50 years, this predator from the Papua region has caused the extinction of nine of eleven native species of forest birds and the apparent extinction of three skink species and two species of gecko on Guam. The snake has now spread to Saipan and there are serious fears that if the snake were to spread to the FSM it would cause similar devastation. The most widespread introduced animals currently present in the FSM are goat (Hir-

cus capra), pig (*Sus Scrofa*), dog (*Canis familiaris*), cat (*Felis catus*), pacific rat (*Rattus exulans*), norway rat (*Rattus norvegicus*), ship rat (*Rattus rattus*), and mouse (*Mus musculus*). Rats are particularly serious pests and consume a wide range of prey including fruits, seeds, insects, snails, lizards and birds, including eggs and nestlings. Pigs, goats and cattle cause habitat disturbance by eating tree seedlings and thereby slowing forest regeneration and reducing native plant diversity. Both dogs and cats prey on seabirds and landbirds particularly surface nesting species, while cats also prey on skinks and geckos. The impact of feral animals on bird populations received attention by Buden (2000) who compared bird surveys that were conducted in 1983 and 1994. Buden (2000) suggested that cats and rats were largely responsible for a 65-80% decline in most species of birds. Other species reported from parts of FSM include Rusa deer (*Cervus timorensis*), *Rattus tanezumi* (Flannery 1995), monitor lizard and the red junglefowl (*Gallus gallus*) (Buden 1996). The monitor lizard (*Varanus indicus*) was introduced in the hope that it would control rats. It became established and is reported to have become common and widespread but now is relatively scarce and restricted to a few areas on Pohnpei and Kosrae. The Cane Toad (*Bufo marinus*) is present on Pohnpei and many of the other islands in FSM. Its introduction is said to have been made in the hope of controlling the monitor lizard! It is also believed to be contributing to mosquito control in the FSM, and therefore is probably still being activity distributed.

154 Arthropods are the most numerous invasive species on islands and ants probably pose the greatest arthropod threat to conservation in the Pacific. The potentially most damaging ant invaders include the bigheaded ant *Pheidole megacephala*, the long legged or crazy ant *Anoplolepis longipes*, the Argentine ant *Lineopthema humile*, little fire ant *Wasmannia auropunctata* and others. Characteristics of ants that make them so destructive include the formation of large, non-competitive multi-queen colonies, the ability to hitchhike readily, highly aggressive behavior and the limited number of effective control options. Introduced ants have decimated all lowland native vertebrates and invertebrates such as crabs, snails and aquatic and semi-aquatic invertebrates by predation, direct competition and by creating favorable conditions for other invasive biota.

155 Introduced land snails have decimated native snail species on many islands in the FSM. The high islands have the highest snail diversity, and are therefore at greatest risk from introduced snail species. The carnivorous rosy wolf snail, *Euglandina rosea*, was introduced to control another introduction, the giant African snail (*Achatina fulica*), but has unfortunately decimated native land snails. On Pohnpei the flatworm *Platydemus manokwari* was also introduced to control the Giant African snail and has also impacted native species. Neither of the two introduced biological control agents appears to be effective control of *A. fulica* populations.

156 Hundreds of plants have been introduced to islands of the FSM and several have become serious threats to native habitats of the nation. The impacts of invasive plants on native flora and vegetation include decreased dominance of native species, decreased overall species richness, fewer vertical tiers of plants, and a lower range of biodiversity overall. Many of the invasives are heliotropic and are more successful than native species in forest clearings from where they may spread into the forest. The spread of invasive plants has been hastened by habitat degradation on islands from typhoon damage or agricultural activity. Some of the most aggressive weedy invaders include the following:

- trees and shrubs: African tulip tree (*Spathodea campanulata*), wild tamarind (*Leucaena leucocephala*), red sandalwood tree (*Adenanthera pavonina*), Lantana camara, *Clerodendrum* spp, *Chromolaena* sp., and the giant sensitive plant (*Mimosa invisa*);
- the climbing vines *Merremia peltata*, *Mikania micrantha* and *Coccinea* spp;
- the grasses *Paspalum*, *Imperata*, and *Pennisetum* spp;
- the creeping herbs *Costus* sp. and *Wedelia trilobata*.

157 Other potentially destructive alien invaders include introduced fishes, amphibians and crustaceans which can impact on native biodiversity by altering habitats, competing for food and living space, introducing pathogens, hybridization with native species and socio-economic and environmental impacts.

b Economic Implications

158 In early 1999 scientists from the Cornell University in the United States reported that foreign plants and animals were damaging various parts of the U.S. ecosystem to the extent of about \$123 billion a year! This cost was determined by estimating the economic consequences of irreversible ecosystem damage, loss of amenity, and mitigation measures. The national situation was deemed so serious that an Executive Order was passed by then President Clinton for the coordination and support for the control of exotic species across the country and the strengthening of quarantine protocols. Although similar figures do not exist for the FSM, the severity of the problem is probably no different (and may be much greater proportionally) than in the United States. Invasive species are costing the nation's governments, private sector, and communities millions of dollars in ecosystem damage, lost crops and livestock, and mitigation/control every year. Experience from other countries shows that so far, the record of controlling invasive plant species, whether on islands or continents, consists of few clear victories, some stalemates and many defeats. Instructive, if expensive lessons have nevertheless been learned. The cheapest and most effective control alien invasive species is to totally prevent their arrival in the FSM. For species already in

the FSM, early detection of an invasive species' presence can make the difference between being able to employ feasible eradication strategies and the necessity of retreating to a defensive strategy that usually means an infinite financial commitment. Obviously, a substantial increase in resources for exclusion and early detection of exotic species would be the most profitable investment. However, if an exotic species is already widespread, then species-specific biological control is usually the only practical way of switching between defensive and offensive strategies. Therefore, the Nation's increased investment in quarantine inspection and enforcement, better screening procedures, and improving procedures and barriers to invasive species at the nation's airports and seaports is a small price to pay compared to allowing more invasive species and become established to enter the FSM.

c Critical Issues for Implementation

159 For both plants and animals, the extent of an infestation, its configuration in the landscape, and the amount of resources available to managers are key issues. Over the last several years, the National and State governments have greatly improved their coordination on quarantine and invasive species control and eradication, thanks in a large part to the SPC Plant Protection Officer's dedicated efforts. National and State government leaders' recognition of the tremendous threat of invasive species has also improved considerably, although State governments must devote substantially more staff time and funding to address this key issue. Public (including private sector) awareness, although also improving still needs to be substantially improved.

d Outcome measures, justification, and linkages

160 Introduction of new alien invasive species into the FSM and transfer of existing alien species across state borders and between islands within States totally prevented between now and 2020

161 As discussed above, the introduction of alien invasive species to the FSM is probably the largest long-term threat to the nation's natural environment. The National government and State government must update or develop and implement national and state laws and screening processes for alien species introduction to minimize their impact on the nation's biodiversity, and continue to strengthen further the enforcement capacity of all laws and regulations relating to alien species introductions. The National and State governments should cooperate to further develop educational programs, including those to improve general awareness amongst the population to reduce the chance that invasive species are spread from one island to another, either accidentally or deliberately. Although much has been accomplished, the National government must continue to improve screening of all international and domestic watercraft and aircraft entering the nation's ports and traveling within the nation. The National government

should also assist the States to establish and train interagency rapid response teams to deal specifically with the possible accidental introduction of the Brown Tree Snake. The National government should also consider working in partnership with the States and the private sector to improve physical barriers to alien species introduction at all ports and airports in the nation.

162 Control, and if feasible, eradication programs for top ten invasive species instituted in all states by 2008

163 Each State should establish invasive species task forces to improve coordination between groups and agencies working on invasive species and develop rapid response plans. The State task forces will also identify and evaluate invasive species present in their respective states and develop control/eradication plans for priority species. The task forces, in partnership with State government agencies, NGOs, and the private sector, will work to control and eradicate (where feasible) priority invasive species, especially those that have been introduced but have not yet become widely established. The national government should also sponsor a review of biological control agents for invasive plants in FSM, in terms of what has been introduced, and what successes (and failures) there have been, and recommend future options for the control of widespread species.

6.2.8 Strategic Goal 8: Create sustainable financing mechanisms for environmental and sustainable resource initiatives

a Analysis and justification

164 Currently, the majority of the funding support for conservation and resource management activities undertaken by the FSM and State governments, NGOs, and other entities is from external sources, mainly through the Compact Environment Sector or other bilateral sources (primarily the US, Australia, and Japanese governments). For the near term, the FSM will remain dependent on external conservation assistance, and efforts should be made to improve access to funding resources by State and local governments, community groups, and NGOs. However, both local and international donors are increasingly concerned with building increased in-country long-term conservation funding. The FSM government, in partnership with the States, needs to assess and create long-term conservation financing mechanisms to support the recurrent costs of government, community-based and NGO conservation efforts. A number of different long-term funding mechanisms have been developed in other countries that may be applicable to the FSM (Table 2).

Table 2. Examples of Conservation Finance Strategies and Tools (Source: IUCN)

Strategy	Tools
----------	-------

Strategy	Tools
<i>Tax Incentives for Conservation</i>	<ul style="list-style-type: none"> • Income tax deductions for conservation contributions. • Tax deductions for certain kinds of land use. • Tax exemptions for conservation activities or properties devoted to conservation (such as land used for private nature reserves).
<i>Economic Incentives</i>	<ul style="list-style-type: none"> • Allocation of tax revenue in a way that rewards conservation (e.g., to jurisdictions that have significant land in protected areas). • Fees to support conservation (e.g., fees for the use or extraction of natural resources like minerals, timber, and water). • Control access to shared resources (e.g., government could use a combination of regulation and limited ownership rights to provide incentives for conservation of shared resources such as fisheries). • Trading of development permits (e.g., government can create tradable permits for development of a given area that can be used in conjunction with 'credits' for conservation activities). • Performance bonds (e.g., for development projects with a high risk of environmental damage, governments could require advance payment of a 'bond' to pay for environmental mitigation if it is later needed). • Eco-labeling (e.g., consumers and governments can promote 'green' products through the use of a system of labeling that allows purchasers of a given product to evaluate its impact on the environment). • Biodiversity prospecting and other benefit-sharing mechanisms (e.g., incentives for biodiversity conservation can be created by resource use agreements, such as in the pharmaceutical industry, that provide a portion of revenues generated to be returned to the country, region, or community where that resource is found). • Elimination of perverse incentives (e.g., subsidies or other incentives that encourage the overexploitation of resources). • Identification and support of economic alternatives to unsustainable resource use, especially in areas of growing environmental scarcity. • Sustainable use of resources for local and national income generation. This can help biodiversity projects become economically viable and sustainable for local populations. • Ecotourism
<i>Environmental Trust Funds</i>	<ul style="list-style-type: none"> • Environmental trust funds or revolving funds from locally generated revenues (e.g., tourism revenues, tourism taxes and licensing fees).
<i>Private Sector Partnerships</i>	<ul style="list-style-type: none"> • Eco-enterprises, concessional or contingent loans (to help start biodiversity projects), micro-credit systems, bankable commer-

Strategy	Tools
	cial projects and venture capital funds in the biodiversity area.
<i>Legal Tools to Promote Private Conservation</i>	<ul style="list-style-type: none"> • Promoting/facilitating donations of land, money or other assets to conservation organizations. • Promoting conservation easements (whereby landowners retain ownership of land, but use it for limited purposes while permanently removing their right to use it for non-conservation purposes). • Promoting/facilitating conservation agreements (whereby landowners enter a legal agreement to manage property according to specific conservation terms, often in exchange for payment). • Promoting/facilitating land exchanges (whereby property owners can exchange property that is significant for conservation reasons with a different property or equal value, but lesser conservation significance).

b Economic implications

165 While the long-term strategy for funding of conservation activities in the FSM is focused on in-country sources, for the near future the nation will continue to be dependent on external financial assistance. In nearly all cases, the National and State governments need to increase budgets for natural resource management in order to deal with growing environmental threats and lack of technical capacity. The development and support of the Micronesia Conservation Trust provides an extraordinary opportunity to the nation to support private involvement in environmental protection and sustainable resource management at substantial cost savings to the government. In addition, MCT will be able to leverage additional outside funding, thus multiplying the national investment in the fund several times over. The National government should coordinate closely with the States to ensure that they are able to access external funding sources to guarantee at least a minimum level of resource management. Government support for the establishment and capacity building of NGOs and community-based organizations will also help bring in additional external conservation funding as a growing number of international donors prefer to provide funding to these groups rather than governments.

c Critical issues for implementation

166 Developing sufficient sustainable conservation finance mechanisms in the FSM will require a coordinated effort involving the National, State and local governments, NGOs and the private sector. Successful funding mechanisms will involve new non-conventional public-private partnerships, and the government may not be the controlling partner in some of these relationships. In many cases, the private sector and NGOs can do a lot more conservation work than the government can with the same amount of money, and the National and State gov-

ernments must be willing to support and promote this new model of public-private partnership.

d Outcome measures, justification, and linkages

167 Micronesia Conservation Trust (MCT) capitalized with \$20 million, and providing \$1 million/year in grants to organizations and communities throughout the FSM by 2020

168 Over the past few decades, most conservation funding in the FSM has been provided directly to the National and State governments. However, as the government role evolves away from management and enforcement towards a partnership role with the local communities and NGOs, the FSM government needs to support the development of sustainable sources of in-country conservation funding for environmental and sustainable development initiatives undertaken by local partner organizations and communities. On the recommendations from the 1999 FSM Economic Summit, a group of 18 private and public sector leaders from the four FSM states - collectively representing the national government, state and municipal government agencies and legislatures, private businesses, local NGOs, and traditional leaders - formed a steering committee in February 2001 to create the Micronesia Conservation Trust (MCT) as a sustainable source of funding for conservation activities in the FSM. In April 2002, a selection committee appointed the founding board of MCT and during the first board meetings in May 2002, a 3-year strategic and financial plan and a comprehensive fundraising plan were completed and approved.

169 The Micronesia Conservation Trust is a private corporation with a governing board that includes members from national, state, and municipal governments, NGOs, business, and academic institutions. Its goal is to mobilize funding from a variety of sources to build an endowment from which to provide long term support for sustainable natural resource management in FSM. The Trust places special emphasis on building the capacity of Micronesian organizations to design and manage conservation programs, and providing a forum to bring together people from national, state, and local governments with private enterprises and organizations to collectively address the challenges of natural resource management in FSM, form public-private partnerships, and share experiences and best practices.

170 The MCT will manage a program of grants to support the goals of FSM's National Biodiversity Strategy Action Plan. The Trust will finance innovative and effective projects that will:

- support community awareness about biodiversity conservation and related environmental education programs;
- support the conservation of priority natural biodiversity resource areas;

- strengthen the ability of communities, community organizations, government agencies, conservation and development NGOs, and other appropriate organizations to conserve FSM's biodiversity and sustainably manage its natural resources for the benefit of future generations; and
- support biodiversity conservation advocacy.

171 The National and State government need to should fund directly and assist in securing foreign assistance for the Micronesia Conservation Trust to strengthen and empower resource owners and local communities to manage their resources sustainably. The most promising opportunities for foreign assistance currently are the European Union Euro\$700,000 non-state actors fund being dedicated to conservation in the FSM, and the possible extension of the GEF Small Grants Program (SGP) funding of \$200,000/year with MCT as the in-country administering mechanism. The MCT Board will need the strong support of the National and State governments to secure a position as the administering mechanism for these funds.

172 Access to outside funding and technical assistance by the government and non-government conservation agencies increased 100% by 2010

173 The ability of government and non-government agencies and local communities to access outside technical assistance and funding is improving, but still needs developing. The National government in particular can facilitate effective access to external sources of funding (bilateral, multilateral, international) for environmental and sustainable initiatives through establishing a database of all existing and proposed environmental projects to encourage coordination and identify gaps, developing in-country capacity (government and non-government) to identify financial needs, prepare high quality funding proposals, secure funding, and manage budgets effectively, improve access to GEF funding windows for government and civil society, and granting tax-exempt status for NGOs and other financial incentives to encourage NGO fund-raising and development.

174 Sustainable conservation funding mechanisms to support conservation activities in all states implemented and covering at least 25% of the States' environmental project costs by 2010

175 With the assistance of the National governments, State governments should be encouraged to develop and implement sustainable funding mechanisms (see Table 2 above) to cover recurrent environmental management and conservation costs and leverage additional conservation funding from other sources.

6.2.9 Strategic Goal 9: Enhance and Employ In-Country Technical Capacity to Support Environmental Programs

a Analysis and justification

176 The long-term environmental management and sustainable development of the FSM depends on a strong cadre of local technical staff in the National and State governments, NGOS, and the private sector. Many opportunities for formal and informal training exist both locally and abroad through the generous support of the US, Australia, Japan, New Zealand, Israel, and other government and private donors, and these have helped slowly develop the nation's technical capacity over the last decade or so. However, a large portion of these training opportunities currently being offered are based more on donor priorities and/or existing capacity building programs than the actual needs and ability of the FSM participants. In addition, there are still too few FSM citizens pursuing university and advanced degrees in technical fields (e.g. biology, engineering, chemistry, physics, geology, hydrology, ecology, etc.). The result is that the nation is still highly dependent on outside technical experts, a strategy that is expensive, does not generally foster in-country capacity, and can result in inappropriate projects and approaches.

b Economic Implications

177 Long-term capacity building of the nation's government, NGO and private sector in environmental management and sustainable resource management will require additional commitment and investment on the part of the both the National and State governments. Much of the short-term training costs can be covered by foreign donors, but the National and State governments need to but more effort into developing individual training assessments for government and non-government technical staff and effectively transmit those needs to the donor community. Promoting technical University and graduate education can be accomplished either by expanding the amount of money available for scholarships or within existing means by adding technical environmental fields to the National and State education priorities governing the use of existing scholarship resources to environment and resource management.

c Critical Issues for Implementation

178 Current employee evaluation systems in place in the National and State governments do not adequately allow supervisors and staff to set individual development goals and identify critical training needs. These systems may need to be updated on a national level, and supervisors trained in employee development to properly address this strategy. The College of Micronesia has done an admirable job attempting to meet the nation's human development needs, but cannot continue to do so with limited funding and further budget cuts. The National and

State governments will need to prioritize support to further build COM into the country's central training and higher educational institution, or risk the College's eventual demise. Environmental health and sustainable resource management/science need to be added to the National and State government's current scholarship priorities if the nation is truly serious about building internal technical capacity.

d Outcome measures, justification, and linkages

179 Staff of State government and non-government environmental organizations will be technically competent and highly capable to deal with all environmental challenges facing the nation by 2010

180 The National government, in cooperation with the States (perhaps under the auspices of the Sustainable Development Council) should conduct a national assessment of technical training needs for all existing and potential government, NGO, community, and private sector organizations involved in managing and protecting the nation's environment, and then work with local and outside donors/technical agencies to develop long-term environmental training programs targeting key needs. Whenever possible, training should be offered in-country training so that the maximum number of people can participate. Periodic follow-up training should be offered to assure that participants master the skills and knowledge. The National and State governments, in close partnership with the College of Micronesia, should build local service provider networks to provide cost-effective trainers and resource people to help build local technical capacity.

181 The College of Micronesia will emerge as the regional training "center of excellence" in environmental protection and natural resource management by 2010

182 The College of Micronesia, as the nation's only institution of higher learning, should be encouraged and provided support to develop formal (up to B.Sc. degree level) and informal conservation, resource management and environmental protection training programs.

183 Government and non-government organizations throughout the country will be linked together in strong networks and actively sharing best practices/successes, lessons learned, and opportunities for assistance by 2010

184 Due to their limited size and resource base, most NGOs in the FSM perform their work with minimal training and in relative isolation from other groups. They often require assistance with a wide range of activities including strategic planning, governance, human and financial management, resource mobilization, impact assessment and performance reporting. The Micronesia Leaders in Island Conservation (MLIC), a peer learning network for the region's con-

servation leaders, was launched by The Nature Conservancy and the Packard Foundation in January 2002. Its purpose is to leverage conservation work in Micronesia by increasing the success, effectiveness, and number of its conservation leaders in the nonprofit and government sectors. MLIC's approach is the creation of a support structure that fosters shared self-directed learning to address priority organizational and technical needs. Currently 10 leaders from State government conservation agencies and NGOs in the FSM are participating in the network. The National and State governments should assist with the expansion of this network and provide support to include more conservation leaders from the FSM. SPREP, IUCN, and The Nature Conservancy are also developing an Invasive Species network for the Pacific, and the National and State governments and NGOs should help determine the right participants for this network when it is launched early next year (2004).

185 At least 10 new FSM conservation/environment leaders are nurtured and developed by 2010

186 The nation's current environment and conservation leaders are too few and lack the necessary technical skills and abilities to take on all the nation's environmental challenges. The National and State governments, in close partnership with the College of Micronesia and other regional educational institutions, must proactively expand the pool of current conservation professionals in the FSM, and begin developing the next generation. The National and State governments should compile, evaluate and disseminate information on environmental training opportunities and scholarships and work with COM to identify suitable candidates. They should further establish and fund graduate (M.Sc. and Ph.D.) and undergraduate scholarships in environmental studies, with the requirement that students return to the FSM upon completion of their studies for a fixed period (e.g., 2-3 years of service for every year of scholarship). Last, the National and State governments, in partnership with NGOs, should establish and provide internship opportunities for promising students and recent graduates with National and State government and NGOs.

6.3 *Activites and Outputs*

187 In this section, a narrative description of the Environment Sector matrix is presented, indicating the linkage between the strategic goals/outcome measures and the delivery of specific outputs. The rationale of the activities and outputs is indicated through the description of linkages. This section also provides an assessment of risks and weaknesses to inform the anticipated ex post performance evaluation efforts.

6.3.1 Strategic Goal 1: Mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities

a Activities and outputs, linkages, and rationale

188 Consolidate national environmental programs under a central office/division with responsibilities including coordination of environment and natural resource conservation activities and assistance to states in addressing their environmental implementation needs

189 Resource management and long-term environmental health can only be achieved with the integration of environmental considerations and safeguards in economic planning and decision-making. Currently national environmental functions are located amongst several agencies, and thus environmental concerns are not always fully represented in national policy and decision-making. Combining these functions in single national office or division would greatly facilitate coordination and improve assistance to the states. Output is: all national environmental programs combined into an office/division by end 2004 and appropriate services/functions decentralized/transferred from the National to the State level.

190 Strengthen the President's Council on Environmental Management and Sustainable Development (SD Council) through stronger state and NGO representation

191 In recent years, the President's Council on Environmental Management and Sustainable Development (commonly known as the SD Council) has met irregularly and has also suffered from a lack of credibility with the States due to transportation and communication challenges of getting State representatives to actively participate. Still, an effective coordinating body connecting the national, state government and non-government environment agencies is needed. Outputs include: the conduct of quarterly meetings of the SD Council, State representatives appointed by Governors added to the SD Council membership and their participation in quarterly meetings ensured, core staff (at least one professional and one administrative) assigned full-time to SD Council activities, a sustainable indicators program developed and implemented by the FSM Environment Office/Division and the SD Council, and the program piloted in one State.

192 Develop combined State BSAP/ Sustainable Development Plans

193 Under the NBSAP Add-On project funded by the UNDP-GEF, each State will be developing State Biodiversity Strategies and Action Plans (BSAP). Outputs include: the establishment of Natural Resource Stewardship Councils in at least one state by 2005, with community representatives designated by traditional leaders and communities, biodiversity clearinghouse nodes established and sustained in all States by 2005, and communities provided support for envi-

ronmentally sustainable projects/ programs and individuals assisted with projects that utilize land and marine areas for highest value use provided in all States.

194 Improve land-use and sustainable development planning in urban centers

195 Development in the States' urban centers (Lelu/Tofol, Kolonia, Weno, and Colonia) has been haphazard at best, and increasing pressures as rural populations move to "town" for employment, education, and other opportunities currently represents a major threat to the natural environment and human health in these areas. Each State must prioritize the development and implementation of land-use and zoning master plans for the State urban centers, and then effectively enforce them. Outputs include land-use and zoning plans developed in all four urban centers (Lelu-Tofol, Kolonia, Weno, and Colonia) by 2007; GIS (Geographic Information System) centers established and competently staffed in all four states with nodes in key government offices (Lands, Planning, EPA, Forestry, and Marine) by 2006; information compiled in GIS systems categorizing land and near shore waters according to their highest value; and, all key natural resource information (digital elevation model (DEM), soils, vegetation, rivers, wildlife populations, etc.) updated and digitized for each state by 2010.

196 Promote and support sustainable land use and development planning in rural areas and outer islands

197 Municipal governments serve as the front-line decision-makers in sustainable resource management and economic development matters. With assistance from the National and State governments, each municipality should be encouraged to develop a long-term sustainable development plans and all funding from higher levels of government should focus on the implementation of these plans. Outputs include: pilot long-term vision and sustainable development plans developed for at least 2 communities/municipalities in each state by 2006; outreach and incentive schemes to encourage communities/ municipalities to adopt environmentally friendly development developed and launched in at least one State by 2008; regular (quarterly) consultation process between state government and traditional leader councils established and implemented in Yap, Pohnpei, and Chuuk; and, at least 2 traditional sustainable resource management practices identified and promoted in each state.

198 Strengthen State Environment Protection agencies to better assess development projects, and enforce and prosecute offenders

199 State governments have all enacted legislation requiring Environmental Impact Assessments (EIA) for development activities. However, EIA legislation is only randomly enforced, and in some cases, especially for large government projects, has been waived or ignored in the past. The real costs of environmental impact must be fully assessed for all projects, private and public, and decisions

made based on the real costs of the development, both current and future, in terms of its impact on the natural environment. EPA Boards and staff, who currently review and make decisions based on EIAs, need to be fully trained in EIA, environmental protection and sustainable development. Outputs include; fully trained State EPA Boards in all four States in environmental protection and sustainable development, lawyer/prosecutors recruited and hired to support each State EPA by 2006; doubling of the EPA staff in each State designated as full-time enforcement officers by 2005; EPA enforcement officers in all States trained in legal procedures, evidence handling, case development, etc. by 2006; EIA legislation improved and strengthened in all States by 2006; National standards for Environmental Impact Assessments & clearinghouse & standards for EIA expertise developed by 2006; roster of certified technical assistance for EIAs and other environmental planning developed by 2006; a consortium of local and outside expertise to conduct EIAs in place by 2006; successful prosecutions for pollution, illegal earthmoving/landfill, and other infringements of environmental laws and regulations improved by 50% by 2006; and, improved laboratory facilities in all four states to handle basic environmental contamination testing of water and soil by 2006.

200 Revamp existing State development review processes (including foreign investment) in all states to take into account environmental considerations and community input at all stages of project review

201 Existing State development review processes vary between States, but in general do not provide sufficient opportunity for community input. Some efforts are being made to improve the transparency of development review processes, as well as to better integrate environmental considerations, but further efforts need to be made. Output is: development review processes with strong environmental criteria and involving community input adopted in two states by 2006.

202 Draft necessary implementing legislation for international conventions to which the FSM is already a party

203 The FSM has acceded to a number of international conventions regarding the environment, however, implementation has been delayed due to the lack of national policy and legislation supporting these agreements. Output is: National legislation developed and passed to support FSM commitments under all major international environment conventions – Climate Change, Biodiversity, Desertification, Transport of Hazardous Wastes, etc. by 2008.

204 Develop and implement integrated coastal environmental and resource management plans to enhance resilience of coastal and other ecosystems to extreme hazards exacerbated by climate variability and sea level rise

205 With the exception of Kosrae, States have not yet adopted coastal resource management plans to assure coordination and successful resource management. Output is: coastal management plans developed for four state centers by 2008.

206 Integrate considerations of climate change and sea-level rise in strategic and operational (e.g. land use) planning for future development, including that related to structures, infrastructure, and critical assets supporting social and other services

207 Global climate will mean increased extreme weather events (tropical storms, typhoons, and drought), high tides, and sea-level rise. Each State must develop and implement long-term plans for dealing with the impacts of climate change, including the development of integrated environmental and resource management objectives that enhance resilience of coastal and other ecosystems to natural hazards; identification of structures, infrastructure, and ecosystems at risk and explore opportunities to protect critical assets; "climate proofing". Outputs include: existing facilities and infrastructure "climate-proofing" assessments and improvement plans developed for all States by 2010; and, 100 % of new government facilities and infrastructure designed and constructed to be "climate-proof" from 2005 onwards.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Consolidate national environmental programs under a central office/division</i>	<ul style="list-style-type: none"> States may look on national consolidation as a threat to their constitutional authority 	<ul style="list-style-type: none"> Assure that new office/division's mandate focuses on "coordination", and does not usurp State authority.
<i>Strengthen the President's Council on Environmental Management and Sustainable Development (SD Council)</i>	<ul style="list-style-type: none"> States may view National SD Council as a threat to their resource management authority Cost of active State participation (travel and communication) may be unwieldy 	<ul style="list-style-type: none"> Work closely with State Governors to understand "coordination and informational sharing" mandate of SD Council and carefully select State representatives Take advantage of other national initiatives that bring together the State and National government resource management agencies to hold SD Council meetings
<i>Develop combined State BSAP/ Sustainable Development Plans</i>	<ul style="list-style-type: none"> Lead State resource management agencies have limited planning 	<ul style="list-style-type: none"> Provide planning training and support to State resource management

Activity	Risks/Weaknesses	Risk Management
	capability	agencies
<i>Improve land-use and sustainable development planning in urban centers</i>	<ul style="list-style-type: none"> • Current land tenure situation does not allow for easy transfer of land • Current enforcement ability of States is insufficient 	<ul style="list-style-type: none"> • Encourage highly participatory methods of community land-use planning in urban centers • Assist States to develop urban land-use plan incentives and enforcement
<i>Promote and support sustainable land use and development planning in rural areas and outer islands</i>	<ul style="list-style-type: none"> • Lead State resource management agencies have limited planning capability • Policies encouraging sustainable land use and development at municipal level are lacking • State control over municipal plans and budgets is limited 	<ul style="list-style-type: none"> • Provide planning training and support to State resource management agencies • Through National funding appropriations and policy, encourage sustainable land-use and development • National government improves coordination with States regarding government and infrastructure funding to municipalities.
<i>Strengthen State Environment Protection agencies</i>	<ul style="list-style-type: none"> • Lack of qualified staff and prospective staff • Limited autonomy of State EPA offices in some States 	<ul style="list-style-type: none"> • Provide environment scholarship opportunities to agency staff and island youth • Encourage States to establish and/or confirm autonomy of State EPAs
<i>Revamp existing State development review processes (including foreign investment) in all states</i>	<ul style="list-style-type: none"> • Government and private sector resistance to making review process more cumbersome 	<ul style="list-style-type: none"> • Integrate environmental considerations into "stream-lined" review processes
<i>Draft necessary implementing legislation for international conventions to which the FSM is already a party</i>	<ul style="list-style-type: none"> • States maintain control over resource management within the 12 mile zone, not National Government • States may not be aware of international treaty responsibilities 	<ul style="list-style-type: none"> • Provide enhanced opportunities for State governments to understand and formally approve international conventions
<i>Develop and implement</i>	<ul style="list-style-type: none"> • Lead State resource 	<ul style="list-style-type: none"> • Provide planning train-

Activity	Risks/Weaknesses	Risk Management
<i>integrated coastal environmental and resource management plans</i>	management agencies have limited planning capability	ing and support to State resource management agencies
<i>Integrate considerations of climate change and sea-level rise in strategic and operational (e.g. land use) planning for future development</i>	<ul style="list-style-type: none"> • Lead State resource management agencies have limited planning capability • Limited infrastructure budgets may limit State compliance with environmental considerations in project design 	<ul style="list-style-type: none"> • Provide planning training and support to State resource management agencies • Through cost/benefit analysis assistance to States and Municipalities, demonstrate the long-term benefits of integration of climate change considerations into design and construction of public projects.

6.3.2 Strategic Goal 2: Improve and Enhance the Human Environment (Improve waste management (reduce, recycle, reuse) and pollution control)

a Activities and outputs, linkages, and rationale

208 Limit and control importation and transport of polluting and hazardous substances into and within the FSM

209 One of the largest challenges facing small island nations like the FSM is pollution, much of it imported from the outside world in the process of economic development. Import of polluting substances needs to be minimized and both the National and State governments must strengthen and enforce laws and regulations controlling transboundary pollution and transport of hazardous substances. Outputs include: National laws and regulations controlling transboundary pollution and transport of hazardous substances adopted by 2005; all imports of ozone-depleting substances (such as CFCs and including other substances not yet determined) prohibited from 2005 onwards; National and State legislation to ban the import of POPs (persistent organic pollutants including polychlorinated biphenyls (PCBs)) and other hazardous chemicals adopted and enforced by 2006; at least one state bans import of Styrofoam products and/or plastic bags by 2006; and, at least one local handicraft/industry within FSM designing and developing shopping bags (which could also be sold for tourists as souvenirs from FSM) by 2006.

210 Establish and enforce national minimum standards for pollution and hazardous wastes, including POPS

211 POPs (persistent organic pollutants) offer a particularly acute danger to the FSM's human health and environment. The FSM government has not yet ratified the Stockholm Convention, which requires actions at the national level aimed at managing and eliminating POPs. Given that POPs are used and emitted in a variety of economic sectors, including industry, manufacturing and agriculture, the development of appropriate responses is a complex undertaking, and will require a comprehensive approach and actions at various levels. Outputs include: National Implementation Plan for POPs completed by 2005; central temporary storage site for hazardous wastes designated and all hazardous wastes stored until they can be properly disposed of in all States; all existing POPs in the FSM identified and safely disposed of (through AusAID assistance program) by 2006; minimum pollution standards for imported vehicles adopted and enforced by 2006; and import of all motor vehicles manufactured before 1996 prohibited (due to global ban on CFCs).

212 Assess contaminated (e.g., oil, heavy metals, PCBs) lands in all States and undertake clean up operations

213 A number of contaminated sites exist in the FSM, most dating from the Trust Territory administration. These sites pose continued human health and environmental danger. Outputs include: inventory and assessment of contaminated lands in all States completed by 2005; and, clean up plans developed and implementation begun by 2006.

214 Promote the development and effective use of waste reduction initiatives, solid waste collection systems, and recycling programs for aluminum, glass, and paper in all state centers

215 State governments need to establish and encourage waste reduction initiatives and the effective use of recycling programs for aluminum, glass, and paper in all state centers, as well as supporting the development of other alternatives, e.g., composting of organic wastes, etc. Outputs include: develop Integrated Waste Management Plan focusing on source reduction, reuse, recycling, composting, land filling, incineration, and disposal of hazardous wastes all States by 2010; waste management and reduction campaigns conducted in all States by 2006; hazardous waste (waste oil, batteries, etc.) collection services established in one State by 2006; solid waste collection services serving 75 % of the population in all State urban centers by 2006; 50% of solid waste collection services privately-managed by 2008; aluminum recycling centers established and operating in at least two states by 2006; glass recycling centers established and operating in at least two states by 2006; 100% of government office aluminum, glass, and paper wastes are recycled by 2008; and, 100% of imported cans recycled nation-wide by 2006.

216 Designate, establish and/or upgrade, and manage easily accessible safe waste disposal sites on all populated islands, and encourage their effective use

217 Waste disposal sites need to be established and improved in both state centers and outer islands. Outputs include: all four state urban centers will improve or establish and properly manage a designated waste disposal site (separating hazardous wastes, plastic or other impervious liner, composting, covering with soil, etc) by 2010; 50 % of the nation's outlying municipalities will improve or establish and properly manage a designated waste disposal site (separating hazardous wastes, plastic or other impervious liner, composting, covering with soil, etc) by 2020; and, private companies will manage 50% of waste disposal sites (SGOV, SLEG, SEPA, MG)

218 Remove and/or recycle abandoned cars and other bulky solid wastes (computers, air conditioners, stereos, microwaves, washing machines, and other items with electronic components that require special disposal) on all islands

219 The growing cash economy and exposure to western commodities has led to a great increase to abandoned vehicles and other e-wastes. These bulky, non-biodegradable items threaten to overwhelm solid waste collection and disposal efforts, especially in the state urban centers. Outputs include: at least two States launch a fund financed by a tax on vehicle importers to finance the cost of removing abandoned vehicles by 2006; all abandoned vehicles will be removed from public areas and safely disposed of (including use as artificial reefs) in all States by 2008; and, tax incentive created to encourage local or foreign entrepreneur to crush vehicles and export them to Asia for the scrap metal market.

220 Improve sewage treatment facilities in main population centers and resite sewage discharge locations outside the barrier reefs to limit negative impacts on the marine environment in all state centers

221 Currently, human sewage is presents a major environmental and public health problem, especially in the nation's urban centers. Outputs include: increase the number of homes with connection to sewage system in urban centers to 50 % by 2006; and, reduce to 0% the amount of untreated sewage discharge into lagoons in all States by 2008.

222 Develop and implement urban storm water management plans in urban centers

223 High rainfall coupled with large hard-surfaced landscapes leads to high run-off rates and pollution in the nation's urban centers, posing both an environmental and health hazard. Output is: storm water devices in urban centers

(e.g., litter traps, sediment traps, oil/water separators) installed and/or improved in all State centers by 2008.

224 Provide and encourage the use of sanitary sewage disposal in all rural areas (septic tanks, water seal toilets, composting toilets, etc.)

225 With a few exceptions, sanitary facilities are both substandard and limited in both urban and rural areas within the nation. Output is: 100% of households in all States will have access to some form of sanitary latrines (temporary or permanent) by 2010.

226 Improve management of surface catchments and aquifers to meet projected water supply demands, including educational programs for landowners and other key stakeholders

227 A clean water supply is a basic need for a healthy community, but many areas of the FSM have not yet attained this basic standard of living. The first step in a clean water supply is source water protection and management. Outputs include: limited-access Watershed Forest Reserves established above 50 % of village water systems catchments on high islands by 2010; increase to 50 % the number of households connected to a safe water supply system in all States by 2006; decrease by 50 % levels of contamination of groundwater aquifers and surface waters by 2010; watershed management fund from public water system revenues established in at least one state by 2006; and, in partnership with USGS and WERI, reestablish and monitor a system of stream gauges in all four States by 2006.

228 Continue to improve and extend centralized water systems in urban centers, and improve community water systems in rural areas to assure access to safe drinking water supplies

229 Waterborne disease continues to be the major public health challenge in the nation. Clean water must be extended to all of the nation's urban and rural communities. Outputs include: public water systems extended to 250 additional households in each main island by 2006; water subsidies eliminated in all States by 2010; 80 % of FSM rural households have access to safe drinking water (including roof catchments, sand filtering, and other low-cost, low tech methods) by 2010; and, low tech solar desalination plants are established on at least 4 populated outer islands in each FSM State by 2008.

230 Increase preparedness and skills/capacity of relevant government and private sector agencies to rapidly respond to pollution emergencies (e.g., oil spills, ship groundings, natural disasters, etc)

231 Pollution emergencies, especially oil spills, represent a major potential threat to each island's environment and public health. Outputs include: at least two states will establish and train an inter-agency pollution emergency rapid

response team by 2006; develop and implement legislation for the prevention, control and removal of oil spills in all States by 2008; oil spill contingency plans developed and implemented in all States by 2006; national response plan to large oil spill events developed by 2006; and, develop methods of waste/spilled oil collection and disposal in all States by 2008.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Limit and control importation and transport of polluting and hazardous substances</i>	<ul style="list-style-type: none"> • Lack of enforcement ability by key agencies • Lacks of support and/or understanding of issues by private businesses 	<ul style="list-style-type: none"> • Improve National laws and regulations controlling trans-boundary pollution and transport of hazardous substances • Involve private business in law development and enforcement
<i>Establish and enforce national minimum standards for pollution and hazardous wastes</i>	<ul style="list-style-type: none"> • Lack of enforcement ability by key agencies • Lacks of support and/or understanding of issues by private businesses 	<ul style="list-style-type: none"> • Complete and implement National Implementation Plan for POPs with private sector participation
<i>Assess contaminated lands in all States and undertake clean up operations</i>	<ul style="list-style-type: none"> • Lack of capacity by key government agencies • Limited financial resources for expensive clean-up operations 	<ul style="list-style-type: none"> • Access assistance and training from Australia and US sources
<i>Promote the development and effective use of waste reduction initiatives, solid waste collection systems, and recycling programs</i>	<ul style="list-style-type: none"> • Lack of profitable market for recycled materials • Lack of public support 	<ul style="list-style-type: none"> • Develop Integrated Waste Management Plans in each State • Subsidize recycling efforts to make them profitable
<i>Designate, establish and/or upgrade, and manage easily accessible safe waste disposal sites on all populated islands</i>	<ul style="list-style-type: none"> • Lack of suitable sites • Lack of public support for establishment of new waste disposal sites 	<ul style="list-style-type: none"> • Work closely with States to identify best sites for waste disposal • Build awareness of links between wastes and public health
<i>Remove and/or recycle abandoned cars and other bulky solid wastes on all</i>	<ul style="list-style-type: none"> • Lack of profitable market for recycled materials 	<ul style="list-style-type: none"> • States launch a fund financed by a tax on vehicle and elec-

Activity	Risks/Weaknesses	Risk Management
<i>islands</i>	<ul style="list-style-type: none"> Lack of local capacity to deal with vehicles and other bulky e-waste. 	tronic appliance importers to finance the cost of removing abandoned vehicles and appliances
<i>Improve sewage treatment facilities in main population centers and resite sewage discharge locations outside the barrier reefs</i>	<ul style="list-style-type: none"> Lack of funding to undertake needed improvements to current sewage disposal systems 	<ul style="list-style-type: none"> Work with foreign donors (e.g., US, Japan, EU, Australia) to prioritize and fund improvements in urban sewage systems
<i>Develop and implement urban storm water management plans in urban centers</i>	<ul style="list-style-type: none"> Lack of funding to undertake needed improvements to current storm water management systems 	<ul style="list-style-type: none"> Work with foreign donors (e.g., US, Japan, EU, Australia) to prioritize and fund improvements in storm water management
<i>Provide and encourage the use of sanitary sewage disposal in all rural areas</i>	<ul style="list-style-type: none"> Lack of funding to improve sanitary sewage disposal systems 	<ul style="list-style-type: none"> Work with foreign donors (e.g., US, Japan, EU, Australia) to prioritize and fund rural sewage disposal
<i>Improve management of surface catchments and aquifers to meet projected water supply demands</i>	<ul style="list-style-type: none"> Lack of public support to set aside watershed catchments 	<ul style="list-style-type: none"> Establish watershed management fund from public water system revenues Build awareness of links between watershed management and water quality/public health
<i>Continue to improve and extend centralized water systems in urban centers, and improve community water systems in rural areas</i>	<ul style="list-style-type: none"> Lack of funding to improve and extend water systems Public unwilling to pay for water 	<ul style="list-style-type: none"> Work with foreign donors (e.g., US, Japan, EU, Australia) to prioritize and fund water supply improvements
<i>Increase preparedness and skills/capacity of relevant government and private sector agencies to rapidly respond to pollution emergencies</i>	<ul style="list-style-type: none"> Lack of capacity by key agencies to support rapid response team 	<ul style="list-style-type: none"> Assess outside training and support (including private companies like Mobil and Shell).

6.3.3 Strategic Goal 3: Reduce energy use and convert to renewable energy sources/Minimize emission of greenhouse gases

a Activities and outputs, linkages, and rationale

232 Decrease the use of imported petroleum fuels through improved energy efficiency, energy conservation, elimination of energy subsidies, and public education

233 Although the FSM is not a large per capita consumer of petroleum products compared to more industrialized nations, petroleum imports represent one of the largest government expenditures on all islands. Efforts must be made to decrease the nation's dependency on expensive imported petroleum products. Outputs include: 100% of all housing development funded by the US or FSM and State Governments shall meet minimum US standards for energy efficiency from 2006 onwards; all electricity subsidies in the FSM eliminated by 2010; all states fully enforce new pollution standards through existing vehicle inspection and maintenance programs from 2006 onwards; 100% public and private motor vehicles in the FSM will meet minimum efficiency and pollution standards by 2006; and, 100% of energy generation in the FSM will meet USEPA and other relevant standards by 2008 (SDEA, SPUC)

234 Provide public transportation in State population centers and discourage private vehicle use, including through educational programs

235 Private vehicle ownership and use has skyrocketed in recent years, fueled by Japan's practice of dumping used cars in Pacific island nations. In urban centers, roads are increasingly congested, public health is declining, and petroleum use continues to increase steadily. Public transportation is needed especially in urban centers and their environs. Outputs include; at least one state will establish a public transportation system on the main island which will be regularly used by at least 30% of the island's population by 2010; vehicle ownership per capita will decrease by 50% by 2010; and cycling paths will be established in one urban center by 2008.

236 Increase the use of solar power, wind, and/or solar/wind hybrids for alternative power generation schemes, especially in rural and remote communities, through incentives and public education

237 Alternative energies offer a viable alternative to expensive and environmentally damaging petroleum-based technologies. The nation needs to increase their investment in alternative energy generation. Output is: solar and/or wind power systems will be established and operating on at least two outer islands in each state by 2008 (EU-funded energy project).

238 Provide incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms in government and private sector buildings and development projects

239 Proper building design, taking into account the latest developments in tropical architecture, could substantially reduce the use of petroleum-generated energy. Outputs include: 100% of new public buildings will be energy efficient from 2005 onwards; new public buildings will integrate at least one alternative energy source (solar, wind, hydro-electric) to generate at least 50 % of energy needs; and, 25 % of existing public buildings will be refurbished with energy efficiency mechanisms by 2010.

240 Undertake planning, regulatory, educational and other initiatives that will ensure the preservation of remaining native forests and agroforests and ensure reforestation for watershed protection and as a carbon sink

241 Avoiding deforestation and preserving existing forests as a carbon sink is one important way the FSM can contribute to decreasing global warming and climate change. Outputs include: National government, in concurrence with all States, adopts policy of no net loss of forests and mangroves by 2006; limited-access Watershed Forest Reserves established above 50 % of village water system catchments on high islands by 2010; reforestation will be undertaken successfully in at least 50% of the nation’s degraded watershed areas by 2020; and, ban or gradual ban of use of mangroves for fuel wood in all States adopted and enforced by 2006.

242 Undertake educational and other initiatives that will prevent the degradation and destruction of coral reefs

243 Besides their substantial contribution to ecosystem protection and the subsistence and cash economy, the Nation’s coral reefs represent a large carbon sink. Protection will further contribute to decreasing global warming and climate change. Output is: the National government, in concurrence with all States, adopts policy of no net loss of coral reefs by 2006.

244 Upgrade local capacity to carry out operation and maintenance of all renewable energy hardware

245 Renewable energy generation will demand new skills and competencies amongst the nation’s workforce. Output is: local utilities and private sector staff in all States able to operate and maintain renewable energy hardware by 2008.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Decrease the use of imported petroleum fuels through</i>	<ul style="list-style-type: none"> Lack of public support for energy efficiency and de- 	<ul style="list-style-type: none"> Build awareness of linkages between

Activity	Risks/Weaknesses	Risk Management
<i>improved energy efficiency, energy conservation, elimination of energy subsidies, and public education</i>	creased dependence on petroleum fuels	petroleum-based energy use, national economy and global warming.
<i>Provide public transportation in State population centers and discourage private vehicle use</i>	<ul style="list-style-type: none"> • Lack of public support and use of public transportation 	<ul style="list-style-type: none"> • Establish tax on vehicle importers to finance the cost of removing abandoned vehicles • Cut all fuel subsidies so that consumers pay the full price of generated power and fuel
<i>Increase the use of solar power, wind, and/or solar/wind hybrids for alternative power generation schemes through incentives and public education</i>	<ul style="list-style-type: none"> • Expense of adopting alternative energy technologies will discourage private and public entities from adopting them. 	<ul style="list-style-type: none"> • Provide cash and other incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms
<i>Provide incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms in government and private sector buildings and development projects</i>	<ul style="list-style-type: none"> • Expense of adopting alternative energy technologies will discourage private and public entities from adopting them. 	<ul style="list-style-type: none"> • Provide cash and other incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms
<i>Undertake planning, regulatory, educational and other initiatives that will ensure the preservation of remaining native forests and agroforests and ensure reforestation for watershed protection and as a carbon sink</i>	<ul style="list-style-type: none"> • Lack of public support to set aside forests as protected areas, especially on private lands 	<ul style="list-style-type: none"> • Provide financial incentives (e.g., tax breaks, preferred government services, etc.) for the conservation use of private lands
<i>Undertake educational and other initiatives that will prevent the degradation and destruction of coral reefs</i>	<ul style="list-style-type: none"> • Lack of public support for marine conservation 	<ul style="list-style-type: none"> • Establish a community-led national system of marine protected areas • Involve community in monitoring of fish recovery in protected areas
<i>Upgrade local capacity to carry out operation and</i>	<ul style="list-style-type: none"> • Lack of capacity to maintain and operate alterna- 	<ul style="list-style-type: none"> • Assess outside assistance to train in-

Activity	Risks/Weaknesses	Risk Management
<i>maintenance of all renewable energy hardware</i>	tive energy technologies	country staff in alternative energy technologies

6.3.4 Strategic Goal 4: Enhance the benefits of the sustainable use of the FSM's genetic resources and ensure benefits derived are fairly shared amongst stakeholders

a Activities and outputs, linkages, and rationale

246 Draft and adopt mechanisms and legal framework regulating access to traditional knowledge, other forms of intellectual property, and genetic resources in the FSM so that the value of these resources is preserved for FSM citizens

247 The FSM's biodiversity and the traditional knowledge surrounding it are now recognized as a valuable and unique resource. Currently, the FSM does not have specific legislation specifically addressing ABS (access and benefit sharing), however several existing laws pertain to genetic resources and traditional knowledge. The FSM has already been subject to exploitation of its genetic resources and traditional knowledge, so this is an urgent issue for the Nation. Outputs include: National legislation adopted protecting the FSM's biodiversity and intellectual property and ensuring equitable sharing of benefits from any utilization, including enforcement protocol and penalties, by 2006; National bio-prospecting coordinating expert panel established by 2005; process for the collection of biological specimens needed for scientific studies which complies with international regulations on the transport of biological specimens established by 2005; and, a model genetic access agreement negotiated and completed between the National and at least one State government and one private sector firm by 2008.

248 Encourage and assist individuals, families and communities to secure their traditional knowledge and enhance it where appropriate

249 The need to fully document the FSM's traditional knowledge and practices has been emphasized many times, however to date, only limited progress has been made. The strong cultural value and difficulty of collecting traditional knowledge and the fear that documenting this knowledge makes it easier to exploit are two reasons for the lack of progress so far. Still, every day, FSM elders die and take another bit of the Nation's collective traditional knowledge with them. To assure that this valuable resource is preserved for the benefit of future generations and the world, the National and State Governments should allocate funding to collect traditional knowledge in whatever form is appropriate in some central location. Outputs include: all State Foresters, and State Marine

Resources and Agriculture Chiefs trained in ethnobotany and genetic access and benefit sharing by 2006; capacity of local staff in archaeology, museum/ curator, and other indigenous knowledge-based disciplines improved in all States by 2008; traditional knowledge databases established and maintained in all states using World Intellectual Property Organization’s (WIPO) recommended protocol by 2006; and; classes/training in ethnobotany and related subjects offered at College of Micronesia campuses in 2 States by 2006.

250 Document, improve, and enforce the current national research permitting process to assure that intellectual property rights and genetic resources are protected

251 Currently, the FSM National Agriculture Unit of the Department of Economic Affairs issues permits for bringing plants, animals and plant products and animal products from outside FSM. The FSM States issue permits for interstate traffic. The Agriculture Unit also collaborates with the FSM National History & Archives Unit of the Department of Health, Education and Social Affairs in the research application process, especially if related to agriculture. Researchers apply for entry permits from FSM Immigration and include a research proposal that is reviewed by the Unit with a resulting recommendation to be returned to Immigration. In the past, most foreign researchers have worked in the areas of archeology, geology, geography and the social sciences. Recently, however, researchers in the life sciences have become more prevalent. The current research proposal load has begun to overwhelm the Unit, and this has led to increased collaboration with Department of Economic Affairs and the State governments to review proposals. There are a lot of gaps in the current research approval process, and issues include the lack of expertise to review proposals and a lack of coordination between States and the National Government, exacerbated by the fact that visitors can come for 30 days without a permit. Outputs include: 100% of research on the FSM's traditional knowledge and genetic resources is approved and monitored by the FSM National Government and respects the nation's policies in this regard by 2008; develop and implement a scientific code of conduct for all biodiversity and bioprospecting research in the FSM; research permit process that includes provisions for hiring local associates in order to assure the local capacity is developed and supported in conjunction with research on genetic resources and traditional knowledge (NBSAP) for permitting adopted by 2008.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Draft and adopt legal framework regulating access to traditional knowledge, other forms of intellectual</i>	<ul style="list-style-type: none"> • Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> • Assess outside assistance (e.g., SPREP, UNDP-GEF) to train local

Activity	Risks/Weaknesses	Risk Management
<i>property, and genetic resources in the FSM</i>		staff and assist in drafting legislation.
<i>Encourage and assist individuals, families and communities to secure their traditional knowledge and enhance it where appropriate</i>	<ul style="list-style-type: none"> • Lack of cooperation/desire from local experts for documenting traditional knowledge 	<ul style="list-style-type: none"> • Train government resource managers in ethnobotany and genetic access and benefit sharing • Establish and maintain traditional knowledge databases in all states using World Intellectual Property Organization's (WIPO) recommended protocol • Offer classes/training in ethnobotany and related subjects offered at College of Micronesia campuses
<i>Document, improve, and enforce the current national research permitting process to assure that intellectual property rights and genetic resources are protected</i>	<ul style="list-style-type: none"> • Lack of local expertise to review research proposals • Lack of coordination between States and the National Government 	<ul style="list-style-type: none"> • Establish a National bio-prospecting coordinating expert panel • Develop and implement a scientific code of conduct for all biodiversity and bioprospecting research in the FSM • Develop a research permit process that involves both State and National input

6.3.5 Strategic Goal 5: Manage and Protect the Nation's Natural Environment/Protect, conserve, and sustainably manage a full and functional representation of the FSM's marine, freshwater, and terrestrial ecosystems

a Activities and outputs, linkages, and rationale

252 Assist states, municipalities and communities to identify high priority "areas of biological significance", and support the development and implementation of conservation management plans for these areas

253 The continued health and functioning of the FSM's entire natural environment is imperative to the nation's sustainable future, and policy, planning and economic development efforts should focus on maintaining the nation's entire natural environment as well as rehabilitating areas that have been degraded in the past. As part of the recent NBSAP process, an ecoregional plan entitled "Blueprint for Conserving the Biodiversity of the Federated States of Micronesia" (The Nature Conservancy 2003) was completed by The Nature Conservancy in partnership with the National and State Governments, UNDP-GEF, USDA Forest Service, and the USDOJ Office of Insular Affairs. The blueprint identifies and prioritizes 130 areas of biodiversity significance (ABS) in the FSM. These ABS contain the FSM's best remaining biodiversity and the critical habitats that sustain these island ecosystems, and are prime candidates for establishment and management as protected areas. Nearly all are highly threatened by over-harvesting, destructive infrastructure projects, or invasive species. Addressing these threats depends on increasing awareness and action by the growing populations of Micronesians dependent on these resources. Outputs include: genetic resources, natural communities & ecosystems inventoried and support provided for state biodiversity nodes by 2006; 50% of government and NGO conservation area managers are trained in, adopt, and apply conservation area planning methods for their specific sites by 2008; 50% of the FSM municipalities legally designate at least one marine or terrestrial site (using the ABS sites identified in ecoregional plan developed under the NBSAP) as a conservation area by 2010; limited-access Watershed Forest Reserves established above 50% of village water system catchments on high islands by 2010; and; deforestation/agricultural land conversion rates will decrease by at least 50% on all high islands in the FSM by 2006.

254 Establish and enforce biologically connected marine protected area networks in all four states with the goal of protecting at least 20% of the FSM's reefs in no-take reserves

255 Experience from other countries has shown that in order to maintain the nation's biodiversity and long-term ecosystem health, the FSM also needs to move forward with the development of a national system of community-led marine, freshwater, and terrestrial conservation areas where special measures are enforced to conserve biological diversity. Current marine protected areas in the FSM, where they exist, are generally not well enforced and their effectiveness (i.e. representativeness and functionality) is generally unknown. Outputs include: rapid marine resource assessments carried out in 100% of the high island reefs and 25% of the outer island reefs by 2010; biological reef connectivity studies undertaken and completed in at least two states by 2010; reef resilience to climate change-caused coral bleaching will be integrated into the MPA network design process in at least one state 2010; at least two Municipal governments in each state will successfully manage and enforce a conservation area in

their locale, in partnership with traditional leaders and State government by 2008; successful prosecutions for infringement of laws designating and managing of conservation areas will be increased by 100 % by 2006.

256 Develop and implement programs/policies that recognize, promote, and support community ownership and stewardship of natural resources and support for natural areas in all states, including environmentally compatible economic development enterprises

257 The Nation's local communities and their leaders, by virtue of their de facto ownership and/or traditional stewardship of natural resources, must be the central stakeholder in any attempt to protect and improve the FSM' natural environment. Efforts to educate and support communities in natural resource conservation and sustainable use need to be greatly increased. Outputs include: with National government assistance, State BSAPS completed for all four states and implementation begun; sustainable timber harvest determined for all FSM forests types and unsustainable logging and logging which deprives the culture of the natural resources it needs for its materials culture (traditional houses, canoes, etc.) controlled in all States by 2008; policies encouraging & supporting in-situ conservation of traditional agrobiodiversity in support of land use sustainability and nutritional health adopted in all States by 2008; analyses of nutrient content of traditional crops compiled and disseminated in all States by 2006; a law recognizing and supporting community-led conservation area designation and management is adopted by at least one State by 2006; 100 % conservation area management plans will integrate at least one traditional resource management practice (NDEA, SMRD, COM, MG, NGO); at least one successful ecotourism enterprise is established for 50 % of all conservation areas in the FSM by 2010; and; appropriate mariculture enterprises (sponges, giant clams, pearls, etc.) are successfully established at 50 % of the marine protected areas (MPAs) by 2010.

258 Limit the use of destructive fishing technology, e.g., monofilament gill net, underwater flashlights, SCUBA, fish poisons, etc.

259 The introduction of modern fishing technology and the commercialization of in-shore marine resources has had a major impact on fisheries health in the FSM. All States need to control fishing technology to ensure the long-term sustainability of their inshore resources. Outputs include: prohibit the export of monofilament gill nets with gaps less than three inches in width by 2006; all States prohibit fishing with SCUBA by 2006; at least two states prohibit night fishing with flashlights by 2008; and; harvest and transport of threatened and endangered species by non-traditional means prohibited in all States by 2010.

260 Identify key ecological indicators to monitor trends and conditions of marine and terrestrial biota, and regularly assess their status, and set up

community-based resource monitoring systems and, through education and training, assist communities to use this information for decision-making

261 Monitoring is an integral component of natural resource management, and State governments and NGOs have implemented a number of marine and terrestrial monitoring programs. However, methodologies used are numerous and often non-compatible. Further, monitoring results and trends do not reach the key decision-makers on each island and State. The National government should work closely with the State governments, College of Micronesia, and NGOs to identify key ecological indicators to monitor trends and conditions of marine and terrestrial biota, and regularly assess their status. Outputs include: standard fish and coral monitoring protocols established by the National and State governments and monitoring teams trained in all States by 2006; state fisheries agencies, in partnership with NGOs and Municipal governments implement standard state-wide fish and coral monitoring program by 2007; with support from the national government, each state update vegetation maps by 2008 using aerial or satellite photography and repeat no less than once every five years afterwards; with support of the National government, each State will undertake new forest bird and fruit bat surveys by 2008, and repeat no less than once every five years afterwards; and; establish and manage a community-based monitoring network in at least one State by 2006.

262 Identify endangered or threatened species in the FSM, promote research on their biology, and establish species recovery plans

263 The preservation of all species is given high priority by FSM's NBSAP, for economic as well as cultural reasons. Many of the FSM's species have not been fully studied, and little is known about their biology, key threats, and management needs. The National government, in partnership with the States, should take the lead in the establishing and periodically updating a national biodiversity database, followed by an update the national endangered species law, which is highly outdated and mostly ignored. Outputs include: FSM Endangered species law is updated and adopted by 2007; keystone species, natural communities and ecosystem processes identified, linkages documented, and their condition and trends monitored in all States by 2008; and; develop and implement species recovery plans for at least one threatened or endangered species in each state by 2006 (in partnership with US Fish and Wildlife Service).

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Assist states, municipalities and communities to identify high priority "areas of biological significance", and support the development and</i>	<ul style="list-style-type: none"> • Lack of technical expertise amongst key resource management agencies 	<ul style="list-style-type: none"> • Work with States and NGOs to update the 2002 "Blueprint" document • Access outside sup-

Activity	Risks/Weaknesses	Risk Management
<i>implementation of conservation management plans for these areas</i>		port and training in Conservation Area Planning (e.g., The Nature Conservancy)
<i>Establish and enforce biologically connected marine protected area networks in all four states with the goal of protecting at least 20% of the FSM's reefs in no-take reserves</i>	<ul style="list-style-type: none"> • Lack of community support and participation 	<ul style="list-style-type: none"> • Develop National standards and support for the establishment of marine protected areas • Provide financial and other incentives to communities establishing and supporting marine protected areas
<i>Develop and implement programs/policies that recognize, promote, and support community ownership and stewardship of natural resources and support for natural areas in all states, including environmentally compatible economic development enterprises</i>	<ul style="list-style-type: none"> • Lack of community awareness and support • Lack of environmentally sustainable economic development opportunities 	<ul style="list-style-type: none"> • Complete State BSAPs using highly participatory process • Provide support to community mariculture and ecotourism activities in MPA communities
<i>Limit the use of destructive fishing technology</i>	<ul style="list-style-type: none"> • Lack of support amongst local fisherpeople 	<ul style="list-style-type: none"> • Build awareness of linkages between improved technology and declining inshore fishery resources
<i>Identify key ecological indicators to monitor trends and conditions of marine and terrestrial biota, and regularly assess their status, and set up community-based resource monitoring systems and, through education and training, assist communities to use this information for decision-making</i>	<ul style="list-style-type: none"> • Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> • Access expertise and training in resource monitoring from outside organizations (e.g., SPREP, LMMA, etc.)
<i>Identify endangered or threatened species in the FSM, promote research on their biology, and establish species recovery plans</i>	<ul style="list-style-type: none"> • Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> • Access outside assistance and training to better understand keystone species, natural communities and ecosystem processes and develop species recovery plans (e.g., US Fish and Wildlife)

Activity	Risks/Weaknesses	Risk Management
		Service, University if Hawaii, University of Guam)

6.3.6 Strategic Goal 6: Improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources

a Activities and outputs, linkages, and rationale

264 Bring together educators, representatives of State and National Departments of Education and local and outside environmental experts to develop an appropriate environmental curriculum for the nation's schools

265 The children of today are the decision-makers of tomorrow, and children must be exposed to and informed about environmental issues from their earliest years. Some environmental education is already included in primary and secondary education curricula within such broad subjects as geography and science. The National and State governments should work to bring together educators, representatives of State and National Departments of Education and local NGO and outside environmental experts to develop an appropriate environmental curriculum for the nation's schools. Output is: a nation-wide environmental curriculum featuring the FSM's unique environment and biodiversity will be developed and implemented in schools throughout the FSM by 2010.

266 Implement public educational programs that support good practices in environmental health, sustainable resource management, waste management and disposal, awareness and understanding of the consequences of natural hazards including those related to extreme weather events, climate variability and change and sea-level rise

267 The State governments already have a number of community educators/extension agents working in such agencies as EPA, Health, Agriculture, Forestry, and Marine Resources. In addition, there are a number of other institutions in the FSM that are playing and could expand their role in community environmental education. For example, NGOs are contributing greatly to the building of public awareness and involvement in all States. The churches are also playing a growing role in shaping community attitudes on the environment and the use of natural resources. The State governments should coordinate more closely NGOs, churches and other groups to implement public educational programs that support good practices in environmental health, sustainable resource management, and waste management and disposal. In addition, all parties should work harder to educate and involve the FSM's traditional leadership in conservation activities in States where traditional leaders still exist. Outputs include: carry out at least one conservation public awareness campaign in each state each

year; carry out at least one climate change public awareness campaign in each state each year; establish and implement regular (quarterly) consultation process between state government resource managers and traditional leader councils in Yap, Pohnpei, and Chuuk State by 2006; and; National government, in partnership with the State governments, produce annual "state of the environment" report and present to traditional leaders councils from 2008 onwards.

268 Improve the dissemination and sharing of information on biodiversity, climate change, and other environmental information and activities between different levels of government and with the general public

269 Although information sharing in the FSM continues to improve as technologies such as the Internet, telephone, and television are adopted by and extended to a larger section of the nation's population, more can be done. The National government should take the lead in developing a national clearinghouse mechanism (computer nodes, web page, etc.) with nodes in key locations in the States for disseminating and sharing biodiversity, climate change, and other environmental information and activities. The National and State government should also work with schools and private libraries to expand existing public library resource materials on environmental issues, for example, expand COM resource materials and collections on environmental issues. In addition, the National government should identify training opportunities and work closely with the States and NGOs to increase local capacity to convert technical environmental information into easily understandable materials that can be widely disseminated. Outputs include; clearinghouse mechanism (state computer nodes, web page, etc.) with easily-accessible state nodes successfully implemented, regularly updated, and used regularly by the public by 2006; environmental reference collection established and/or improved in major State and National environmental agencies (e.g. EPA, MRMD) by 2006; College of Micronesia campus library environmental literature collections are improved and updated (measured by a doubling of library resources) by 2010; and; at least one information dissemination specialist in each state will be trained and supported by 2008 (in partnership with SPREP).

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Develop an appropriate environmental curriculum for the nation's schools</i>	<ul style="list-style-type: none"> • Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> • Bring together educators, representatives of State and National Departments of Education and local NGO and outside environmental experts to develop an appro-

Activity	Risks/Weaknesses	Risk Management
		<p>priate environmental curriculum</p>
<p><i>Implement public educational programs that support good practices in environmental health, sustainable resource management, waste management and disposal, awareness and understanding of the consequences of natural hazards climate change and sea-level rise</i></p>	<ul style="list-style-type: none"> • Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> • Improve coordination between all resource managers and educators to deliver key environmental messages to general public
<p><i>Improve the dissemination and sharing of information on biodiversity, climate change, and other environmental information and activities between different levels of government and with the general public</i></p>	<ul style="list-style-type: none"> • Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> • Develop national information clearing-house mechanism with nodes in each State

6.3.7 Strategic Goal 7: Establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect the FSM's biodiversity from impacts of alien invasive species

a Activities and outputs, linkages, and rationale

270 Develop and implement national and state laws and screening processes and improve screening at all ports for alien species introduction and genetically modified organisms (GMOs) to minimize their impact on the nation's biodiversity

271 The introduction of alien invasive species to the FSM is the biggest long-term threat to the nation's natural environment. The National government and State government must update or develop and implement national and state laws and screening processes for alien species introduction to minimize their impact on the nation's biodiversity, and continue to strengthen further the enforcement capacity of all laws and regulations relating to alien species introductions. Outputs include: National alien species screening process in place in all FSM ports of entry by 2006; National GMO policy adopted and enforced by 2008; increase quarantine staff at all ports of entry by 50% by 2008; deputization program for State resource management personnel to augment existing quarantine officers instituted in all States by 2006; and; legislation to require ships to empty ballast water at sea before entering FSM waters or to take other appropriate precautions to prevent the introduction of invasive and potentially harmful marine organisms instituted nationally by 2005.

272 Through training and education, further develop national enforcement capacity of all laws and regulations relating to alien species introductions

273 Much has been done to improve the enforcement capacity of the FSM in the area of alien species introduction. However, more remains to be accomplished. Outputs include: penalties on National quarantine laws increased by 100 % to further discourage violations; and; increase prosecutions for violation of quarantine laws by 100% by 2008.

274 Improve general awareness amongst the population to reduce the chance that invasive species are accidentally or deliberately spread around FSM

275 The National and State governments should cooperate to further develop educational programs, including those to improve general awareness amongst the population to reduce the chance that invasive species are spread from one island to another, either accidentally or deliberately. Output is: carry out a public awareness campaign to women's' groups in all States on the threat of invasive species/diseases through the deliberate introduction of ornamental plants by 2006.

276 Increase local capacity to address biosecurity, particularly the ability at the State level to identify, control and eradicate alien invasive species

277 Since invasive species eradication and control are basically State responsibilities, capacity to address issues must be improved substantially at that level. Output is: at least 2 permanent positions focusing on invasive species control established and hired in each state by 2006.

278 Develop and implement effective quarantine and inspection protocols and, where possible, physical barriers to alien species introduction (lighting, fencing, traps, dogs, etc.) at all ports and airports in the nation

279 The most efficient and economically sound method for controlling invasive species is to never allow them to enter the country in the first place. National government must work in partnership with the States and the private sector to improve physical barriers to alien species introduction at all ports and airports in the nation. Outputs include: develop and train an interagency Brown Tree Snake Rapid Response Force on all islands with ports of entry by 2006 (in partnership with the USGS); institute a policy that all arriving containers, vehicles and other cargo from Guam or the CNMI must be quarantined for three days by 2006; and; with USGS and USFWS assistance, improve one State port/airport to be Brown Tree Snake-proof by 2008.

280 Establish invasive species task forces in each state to improve coordination between groups working on invasive species to identify and evaluate

species present in the FSM and develop control/eradication plans for priority species, including rapid response plans for each state

281 Because of the interdisciplinary nature of invasive species control practices, inter-agency coordination is imperative for success. Outputs include: all four states establish and fund inter-agency Invasive Species Task Forces to deal with priority invasive species by 2006; and; develop rapid response plans for the five most serious invasive species threats after the Brown Tree Snake by 2008; invasive plant and animal database updated and widely disseminated to all State resource management agencies and private sector by 2007; and; develop control eradication plans for the top ten invasive species in each State by 2008.

282 Control and eradicate (where feasible) priority invasive species, especially those that have been introduced but have not yet become widely established

283 Even if invasive species have entered the FSM, effective eradication and/or control can still be economically realized with early detection and action. Many of the invasive species present in the FSM have not yet reached epidemic proportions and can be controlled with fairly minimal inputs. Outputs include: State Governments prioritize invasive species control and eradication in annual budgets from 2005 onwards; State Governments develop control and eradication protocols involving local communities, traditional leaders, and resource owners; and, complete review and recommendations for biological control in the FSM (what has been introduced, successes and failures, and future options) and widely disseminate by 2008.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Develop and implement national and state laws and screening processes and improve screening at all ports for alien species introduction and genetically modified organisms (GMOs)</i>	<ul style="list-style-type: none"> • Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> • Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)
<i>Through training and education, further develop national enforcement capacity of all laws and regulations relating to alien species introductions</i>	<ul style="list-style-type: none"> • Lack of expertise by local legislative bodies 	<ul style="list-style-type: none"> • Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)

Activity	Risks/Weaknesses	Risk Management
<i>Improve general awareness amongst the population to reduce the chance that invasive species are accidentally or deliberately spread around FSM</i>	<ul style="list-style-type: none"> Lack of invasive species awareness by local population 	<ul style="list-style-type: none"> Build awareness of linkages between invasive species, agricultural and native ecosystem productivity, and the economy
<i>Increase local capacity to address biosecurity, particularly the ability at the State level to identify, control and eradicate alien invasive species</i>	<ul style="list-style-type: none"> Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)
<i>Develop and implement effective quarantine and inspection protocols and, where possible, physical barriers to alien species introduction at all ports and airports in the nation</i>	<ul style="list-style-type: none"> Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)
<i>Establish invasive species task forces in each state to improve coordination between groups working on invasive species to identify and evaluate species present in the FSM and develop control/eradication plans for priority species</i>	<ul style="list-style-type: none"> Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)
<i>Control and eradicate (where feasible) priority invasive species, especially those that have been introduced but have not yet become widely established</i>	<ul style="list-style-type: none"> Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)

6.3.8 Strategic Goal 8: Create sustainable financing mechanisms for environmental and sustainable resource initiatives

a Activities and outputs, linkages, and rationale

284 Fund directly and assist in securing foreign assistance for the Micronesia Conservation Trust to strengthen and empower resource owners and local communities to manage their resources sustainably, as well as to improve the long-term viability of local and national environmental and sustainable programs

285 The Micronesia Conservation Trust was established in 2002 and has been adopted as the national funding mechanism for implementation of the nation's NBSAP. The MCT long-term funding goal is to develop an endowment of \$20 million which can generate sustainable grant funding of about \$1 million/year. Outputs include: the Micronesia Conservation Trust will be established and endowed with at least US\$10 million by 2010; all States will establish sub-accounts within the MCT to help support state environmental priorities by 2010; GEF Small Grants Program provides \$250,000/year grant money through the MCT from FY05 onwards; and; MCT will access assistance from at least one other GEF grant window (PDF A, PDF B, medium-sized, or large grants) and other multi- and bilateral donors by 2006.

286 Facilitate effective access to external sources of funding (bilateral, multilateral, international) for environmental and sustainable initiatives

287 Effective environmental and natural resource management in the FSM can only be realized with substantially increased funding, much of which will need to be raised from outside sources besides the Compact revenues. Outputs include: through the clearinghouse mechanism, regularly provide information on environmental grant opportunities to State governments and NGOs from 2005 onwards; increase external environmental funding (excluding US government) by 100% by 2010; hold fund-raising, proposal-writing, and project management workshops for government and non-government environment personnel in all States beginning in 2006 and biannually thereafter; maintain and expand existing SD Council database to include project information from all States by 2005; and, secure at least one GEF medium-sized grant every year and one GEF large grant every three years from 2005 onwards.

288 Provide legal and financial incentives to encourage NGO fund-raising and development

289 The FSM's non-profit (NGO) sector has a largely undeveloped potential to bring in substantial financial resources for environmental and natural resource management, both from within the country and outside. Much of this funding is not accessible to government agencies so represents new resources. Outputs in-

clude: adopt national tax-exempt status for non-profit organizations to increase private sector support and donations from individuals and businesses by 2006; and, at least one strong and effective state-wide NGO will be established in each state to engage local communities, the government and private sector in innovative and highly successful conservation partnerships by 2006.

290 Develop in-country sources of funding and investment for environmental and sustainable initiatives, including resource rentals and/or royalties, user fees for tourism activities, environmental bonds for development projects, and special taxes for visitors and tourists

291 A number of opportunities exist for generating in-country revenue in support of environmental and natural resource management. State governments need to take a lead in identifying and developing sustainable conservation funding mechanisms. Output is: at least one local conservation revenue source will be established in each state that will effectively leverage additional resources (bilateral, private foundation, and other) to assure conservation success by 2010.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Fund directly and assist in securing foreign assistance for the Micronesia Conservation Trust</i>	<ul style="list-style-type: none"> Insufficient donors interest and support 	<ul style="list-style-type: none"> States establish sub-accounts within the MCT to help support state environmental priorities National government to put forward the MCT as the preferred funding mechanism for EU non-state actor funds, GEF Small Grants Program, and other possible funding sources
<i>Facilitate effective access to external sources of funding (bilateral, multilateral, international) for environmental and sustainable initiatives</i>	<ul style="list-style-type: none"> Lack of expertise by local resource management agencies 	<ul style="list-style-type: none"> Seek support and training from in-country (e.g., College of Micronesia) and outside sources
<i>Provide legal and financial incentives to encourage NGO fund-raising and development</i>	<ul style="list-style-type: none"> Lack of government support for tax-exempt status and other incentives 	<ul style="list-style-type: none"> Build awareness of existing and potential financial contribution of a healthy NGO sector to the national economy

<i>Develop in-country sources of funding and investment for environmental and sustainable initiatives</i>	<ul style="list-style-type: none"> • Lack of government support to use in-country revenues for conservation and environmental purposes 	<ul style="list-style-type: none"> • Build awareness amongst the Nation's leaders of the true costs and benefits of a healthy natural environment.
---	---	---

6.3.9 Strategic Goal 9: Enhance and Employ In-Country Technical Capacity to Support Environmental Programs

a Activities and outputs, linkages, and rationale

292 Assess technical training needs in the areas of waste management, drinking water quality, environmental monitoring, chemical safety, resource management, and emergency preparedness, and identify/develop training programs

293 Lack of capacity is a major constraint to environmental and natural resource management in the FSM. Training for government and NGO resource managers is a key need, but efforts to date have been largely uncoordinated and donor-driven. Outputs include: training needs assessment completed by 2006; comprehensive training program developed and implemented by National government by 2007 (in partnership with US Government agencies and SPREP); through the clearinghouse mechanism, regularly provide information on environmental training and scholarship opportunities to State governments and NGOs from 2005 onwards; and, National regulations requiring approval of visiting researcher's proposals, presentation of research finding to the public, and provision of copies of all reports/products; and contribution to the development of local capacity by hiring a local guide & assistant, affiliating with a local agency, NGO or institution, and/or contributing to a scholarship fund for local students studying environmental subjects established by 2005.

294 Build local service provider networks to provide cost-effective trainers and resource people to help build local technical capacity

295 Currently, most technical assistance and training is carried out using trainers and other resource people from outside the FSM. This is expensive and unsustainable in the long-term. Opportunities exist, especially through such institutions as the College of Micronesia, to develop in-country expertise. Outputs include: environment service providers network established and actively providing in-country training and technical assistance by 2008; a cadre of EIA specialists trained and national network/ consortium of certified expertise developed by 2006.

296 Develop formal (up to B.Sc. degree level) and informal conservation, resource management and environmental protection training programs at the College of Micronesia

297 Training is only a partial solution to the Nation's current human resource shortage in the area of environmental and natural resource management. The long-term solution lies in increasing the education levels of key government and non-government resource managers. Outputs include: two environmental training programs/year developed and delivered by College of Micronesia to government and non-government agency staff; two year A.S. degree program in resource management and/or environmental science/health offered at all four state campuses by 2008; four year B.Sc. degree program in resource management and/or environmental science/health developed and delivered at COM-FSM Palikir campus by 2010.

298 Promote nation-wide and regional learning networks of local conservation and environmental leaders to promote peer learning

299 Studies have shown that adults learn best when coupled with peers and mentors in day-to-day learning situations. Output is: the Micronesians in Island Conservation (MLIC) peer learning network will be expanded to include at least 16 conservation leaders (currently 10) from the FSM by 2008 (in partnership with The Nature Conservancy, NOAA, and other agencies).

300 Establish and fund graduate (M.Sc. and Ph.D.) and undergraduate scholarships in environmental studies, with requirement that students return to the FSM upon completion of their studies for a fixed period (e.g., 2-5 years of service for every year of scholarship – to be determined by individual States)

301 The Nation's future environmental leaders will be faced with new and complicated challenges that will test even the FSM's best and brightest minds. The Nation, in coordination with the States, needs to build the next generation of conservation leaders through providing graduate educational opportunities. Output is: provide at least two graduate degree scholarships/year (M.Sc. or higher) in resource management/environment to deserving FSM students from 2005 onwards.

302 Develop nationwide (government and NGO) environmental intern program to provide training and career opportunities

303 To ensure that the Nation will have the environmental leaders that it will need in the future, efforts must be made to expose young people to environmental work opportunities early in their careers. Output is: offer ten in-country resource management/environment internships/year to FSM students at the College of Micronesia or studying abroad from 2005 onwards.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
<i>Assess technical training needs in the areas of waste management, drinking water quality, environmental monitoring, chemical safety, resource management, and emergency preparedness, and identify/develop training programs</i>	<ul style="list-style-type: none"> Lack of in-country expertise to assess needs and deliver training programs 	<ul style="list-style-type: none"> Assess outside support and training to develop in-country expertise and training capability (e.g., through the College of Micronesia)
<i>Build local service provider networks to provide cost-effective trainers and resource people to help build local technical capacity</i>	<ul style="list-style-type: none"> Lack of in-country expertise 	<ul style="list-style-type: none"> Assess outside support and training to develop in-country expertise and training capability (e.g., through the College of Micronesia)
<i>Develop formal (up to B.Sc. degree level) and informal conservation, resource management and environmental protection training programs at the College of Micronesia</i>	<ul style="list-style-type: none"> Lack of faculty expertise and other resources to offer these types of programs through COM 	<ul style="list-style-type: none"> Forge strategic partnerships with other Universities in the region, e.g., University of Guam, to offer in-country academic programs up the B.Sc. level
<i>Promote nation-wide and regional learning networks of local conservation and environmental leaders to promote peer learning</i>	<ul style="list-style-type: none"> Lack of financial and human resources to maintain a learning network 	<ul style="list-style-type: none"> Assist Micronesians in Island Conservation network to access bilateral and international financial assistance
<i>Establish and fund graduate (M.Sc. and Ph.D.) and undergraduate scholarships in environmental studies</i>	<ul style="list-style-type: none"> Lack of available financial resources for graduate-level scholarships 	<ul style="list-style-type: none"> Prioritize environmental studies for existing scholarship resources Work with bilateral and international donors to increase graduate scholarship opportunities
<i>Develop nationwide (government and NGO) environmental intern program to provide training and career opportunities</i>	<ul style="list-style-type: none"> Lack of funding for internships 	<ul style="list-style-type: none"> Work with bilateral and international donors to increase funding for internship opportunities

7 Health

7.1 Health Sector Review

7.1.1 Introduction

1 The current health care system in the FSM is a legacy of the system set up by the U.S. Navy and the U.S. Department of the Interior (DOI) in the region after the islands reverted to U.S. control after the second world war. A central hospital, staffed by expatriate doctors was established on the main islands with sub-dispensaries built on remote islands, staffed by health assistants and visited occasionally by field ships. For more comprehensive information on the FSM health system, refer to the ADB funded reviews of the FSM health sector performed in 1999 and 2003 .

a Organizational Structure of the Health Care System

2 The structure of the health care system in FSM mirrors the government structure and as there are three levels of government (National, state and municipal), there are three levels in health care.

i Responsibilities: national, state and municipal level

3 **National level:** At the National level, the Division of Health (DOH of DHESA) has no direct role in the provision of health care services, but is limited to health planning, donor coordination, technical and training assistance. In its coordination and technical assistance role, it has considerable influence on the provision of many preventive medicine and public health programs, which are funded in a large part by the U.S. Department of Health and Human Services (DHHS) and coordinated/managed through the FSM-DOH. It also has an implied role in quality assurance and health standards.

4 **State level:** The Department of Health Services (DHS) in each state is responsible for running state curative, preventive and public health services, including the main hospital, peripheral health centers, and primary care centers, generally called dispensaries. Most DHSs have minimal capabilities for planning and programming, and have structurally weak management systems. There is a main hospital in each state and these are directly accessible only to residents of the urban (state) centers. For residents who live on the outer islands, access is difficult because of the lack of public transportation between the islands. Dispensaries typically are located in island municipalities based on population, need and political considerations.

5 **Municipal level:** In the municipalities (including the outlying islands (OI)), there are dispensaries similar to health clinics (posts). These dispensaries

are part of the state health department, but their day-to-day operations are under the supervision of the mayors in which the dispensaries are located. Services that can be provided at the dispensaries through the health assistants staffing the dispensaries are mainly diagnosis and treatment of common ailments. The more advanced cases are referred to the central hospitals.

ii State based delivery systems

6 The state-based delivery systems for health are an effective way of administering health in the FSM. Given the geographic dispersal, remote nature and cultural diversity of many island communities, these state-based systems for health delivery of services have the best chance of developing more responsive and effective services to meet the needs of the community. However, there is a need to have a collaborative approach between the states and DHESA to achieve national standards of health care and reporting. The constitutional responsibility conferred upon the states to provide health services with the control of the bulk of health budgetary provisions means that there is a political barrier to DHESA enforcement of policy directions. DHESA as the national body for health policy development has a limited capacity to impact on state policy and planning frameworks. As a consequence, there is little national coordination that may help to deliver more effective and more cost efficient services. The partnership between national and state levels for health services could be improved through strengthened collaboration and cooperation. It is important with the new reporting requirements of Compact II to achieve national coordination.

b Health Planning and Expenditure

7 Health services, including primary, preventive and public health and secondary (state hospital) health services, in the past were financed through a mixture of funds associated with the original Compact grant (the 1986 Compact of Free Association which expired in October 2003), U.S. Federal Programs separate from the Compact, state funds and user fees and insurance and grants from bilateral, multilateral, and non-government donors. Compact-associated funding was usually the largest contributor to health sector funding.

8 The phase-down in Compact funds, which began in 1996, precipitated serious problems in the delivery of health services and the amount of funds allocated by the states and national governments in FY1999 for health was nearly 27 percent less than in FY1996. In 1996, the FSM Government moved (with the assistance of the international community, particularly the ADB) to proceed with an economic reform program aimed at stabilizing public finances, removing obstacles to foreign investment and private sector development. With this also came a large down-sizing of the public sector. In an attempt to balance budgets and promote self-sufficiency, most states voluntarily reduced their health workforce through early retirement programs and cut many of their health programs

and services. This led initially to a rationing of health services and deterioration in the quality and breadth of health services in most states, including reductions in health personnel at the national and state level, shortages of drugs and equipment, inadequate maintenance and decreased health services. In most states, the health workforce decreased by as much as 10-30%. Unfortunately, many essential personnel were retired prematurely and/or inappropriately and ad hoc program cuts were made without a strategic overview of the health system or consideration of essential services. The downsizing and streamlining of the various states' department of health services lead to the more efficient use of personnel and funds in most states, but has not yet led to improved quality of care or services.

9 State expenditure allocations are on average 65% to curative services including dental, 10% to public health, 10% for administration, and 15% for overseas referrals. On a national level (including insured referrals and public health programs), 50% are allocated for curative services, 20% for public health and prevention, 10% for administration, and 20% for referrals. Personnel costs are a very high percentage of core Compact funding (about 90% in the case of Chuuk, 52% in Yap and 68% in Pohnpei). Significant reductions were made through early retirements and reductions in salaried hours, and Yap and Pohnpei also contracted out some services that were formerly salaried. Chuuk maintained high staffing levels but cut wages, while Pohnpei reduced staff and maintained high wages. Pohnpei has half the employees of Chuuk but pays twice Chuuk's average wages. The smaller states have relatively higher non-personnel budgets. This may be related to higher fixed costs due to diseconomies of scale, but also to the higher proportion of their health budgets spent on drugs and medical supplies - 21% for Yap and 15% for Kosrae versus 7% for Chuuk and 10% for Pohnpei. The Chuuk budget for drug supplies is grossly inadequate by the WHO standards for basic health services, Pohnpei's is barely adequate, but Yap and Kosrae are adequately funded. Travel budgets are insufficient given the distances involved in some states, particularly for supervision of PHC activities.

10 Only 0.2% to 3% of state health budgets are used for fixed assets, and there is no depreciation account in any state budget. Only Yap explicitly budgets for maintenance, at 3%. This means that fixed assets essential to health services cannot be adequately maintained or replaced. Off-island referrals have been the most contentious health issue in the past, causing accrual of enormous state debts and many internal disharmonies in the communities. Current referrals appear to be managed better than in the past both by states and the FSM-National Health Insurance Program (NIP) by screening cases and using lower-cost providers, but they still account for 20% of all health expenditures. This funding for tertiary care could be used to provide improved on-island care to more than the 200-odd patients who are referred annually.

Table 1 Compact and U.S. grant funding for health to FSM governments, FYs 1999, 2004

	FY 1999 (U.S. \$ million)	FY 2004 (U.S. \$ million)
Chuuk	2.3	4.7
Kosrae	0.8	1.5
Pohnpei	2.0	6.0
Yap	2.0	3.0
FSM government	1.5	0.6
Total-Compact	8.6	15.6
U.S. DHHS categorical grants	2.6	2.6
Total	11.2	18.2

11 Under the terms of Compact II, FSM will receive funds from the U.S. until 2023. Each state in turn will receive a block grant from the FSM national government to cover costs of all aspects of government, including health. Each state will have considerable autonomy in its provision of programs and use of funds. The health budget for 1999, excluding revenues from international donors, was \$11.2 million and in 2004, will be approximately \$18.2 million (refer to Table 1).

c Projected Compact II Funding for Health

12 The most important factor affecting the FSM health care system in 2004, will be the health component of Compact II. Table 2 shows the breakdown of Compact II funding for the health sector in 2004. It is likely that most state DHS will have budget in excess of the health budgets of the last few years and health services in FSM should not face drastic economic hardship and shortages in the coming years. However, just because there is some funding allocated until 2023, does not mean that health reform is not urgently required. Health ser-

Table 2: Health Sector Budget to FSM State and National Governments 2004 (Thousands of Dollars)

Strategic Goal	Chuuk	Kosrae	Pohnpei	Yap	National	Total
Improve PHC	937.6	76.8	2,157.3	1,145.5	354.5	5,361.7
Improve SHC	3,425.4	688.4	3,479.1	1,575.0	116.0	9,284.1
Sustainable Financing Mechanism	328.5	74.4	353.0	161.1	77.5	994.6
TOTAL	4,691.7	1,529.6	5,989.4	2,881.6	548.0	15,640.5

vices whether urban or rural, are generally of poor quality and are currently unsustainable.

13 The major spending priorities agreed upon by both the U.S. and FSM representatives in compact negotiations are health and education. The Fiscal Procedures Agreement of Compact II indicates that the grant “*shall support and improve the delivery of preventive, curative and environmental care, and develop the human and material resources necessary for the Federated States of Micronesia to perform these services. It further states that priority should be given to establishing sustainable funding mechanisms for operating a community-based system with emphasis on prevention, primary care, mental health, substance abuse prevention, and the operation of hospitals to provide secondary care at appropriate levels and reduce reliance on medical referrals abroad*”. Thus, although there is no pre-specified health sector funding level, the intent of Compact II is clearly that health should be supported at state and national levels to the degree necessary to provide such services effectively, efficiently and efficaciously.

14 The amended Compact requires detailed and specified budgeting, planning and reporting requirements attached to the yearly grant to FSM. It also requires: clear performance indicators (to measure program progress and success towards “economic development and budgetary self-reliance” goals), long-term rolling development plans with annual operational plans tied to annual performance and budgets, annual program and fiscal audits, annual review and consultation with the U.S. This consultation will focus on program and performance objectives for the upcoming year, program and sector evaluations, quarterly trust fund reports and other types of reports and reviews, as specified in the amended Compact grant documents. Unsatisfactory program and project performance, financial malfunctioning or irresponsibility, and/or failure to follow the jointly-agreed program implementation, reporting and fiscal requirements can precipitate funding and disbursement restrictions, funds can be withheld from projects and programs, or the grant assistance provided in Compact II can be suspended.

d U.S. Federal (Categorical) Program Grants to Health

15 Funding and program emphasis from U.S. Federal Programs and bilateral, multilateral and non-governmental donors are predicted to remain relatively unchanged or slightly decreased from 1999/2000 levels, with the exception of loan funding from the ADB to support primary health care development. The ADB project, known as the Basic Social Services Project (BSSP), will provide approximately \$6.2 million to health and education, of which health will likely receive approximately \$2 million. Each state, however, will determine how much of their loan will be applied to health or education within their state. At this time, Chuuk state has not agreed to participate in the program, nor has Yap. Only Pohnpei, Kosrae and the FSM DHESA have chosen to participate in the

BSSP. If Yap and Chuuk do not participate, it is likely that additional project monies that would have gone to those states will be offered to the participating departments, according to usual FSM allocation protocols.

e *User Fees and Cost Recovery in Hospitals and Dispensaries*

16 The health departments of all FSM states have attempted various cost-recovery strategies, including user fees, wage controls and generic drug purchases, with varying levels of success. Typically outpatient fees run from \$2.00 (Yap) to \$5.00 (Pohnpei). Kosrae and Chuuk charge for medicines, but not for outpatient visits. Most states officially charge for inpatient services and for x-ray and laboratory, but these services are also undercharged compared to their real costs, and fees for such services are poorly collected. Most states do not charge for public health visits, whether at the hospital or the dispensaries. Primary health care visits at dispensaries are also free, whether or not a physician sees the patient. Thus, in all states of the FSM, user fees for health services are theoretically charged but rarely actually collected (even in part).

17 Under Compact user fees were approved in all state hospitals, but were collected sporadically. In Chuuk, user fees are collected, but must be returned to the state treasury so collections remain minimal. Other states have limitations on the amount of the user fees collected that can be used by health department or on what the fees can be used for. Where limits are applied as to the maximum amount the health department can receive from fee collection, often fees are collected at that level only. It is not surprising that collection of such fees is irregular. Under the Compact II agreements, user fees are to be kept and used with the health sector. This may provide increased motivation for the improved collection of fees. However, states can still specify how and where in the health sector such funds can be used. Allocated wisely, user fees can be a significant resource to state health departments.

f *What has been achieved since 2nd Economic Summit*

18 The 2nd FSM Economic Summit (1999) proposed a series of health sector policies and related strategies, programs and activities that would guide the direction and scope of health services delivery in the period of economic uncertainty in the years leading up to the end of the Compact. The policies were: a) prioritizing of health care services; b) developing sustainable health care financing; c) developing a comprehensive human resources for health work plan; and d) supporting appropriate infrastructure development, including both health facilities and health systems development. These policies were meant to provide a guideline for national and state health services with which to plan and implement health services. Despite clearly stated strategies, there does not seem to have been much headway in the achievement of the goals. The lack of achievement may be attributed to poor management and a lack of adequate or appropri-

ate targeting of funds. However, there were two significant meetings held that involved key staff from the DOH of the DHESA and the DHS from each state, i) the FSM Secretary DHESA and Directors DHS and key stakeholders were involved in the *Health Strategy and Policy Meeting* in 2003 that identified key health status improvement outcomes (‘strategic focus’) for the next 5 years and the Drug Policy Meeting in 2003 that endorsed the National Drug Policy.

g The 3rd Economic Summit

19 One of the requirements of Compact II (2003-2023) is that FSM submits a national strategic development plan (SDP) to the U.S. 3 months after Compact II becomes effective (e.g. February 2004). FSM also agreed upon health sector outcomes to be achieved in the first five years of the Compact II (consultations among the FSM States directors of health, key staff from other FSM departments, and U.S. DOI technical staff). The Strategic Goals agreed were: to improve primary health care services accessible to the public; to improve secondary care services provided at the hospitals; and to have a sustainable health care financing mechanism. Specific outcome measures were endorsed and will also be reported on. The ADB approved a small scale technical assistance to review the health sector in FSM and prepare in consultation with key stakeholders the Health Strategic Development Plan (Rodgers et al, 2003) to inform discussion and debate at the 3rd Economic Summit (March 2004). During the Summit, the Health Sector Strategic Plan was accepted with minor changes. It was envisaged that the FSM national, state and municipal governments, would base their health sector funds allocation on the five accepted strategic foci (1) improve primary health care services; 2) improve secondary health care services; 3) prioritize health promotion and services for major health problems; 4) develop a sustainable health care financing mechanism; and 5) improve capacity and accountability systems).

h Health Insurance

20 Originally, the National Health Insurance Program of FSM (NIP) had two functions: 1) to provide additional funds to states to support and improve primary and secondary health care, and 2) to support limited overseas referrals. Support to the state health departments was through a capitation fee, paid periodically (supposedly monthly) and supposedly proportionate to the enrollment in each state. Additionally, it was intended to encourage the development of local private medical practice in the FSM by the re-imbusement of private medical services. Poor management and planning in the early years of the NIP led to massive over-expenditures for overseas referrals, and subsequently minimal and irregular capitation payments to the states. Initially there were few guidelines for out-of-state referrals, and people were often sent for minor or chronic conditions, along with multiple family members and caregivers, all at the expense of

the NIP. Guidelines were soon developed but political pressure was often applied to the state health departments and inappropriate referrals continued.

21 In 2000, there was considerable dissatisfaction with the NIP in the states. NIP management was unresponsive and opaque to queries as to priorities, costs and planning for health care. By 2002, the NIP had been successful at least in encouraging the development of private medical practices in Yap, Chuuk and Pohnpei. Unfortunately, it did this at the expense of the state health departments. Private physicians were paid fee-for-service by the NIP, while health departments still received minimal capitation payments. Even among private medical practitioners, there were frequent complaints that NIP did not pay in a timely manner, nor did they pay appropriately to their NIP-provider agreement.

22 In 2003, at the meeting of state health directors and DHESA senior staff in Chuuk, dissatisfaction with the NIP by the state health departments and DHESA was almost universal. The need for as large a risk pool as possible to support health services in the FSM had also become more widely understood, and it was clear that a risk pool approximating the adult (and working) population of the country was needed to support a financially viable health insurance program. Health directors stated there would be support to the NIP, only if reforms were undertaken by NIP and its managers to make it more transparent and responsive, and to focus increasing amounts of its collections to improving health care in the states. Some reforms to NIP were undertaken in 2003 and a change in the management of the NIP. Policy and oversight of the NIP was removed from the government and placed under a private board, appointed by the President of the FSM. It is expected that the changes in management will lead to increased transparency, responsiveness, and a focus on improving primary and secondary health care.

23 Considerable economic growth needs to occur to increase the number of those in employment and with medical insurance. The potential risk pool (or those formally employed and receiving salaries) is small by commercial standards (estimated at about 20,000 people maximum), and thus is very sensitive to variations in the economy. The rather high dependency and unemployment levels found in the 2000 census indicate that many people working within the formal sector are supporting many others and may not be able to afford health insurance. A downturn in the economy would further shrink this risk pool and thus the number of people able to pay health insurance premiums. It would be more sustainable to have a higher level of health care, with a greater variety of services and technologies, funded not through the government but through an insurance scheme and user fees is needed in the FSM.

i Funds from Multilateral, Bilateral Agencies and NGOs

24 Additional funds are received from WHO (\$20,000), UNICEF (\$60,000) and UNFPA (\$20,000) for specific health activities or commodities. UNFPA provides contraceptives to complement the MCH/FP program of DHHS, which provides no commodities. WHO provides technical assistance to problems areas, such as communicable diseases, health planning and laboratory, and cold chain commodities. Such technical assistance is provided through consultants, workshops and long term training abroad. UNICEF provides a broad range of assistance for women and children, including vitamin A supplements, oral rehydration solution, training in CRC, child prostitution. UNICEF has recently been working in Chuuk to try and improve the dispensary services, particularly to the outer islands. One of the key areas being focused on is training the health assistants to give immunization.

25 Australia's bilateral program to FSM (approximately USD1 million in 2003) has concentrated on education and training, through the provision of scholarships, and provided support to small health projects as well as providing health volunteers and medical specialist teams, disaster relief and a small grants scheme supporting community organizations. Australia has also provided a statistician to give technical assistance has been funded for a 2 year period in the national Department of Economic Affairs. Japan has provided funds for capital projects, such as hospital renovations, and for equipment. China has also periodically provided some ad hoc support in the health sector.

j ADB Basic Social Services Project (BSSP)

26 Communities will be heavily involved in planning and delivering health services (and education services) in FSM in a project for which ADB has approved an US\$8 million loan (total project cost of US\$11.7 million). The ADB loan will come from its concessional Asian Development Fund and is repayable over 32 years, including a grace period of eight years. The interest rate will be one percent per annum during the grace period and 1.5 percent per annum thereafter. The executing agency will be the DHESA and the project will run from 2004 to 2006. The BSSP is expected to provide more effective, accountable and cost-efficient services to poor households and vulnerable groups. The first phase of the project focuses on building up capacity and strengthening institutions at national and state levels, enabling the health department to initiate health sector reforms including extending the health insurance.

k Private Sector, Community and NGO Participation in Health

27 The presence of the private health sector consists of primary health clinics with their own pharmacies. The patients attending are mostly those who can afford to pay out of their own pockets or those enrolled in an insurance program.

The private health sector in FSM has shown considerable growth over the past few years. There are several local physicians in private practice in Pohnpei. One polyclinic employing multiple local physicians has been established, with a laboratory, x-ray and pharmaceutical capability. Additionally, they are reported to have some holding beds, which can be used to observe patients overnight. There are multiple pharmacies in Pohnpei as well, although most seem extremely poorly stocked. Chuuk now has a private medical clinic, which employs several overseas physicians, and there are several small pharmacies as well. Yap has one part-time physician. Kosrae is the only state at this time that does not have a physician in private practice.

28 The growth of private practice in FSM has been a mixed blessing for state health departments. Although they theoretically decrease the health department's patient load and burden, in fact the more serious cases are often referred to the hospital for admissions, x-rays, laboratory and medicines, which are supplied at the same low cost or no-cost basis as regular patients receive. Physicians in Pohnpei and Yap are allowed to admit patients to the hospital, in return for standing call periodically at the respective hospitals. This has generally worked well, despite some private physicians taking advantage of the situation and not showing up, or using the time to see private patients.

29 The biggest problem for the state health departments is that the FSM National Insurance Program (NIP) treats patients seen by private physicians differently from those seen by hospital physicians. Private physicians are paid a fee-for-service for each patient, with the fee closely representing the physicians time and costs. The health department is paid on a capitation basis, and with heavy utilization receives nowhere near its cost basis. Additionally, it appears that NIP pays health department capitation fees last, after paying out-of-country referral fees and in-country private physicians' fees. Consequently, capitation payments vary widely and are difficult to predict or rely on. Since NIP payment policies are opaque, it is impossible for states to determine how much they should be receiving, versus how much they are receiving. This is one reason why the state health departments are not big supporters of the NIP.

30 Although every state in the FSM has a number of NGOs and community groups, there are very few local NGOs and community groups that are involved extensively in health. The FSM Red Cross, which now has chapters in each of the FSM states, provides training in first aid, nutrition and home visits, as well as other health topics. The Micronesian Seminar, a pastoral institute of the Catholic Church in Micronesia, acts as a sort of a social think tank for social and cultural issues, has an extensive library and produces articles and brochures on key social and health issues. It has been important in raising awareness of health and education issues over the last 20 years. Numerous religiously affiliated and

community groups provide intermittent fundraisers for various purposes including health, but few of them are actively involved in health.

31 There are some international NGOs working in FSM. The Pacific Missionary Aviation (PMA) has a base in FSM and provides air services to the outer islands of Yap and Chuuk, including free medical evacuations and cut-rate fees for medical personal on official travel. They also provide air services to the OI of Pohnpei and a commercial service from Pohnpei to Chuuk. Numerous groups and individuals some with religious affiliations, provide specialty medical care on a regular basis in the various states. This includes large and organized groups, like Canvasback Missions, which send regular medical and dental teams to the OI and rural areas of FSM, and donor-supported eye teams from Japan and Australia.

7.1.2 Rationale For A Strong Focus On Improving People's Health

32 The 2001 Report of the Commission on Macro-Economics and Health: Investing in Health for Economic Development provides a strong rationale for maintaining a focus on improving people's health as an important determinant of development in low-income countries. Disease is a drain on society and health investment can accelerate economic growth. The poor share a disproportionate burden of avoidable deaths and suffering and are more susceptible to diseases because of malnutrition, inadequate sanitation, lack of clean water and are less likely to have access to medical care. Poverty incidence is estimated to be high with approximately 40% of the FSM population falling below the national poverty line. Basic social services are failing to reach the poorer strata of society, the OI and rural areas and FSM has poor health indicators. In addition, FSM is a tourist destination and access to health services in the case of unexpected illness or accident is seen as an important criteria to possible tourists.

a Poverty and Health

33 Poverty incidence is estimated to be high with approximately 40% of the FSM population falling below the national poverty line. Basic social services are failing to reach the poorer strata of society, the OI and rural areas and FSM has poor health indicators. Improvements in the health of the population of FSM will bring considerable economic gain, particularly to the poor. To improve health, there needs to be multi-sectoral action, with the community taking more responsibility for its own health. In the long term, increased community participation should lead to better understanding of individual's role in health, ultimately lead to healthier lifestyles, less disease burden and a greater potential for productive labor and economic return. As health or ill health is also the result of socioeconomic circumstances, there is a need to increase employment opportunities, particularly in rural areas, by private sector investment in agriculture, fisheries, industries, handicrafts, business or tourism.

b Women and Health

34 Women's health is affected by biological, social, economic and cultural factors. In developing countries they spend a significant amount of time bearing and rearing children but have limited access to family resources and are generally more financially constrained when they become ill. It is important to focus on women as they have special needs throughout their lives (high burden of reproductive health, gender based violence and discrimination within the household in the allocation of resources for nutrition and health care) and women also have the primary responsibility for ensuring medical care for their children. Strengthening health services targeting women and children will reduce the constraints on the time of the women, improve their health and help correct gender-based inequities.

c Progress towards Millenium Development Goals

35 Improvement in health is directly related to achievement of the Millennium Development Goals (MDGs), set by 147 heads of State and Government in 2000 for reducing poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women by 2015. The Millennium Declaration led to the formulation of goals, numerical targets and quantifiable indicators - the MDGs where efforts are on achieving significant and measurable improvements in people's lives. FSM has shown little progress towards meeting the MDGs by 2015 - poverty incidence is estimated to be high, basic social services fail to reach the poorer strata of society, the outer islands and rural areas and FSM has poor health indicators. FSM does not seem to be clear about the role of MDGs within the health development agenda, especially at the program and state levels. There is a need to have mechanisms to track progress on goals and targets and to improve data quality and data collection

7.1.3 Health Consumers In The FSM

a Demographic data

36 Approximately 97% of the population of the FSM are Pacific Islanders, mostly Micronesians of various ethnic derivations, with a very small number of Polynesians. The remaining 3% are mostly expatriate residents from Asian nations, the United States and Japan. Each of the four states exhibits its own culture and traditions, but common cultural and economic bonds exist that reach back to antiquity. Although more than seven languages are spoken in Micronesia, English is the official language of government and commerce. The 2000 Census showed a total population of 107,008 with a fairly even distribution of male and female. The population is young with a median age of 18.9 with 40% of the total population below 15 years of age.

Table 3: Health Indicators for Micronesian Jurisdictions 2002

	Yap	Kosrae	Chuuk	Pohnpei
Population	11,000	7,300	53,000	34,000
% of population less than 15 years of age	41%	43%	46%	44%
Birth rate	2.9%	2.7%	3.5%	3.3%
Total fertility rate	3.7	4.2	5.6	4.3
Infant Mortality rate	3.9%	4.9%	5.3%	4.2%
Child mortality rate	1.2%	1.7%	1.8%	1.3%
Life Expectancy at birth	67	65	64	66.5
% of 2 years old (1997) fully immunized	95%	95%	65%	72%
% of 2 years old (1999) fully immunized	80%	95%	60%	60%

Note: Figures taken from FSM 2000 census

37 Population growth has decreased to less than 1 per cent in 2000 from 1.9 per cent in 1997. While crude birth rate and fertility rates are still high compared with developed countries, the number of children born per woman has decreased. The total fertility rate was 4.5 per cent in 2001 but varied considerably between states. In 1997 it was 4.7 and in 1973, it was 8.2. The fertility decline has happened in the absence of economic development seen in other countries with similar declines. The decline may be attributed both to the high infant mortality rate of 21.8 (2001) per 1 000 live births, the emigration, family planning, education of parents, employment of women, the new retirement program and job opportunities in the US where many men and especially women move to.

38 High population growth adversely affects health indicators such as infant and maternal mortality, and also offsets economic growth. Prenatal care is slowly improving in the state centers and is being expanded to remote areas. Death and illness due to diarrhoea and acute respiratory infections still form a large proportion of infant mortality and morbidity. The crude birth rate in 2001 was 23.0 as compared to the 22.3 (2000), 20.9 (1999) and in 1997 was 23.5 per 1 000 live births. The rates of both crude birth and the fertility rates continue at the same levels, which reflects a need for increased family planning coverage. Life expectancy at birth for both male and female was 67.2 while male alone was 66.6 and female was 67.7. Thus, the census (2000) confirmed that there has been little change in the demographic indicators for the FSM since the mid 1990s. The population continues to grow, increasing numbers of individuals and families continue to migrate and the state birthrates are stable but high. The dependency ratio remains close to 50%, and the fertility rates, infant and child

Table 4.a Leading Cause of Hospital Admissions, 1999
(Rate is per 100,000)

	#	Rate
Pregnancy related conditions and delivery	2093	2886.30
Respiratory problems	1040	1434.60
Endocrine and metabolic related conditions	830	1144.50
Infections and parasites	477	657.70
Genitourinary diseases	439	605.30
Digestive related conditions	382	526.70
Circulatory problems	380	524.00
Skin problems	373	514.30
Injury and poisoning related conditions	289	398.50

Table 4b Mortality Rates by Disease Category, 2002
(Rate is per 100,000)

	#	Rate
Diseases of the circulatory system	84	78.5
Endocrine/metabolic disease/condition	51	47.7
Diseases of digestive system	50	46.7
Diseases of respiratory system	47	43.2
Cancers (all forms)	46	43.0
Perinatal disease/conditions	15	14.0
Genitourinary	13	12.1
Disease of the nervous system	8	7.5
Diseases due to injury/poisoning	2	1.0

morality rates and life expectancy at birth all vary by state, but remain approximately unchanged when pooled for small numbers from the late 1990s.

b Disease Trends

39 The major causes of morbidity and mortality (refer to Table 4) were non-communicable diseases such as heart disease, diabetes, hypertension, obesity, chronic lung disease, cancer, prematurity, complications of pregnancy and labour, and malnutrition. However, respiratory diseases, skin diseases, gastrointestinal diseases, otitis media and other infectious diseases—combined—are the leading causes of the hospital admissions. NCDs have replaced infectious and immunizable diseases as leading causes of morbidity and mortality among adults and even children in FSM. NCDs are chronic in nature and related to lifestyle choices, and as such are preventable. Preventable cancer morbidity and mortality likewise continue to grow. Cervical cancer is now the leading cancer in FSM. Head and neck cancer, once only common on Yap, has increased in the

other states due to the spread of betel nut chewing to the other island states of FSM. Liver cancer, associated with Hepatitis B infection, is gradually falling, due to widespread Hepatitis B vaccination in newborns, children and health workers but is still common over age 40. All of these cancers may be considered diseases of lifestyle; all could be prevented.

7.1.4 Delivery Of Health Services

a Primary Health Care

40 There is an urgent need to focus attention on improvements in the quality of primary health services as this is the base of health care in FSM. The primary health care (PHC) system (which includes the dispensary/health center system and the public health team (PH team)) is responsible for delivering primary, preventive and public health services to both the rural and urban populace in FSM. In recent years, primary, preventive and public health care services have been deteriorating throughout FSM. A field mobile PH team from the public health division at the DHS usually provides public health services to municipalities and communities using the dispensaries and HA's as the nexus of activities. These teams are supposed to visit each dispensary on a regular schedule, but have seldom done so in the last few years because of funding constraints, poor management and supervision and lack of supplies. Appropriate investments and administrative and support practices need to be put in place so that the quality of the health services is delivered at appropriate state, national and international standards.

41 Super Dispensaries, thought to be the way of the future, have not proven to be successful. These super dispensaries were to be staffed by a physician, nurses and other health personnel, have a pharmacy, a small laboratory and possibly an X-ray unit, as well as a means of communicating with the DHS and the main hospital to deal with most emergencies in the field. The plan was to utilize these super dispensaries as permanent outreach sites for immunization and other public health programs. There has been limited support in most states for these more expensive dispensaries, despite their potential to improve delivery of health services. Additionally, severe budget cuts in the health sector, implemented by most states since CY 2000, have landed directly on PHC. Most states have chosen to support hospital services rather than PHC, despite increased utilization and costs to the hospital. Thus, super dispensaries were converted to regular dispensaries on Pohnpei, and never really implemented on the Chuuk OI. Yap has implemented one super dispensary. This dispensary has additional staff and equipment, although no x-ray services and only a part-time physician. Delivery of PHC and public health (PH) services is hindered by a lack of medicines, supplies, equipment, inadequate management, supervision and training

and lack of visits by the PH field teams. This has led to increasing dissatisfaction among patients as to the quality and quantity of services.

42 The secondary health care system (services delivered at the hospital clinic and inpatient services in urban state centers), is receiving approximately 70% of patients that could have been handled at the PHC level or who have received improper, insufficient and/or inadequate PHC services at the dispensaries (usually because the dispensaries do not have adequate drugs or medical supplies and equipment). Patients are opting to go straight to the hospital rather than go to the dispensary and receive a prescription that will need to be taken to the hospital to be filled anyway. Given the limited financial and institutional resources available at state hospitals, they cannot effectively deliver such services and also secondary and tertiary health services as well. This failure at the PHC entry point to health services adversely affects the efficiency and effectiveness of health care delivery at all levels. This in turn has led to increased demand for out-of-country referrals by patients and the cost of referrals has further compounded funding deficiencies. Improving the quality of PHC services is an essential starting point for improving the quality of health services in FSM.

b Delivery of Primary Health Care in FSM States

43 PHC systems vary considerably between states, though, in all states, it is evident that there has been a deterioration of the PHC system since the step down of funds for the first Compact. Travel for support, monitoring and supervision of dispensaries, as well as for the PH team have been minimized. Medicines are routinely in short supply at dispensaries (and hospitals), morale is low, and there has been a general loss of confidence in the dispensaries by the communities they serve.

44 **Yap:** Dispensaries on the main island of Yap remain closed, although there has been a concerted effort to re-open two of them. Consequently, there has been a steady increase in the number of patients seen at the hospital and in the severity of their diseases. Clearly minor ailments, easily treated at the PHC level are progressing untreated into major illness, requiring more intensive care and hospitalization. The 16 dispensaries on the outer islands (OI) of Yap have fared somewhat better despite support, monitoring and supervision trips being decreased. Radiotelephones are available but some medicines have been in short supply. One super dispensary is functional, but only partially equipped and staffed. The relatively effective function of the PHC dispensary system in the OI of Yap reflects the strong community involvement and political will of the OI groups. A lack of female health assistants remains a problem in some communities.

45 **Chuuk:** The PHC situation in Chuuk appears to have worsened recently. There are a total of 81 dispensaries in Chuuk. In Chuuk lagoon, many dispensa-

ries are not functional, and Health assistants are not always available. Land disputes remain common, dispensaries have poorly trained staff, and are chronically short of drugs and supplies. There is virtually no supervision, monitoring or support visits to dispensaries. PHC is under-staffed and under-supported at the health department level. Morale is poor at all levels, and community support is minimal to non-existent. Utilization rates at the hospital, for both outpatient and inpatient services, are higher than when PHC was more functional, and anecdotal evidence suggests that like Yap and Pohnpei, more patients are coming to the hospital much sicker than before, with diseases that could have been treated earlier and more fully at the dispensary level. The situation in the OI of Chuuk is somewhat better, where greater community and chiefly involvement have generally kept the HA working and the dispensaries open, and without land disputes. Drugs and supplies remain a serious problem however, and there is little supervision, support and monitoring of the OI dispensaries by the health department. A lack of female health assistants remains a problem in some communities.

46 UNICEF has recently been working in Chuuk to try and improve the dispensary services, particularly to the OIs. 10% (9) of the total dispensaries were included in the UNICEF project. UNICEF worked in dispensaries from Lagoon islands (which can be reached fairly easily from the main island of Weno by speedboat) and the OIs (far more difficult to reach and accessibility is mostly by ship). Meetings with community leaders were held in some islands and health committees formed. Training at the site (in the dispensary) was provided to all health assistants and deficiencies identified for further training. All health assistants (in smaller groups) were brought to Weno and training provided for two to three weeks and follow-up visits to all dispensaries were made to check on the work of health assistants. One of the key areas being focussed on is training the health assistants to give immunization as the outreach teams are only going to the islands on an infrequent basis. The immunization coverage in all these dispensaries has markedly improved over the last year. In 2003, another six dispensaries have been included in the project and the same types of activities are being carried out.

47 **Pohnpei:** There are a total of 9 dispensaries and 2 aidposts in Pohnpei. In 1999, the Pohnpei health department planned to convert all rural dispensaries on Pohnpei to super dispensaries, staffed by nurses, physicians and sanitarians, and supported by daily messenger service from the hospital for laboratory services and medicine. With continuing budget restrictions and political concerns, the health department withdraw all physicians and nurses from the dispensaries and rationed drugs available to rural dispensaries. At the present time, dispensaries are staffed by health assistants, little or no medicines are available, and sick patients generally by-pass the dispensary to go directly to the emergency room or hospital. Community participation, which was high with the initial establish-

ment of the super-dispensaries, health assistants withered. Utilization rates at the hospital for both outpatient and inpatient services are higher than in the PHC days, and antidotal evidence suggests that like Yap and Chuuk, more patients are coming to the hospital much sicker than before with diseases that could have been treated initially at the dispensary level. The OI of Pohnpei have fared somewhat better. Almost every dispensary health assistants a radiotelephone, so medical consultations can be undertaken and some support, monitoring and supervision functions undertaken. Drugs and supplies have generally been available with only minor shortages. There is generally strong community and political support for the dispensary and health assistants in the OI of Pohnpei.

48 **Kosrae:** Kosrae does not have OI, and most of the population live within two hours travel from the hospital. Nevertheless, not all Kosraeans have disposable income or connections to be able to reach the hospital or its clinics. Consequently, the Kosrae health department has established 4 PHC/public health satellite clinics, located at municipal buildings in the various villages. A physician and various nurses from the hospital staff these clinics. The clinics are not open every day in every village, but are open on a regular schedule. Outreach to the village and surrounding areas are the responsibility of the team holding clinic. In practice, this approach seems to be working fairly well. Clinics occasionally are not held on time, or are cancelled. Outreach may miss remote clients. Drugs and supplies reflect availability of such items in the hospital pharmacy. Given these circumstances, Kosrae usually has the best health statistics in the FSM.

c Prevention/Public Health

49 Public and preventive health services in the FSM, with the exception of environmental health, are usually delivered by vertical programs funded categorically by the U.S. DHHS. These programs are administered by the states, but funded by grants to the national FSM DOH, which monitors the programs to some extent and supplies technical assistance to the states. It also provides regular reports to the DHHS, as to the progress of each program. Each state health department also provides counterpart funds for the most public and preventive health programs. The reporting requirements for these grants are extensive and separate, and often interfere with consolidated management and implementation of these programs.

50 At the present time, the following public health programs are categorically funded by the DHHS: a) immunizations, b) maternal and child health (MCH), including Children with Special Health Needs, and School Health, c) family planning (FP), d) sexually transmitted diseases (STD), e) Human Immune Virus Infection/Acquired Immune Deficiency Syndrome (HIV/AIDS), f) Tuberculosis (TB), g) substance abuse and mental health (SAMH), and h) preventive health – programs focused on lifestyle diseases, such as obesity, diabetes, hypertension and cardio and cerebral vascular diseases representing most non-communicable

diseases (NCD). DHHS also provides common vaccines to FSM yearly, sufficient for its needs. Most of the funding received from DHHS in categorical grants is for MCH, Immunization, FP and SAMH, and for personnel for the programs. Very little funds are received for NCD, the leading health problem and killer in FSM and very little funding is allocated by the state or the state health department for prevention of NCDs.

51 Lifestyle diseases, resulting from poor nutrition, risky behaviors and substance abuse, are among the leading causes of death in the FSM and are increasing (refer to Table 5). An excess of calories - in a diet deficient in proper vitamins, minerals, protein and certain fats - leads to obesity, which in turn precipitates diabetes and cardiovascular diseases and ultimately hypertension, heart disease and stroke. Smoking leads to chronic lung disease and to various cancers, including lung cancer. Betel nut chewing, either alone or in combination with tobacco, marijuana, and various solvents, including alcohol, leads to increased head and neck cancer. Promiscuous sexual behaviors lead to the spread of HPV and HBV, causing an increase in cervical cancer (HPV) and liver cancer (HBV), as well as HIV/AIDS and other STDs. The percentage of obesity is higher at all age groups than in the U.S., as is the percentage with hypertension. Mid-life mortality is rising and has been noted to account for almost 1/3 of total mortality in some states, again a rate much higher than in the U.S.

52 Despite the seriousness of lifestyle diseases and the high rate of associated morbidity and mortality, funding for NCDs in the preventive health programs from DHHS and the FSM states is quite small. Consequently, there is insufficient support and training for prevention, health promotion, control and treatment of NCD, and not enough appropriately trained staff, especially health educators. Prevention of NCDs, as well as control and treatment of them, needs to be made a national, state, community and individual priority. At the state and national level, sufficient funding is needed for program support for prevention and health promotion activities. This means support of trained health educators, funds for prevention and health promotion programs through all available media systems, and for support for community initiatives. It means interagency and interdepartmental cooperation, as well as partnerships with the private sector. NCDs are the major danger to the health of FSM, and it needs the full focus of the people of FSM, including government, the private sector and the public. Effective prevention strategies will eventually lead to a decrease in lifestyle diseases with concomitant marked savings to the health sector.

Table 5: Major Causes of Death, 2002

		Yap	Kosrae	Chuuk	Pohnpei	Total
Adults	Diabetes	6	8	19	20	53
	Hypertension/Heart Disease	0	11	42	37	90
	Stroke	3	2	19	14	27
	Chronic Lung Disease	7	0	16	9	32
	Cancer	18	1	16	24	51
	Suicide/Homicide	4	1	3	1	9
	Accidents/Injuries	2	5	27	7	41
Children <15 years	Prematurity	0	2	2	0	4
	Pneumonia/Other infections	0	0	4	4	8
	Malnutrition	0	0	3	0	3
	Accidents/Injuries	0	0	22	2	24

Source: Amato Elymore (DOH statistician)

53 Categorical Grants from the DHHS

54 The categorical programs supported by DHHS grants pay for staff at both the national and state levels. At the national level, the programs are under the Secretary of DHESA. The day-to-day administration and management of the programs is under the direct control of the national coordinator for each program, who works closely with and provides oversight and technical assistance to the program coordinators at the state level. In each of the four states, public health programs are administered under the direction of the State Director of Health Services through the Division of Public Health Services (in some states called the primary health care division). Public health services to date are provided at no cost to clients, although several states have discussed charging fees for certain public health programs.

55 Public health teams in all states report a lack of sufficient funds for travel, supplies and medicine, as well as insufficient personnel, dissatisfaction with multi-tasking, and lack of support from senior state health officials. Morale is reportedly low and absenteeism is high among the public health staff. These complaints are basically unchanged from 1999, although may have worsened to a degree since that time. Despite complaints of a lack of supplies and medicines, the PH programs are insulated from some of the budget-cutting associated with the PHC and hospital programs. It is clear, nevertheless, that state funding to PH programs for travel, supplies, medicines and personnel has decreased and that it is more difficult than ever to deliver such programs to remote areas and OI. Public health programs seem to lack effective management, supervision and

planning, more at the state than national level but also suffer from decrease operational funding.

i Maternal and Child Health

56 The MCH Programs provide primary care and preventive services to pregnant women, mothers and infants; preventive and primary care for children; and services for children with special health care needs. Pregnant women are provided with prenatal care services where they are theoretically screened for pregnancy risks such as GC, syphilis, HIV/AIDS, hepatitis Clamydia (occasionally), cervical cancer, and anemia, and their tetanus booster is updated. Nutrition education and dental services are also provided. Family planning services are provided to women who deliver in the hospital and attend post-partum clinics. Well-baby care is provided to infants in Public Health clinics which includes growth monitoring; developmental screening; immunizations; nutrition education; and counseling. Children with special needs (CSN) are seen at a weekly CSN Clinic, staffed by a CSN physician.

57 Minimal MCH (and FP) services are provided by the health assistants at the dispensaries, due to lack of supplies, training and/or supervision, as well as cultural problems related to the use of male health workers for female-related health conditions. Only about 45% of women in Chuuk deliver in the hospital and many that deliver outside the hospital do so without the assistance of a qualified mid-wife. Many deliver without prenatal assessment or care. Teenage pregnancy is noted to be on the rise, although pregnancies in other age groups are not. In 2002, Micronesia Seminar reported births to women under 19 years of age as a percentage of all births were 8% in Kosrae, 9% in Chuuk, 14% in Yap and 18% in Pohnpei.

58 Cervical cancer was the leading cause of cancer in 2002, as predicted in the Human Resource Study of 1999. It is now crucial that PAP smears be incorporated in all MCH programs and be offered to all women when they become sexually active, or at 18 years of age and every three years afterwards. Given that human papilloma virus (HPV) is so widespread in neighboring Pacific island countries, it is likely that this virus is also a major contributor to cervical cancer in FSM. Consequently, MCH programs should warn about transmission of the sexually transmitted disease, and encourage behaviors to interrupt transmission, including safe sex practices and the use of condoms.

ii Immunization

59 Island epidemiology is different from that of a large continental landmass as the populations of the islands of the FSM are too small to support the continuous circulation of many vaccine preventable diseases (VPD). Diseases such as pertussis and measles occur only as unpredictable intermittent outbreaks,

when they are imported from “off-island.” The FSM provides the following childhood immunizations in all four states: Diphtheria Pertussis Tetanus Vaccine (DPT), Oral Polio Vaccine (OPV), Measles Mumps and Rubella Vaccine (MMR), Haemophilus Influenza type B Vaccine (HIB), Hepatitis B Vaccine (HBV), Bacille Calmette Guerin (a Tuberculosis) Vaccine (BCG), Pneumococcal vaccine is also provided to adults 55 years of age and older. VPDs such as diphtheria, tetanus, polio, measles and others, can be prevented by a relatively cheap series of vaccinations costing perhaps several hundred dollars for complete or long lasting immunity. These diseases appear to be under reasonable control with high rates of vaccination and immunization in most states. The 2003 immunization coverage for 2 year olds was 74%, an increase on the 2001 rate of 63% but less than the 81% in 2000, and an improvement on the 61% reported in 1997. The 2003 immunization rates for 2 year olds vary by state and coverage rates are reported to be approximately 91% in Kosrae, 89% in Yap, 76% in Pohnpei and 68% in Chuuk (refer to Table 6). Immunization rates for school age children is even higher (refer to Table 7). The VPD that is endemic and causes the most morbidity and mortality in the FSM is Hepatitis B. In the 1980s, studies found that 30%-60% of the FSM population had been infected with Hepatitis B and 10%-30% were chronic carriers. Since 1989, Hepatitis B vaccination has been part of the routine childhood immunization schedules.

60 Budget limitations, cancelled voyages and inclement weather and staff scheduling conflicts have reduced some visits, especially on islands or villages remote from the state hospital, to below the minimum needed to complete the primary immunization. Thus, immunization series are reasonably complete near

Table 6: Immunization Coverage for Two-Year-Olds in FSM on children born in 2000, March 2003

Two-Year-Old Cohort	Chuuk	Pohnpei	Kosrae	Yap	FSM
Denominator	1422	1031	211	274	2938
Completed DPT3	90%	91%	99%	96%	92%
Completed DPT4	68%	77%	91%	87%	75%
Completed OPV3	84%	90%	99%	96%	88%
Completed MMR1	90%	91%	94%	97%	91%
Completed MMR2	52%	75%	79%	98%	66%
Completed HBV3	85%	92%	97%	95%	89%
Completed HiB1	97%	96%	97%	100%	98%
Completed BCG *	63%	62%	85%	NA	64%
Completed DPT3, OPV3, HBV3, MMR1,	84%	88%	93%	95%	87%
Completed DPT4, OPV3, HBV3, MMR1	68%	76%	91%	89%	74%

Table 7: Schools Surveys: Immunization Coverage for First Grade Students in FSM, 2002 Enrollment

First Grade Cohort	Chuuk	Pohnpei	Kosrae	Yap	FSM
Denominator	1375	1147	125	299	2946
Completed DPT3	86%	91%	99%	100%	90%
Completed DPT4	79%	86%	98%	100%	85%
Completed OPV3	89%	91%	99%	100%	92%
Completed MMR1	99%	90%	100%	100%	96%
Completed MMR2	80%	84%	96%	99%	84%
Completed HBV3	91%	90%	98%	100%	92%
Completed HiB1	88%	NA	99%	100%	91%
Completed BCG	NA	NA	52%	NA	NA
Completed DPT3, OPV3, HBV3, MMR1,	86%	89%	98%	100%	89%
Completed DPT4, OPV3, HBV3, MMR1	79%	85%	98%	100%	84%

the various state capitals and have improved significantly over the last few years, although in the OI, there are still children missing out on immunization and morbidity and mortality can result from vaccine preventable diseases. Immunization is one of the most successful and popular programs offered by the PH team. Several states have been relatively successful in training MCH and immunization staff in data compilation and analysis; with improved travel funding more complete coverage and reporting should be possible in the remote islands and villages of these states:

61 **Pohnpei:** Immunization rates are lower in Pohnpei than in other states (except Chuuk). The OI of Pohnpei usually have good immunization rates, while it is in the rural areas that immunizations are missed. This appears to be due to two factors: a lack of penetration to the most remote areas and a lack of community understanding regarding vaccinations and lack of community support.

62 **Kosrae :** Kosrae has excellent immunization rates, by any standards.

63 **Yap:** Immunizations rates in Yap are better than many U.S. states.

64 **Chuuk:** Immunizations rates in Chuuk are consistently lower than the other states. UNICEF has recently been working in Chuuk and trained the health assistants to give immunization as the outreach teams are only going to the islands on an infrequent basis and immunization coverage has improved.

65 Maintaining the cold chain at a clinic site on a remote island without electricity, which can only be reached by a boat, is also challenging. In 2003, ten gas powered vaccine refrigerators were delivered to Chuuk. Training programmes on VPDs, vaccine safety and monitoring and cold chain system has

also been carried out in Pohnpei and Chuuk. Cold chain equipments have been ordered based on the recommendations of the UNICEF cold chain consultant for all the four states and training on cold chain system and maintenance and operation was undertaken by UNICEF. More gas operated refrigerators are being purchased by the National Immunization Program through WHO/UNICEF with JICA funding.

66 The use of public education campaigns to increase and maintain awareness of the importance of immunizations is desperately needed for the entire population, including the development of education materials in local languages. Targeted campaigns are also needed in low coverage areas, especially in the islands of Chuuk Lagoon. Missed opportunities continue to be a problem and the immunization staff need to be encouraged to immunize every child fully at every encounter. Training activities are planned that will place heavy emphasis on this issue. The 2004 DHHS grant budget application is for \$753,924 in financial support and \$1,565,865 for direct assistance (vaccines)

iii Family planning

67 The FSM FP program focuses on the health issues facing FSM women of childbearing age (15-44 years), especially teenagers. It concentrates on the following objectives: (a) to increase awareness regarding population problems; (b) to make family planning methods readily available to all and assure that they are supplied by competent health personnel; (c) to increase retention rates of family planning users; and (d) to improve the health status of mothers and children through health education, better nutrition and proper services and medical care delivery. Contraceptive prevalence nation-wide remains low, ranging between 25-35% using only modern long-term methods, and 30-50% using all methods. Reliable contraceptives are readily available only in the urban centers of most states and are difficult to access for teens due to confidentiality and privacy issues. It is generally agreed that there is an unmet demand for increased contraception in most states and that most women would prefer to have fewer children.

68 Effective contraception is not being widely delivered in rural areas and the OI due to lack of sufficient funds for travel, supplies and medicines and lack of training of health assistants in family planning technologies, although this situation appears qualitatively to have improved. Custom and tradition in the male to female relationship in some areas continues to block dissemination and use of contraception. Also, in almost all areas, given the "small town" atmosphere and inquisitiveness, it is highly unlikely that unmarried or teens truly can access such technologies in a confidential manner. With the recent discovery that cervical cancer is a leading cause of cancer in the FSM, it is imperative that FP, like MCH, concentrates on increased PAP smears for women when they become sexually active and to encourage safe sex practices.

iv STD and HIV/AIDS

69 The STD and HIV/AIDS program in FSM is small and minimally funded. The focus of the program includes surveillance and health education. Most state hospitals are not able to perform STD testing, especially the ones requiring complicated and expensive testing kits. Medical officers and nurses indicate that STDs are more common than reported in most states and that they are both under-reported and under-treated. Teens and young adults are a particularly difficult group to reach for prevention and treatment activities as confidentiality and privacy is often lacking in many clinic settings.

70 Recent reports underestimate the prevalence of such STDs, as well as of the HPV, as capability for diagnosis of such diseases is available only at state hospitals and is often expensive and requires complicated testing procedures. The relatively low levels of sexually transmitted diseases such as gonorrhea (10%), Chlamydia (18%), and syphilis (no cases) are mostly documented from prenatal visits in one state and are considered to be totally inaccurate. Many health providers in several states recall recent cases of syphilis and one of the medical staff at a college reported that many young people were reporting with symptoms of syphilis but that they would not go to the hospitals for privacy reasons. The true prevalence of HIV/AIDS is also not known. AIDS is diagnosed clinically based on presenting signs and symptoms (usually people presenting at inpatient clinics already have full blown aids). Between 1999 and 2002, there was a total of 25 cases HIV/AIDS in FSM. Most of the new cases were from Chuuk. For example, in Chuuk alone there are 22 HIV cases, of which 9 have been confirmed by Western-Blot, 2 have moved off island, 8 have died and 3 are waiting confirmation. This may be due to the high degree of movement of the Chuuk population to Guam and other overseas destinations. Given the very high rate of other STDs and the inadequate diagnosis and treatment capabilities in most states, the establishment and spread of HIV in some populations of the FSM is a real possibility.

71 It is suggested that the increase in the STD rate is due to the shift in the economy from subsistence living to wage earning, coupled with urban drift, and associated changes in lifestyles, behavior, values and beliefs, has created disruption to traditional control of island's societal norms and family unity. Urbanization also brings mental stress, opportunity for substance abuse and sexual contacts often with multiple partners.

v Tuberculosis and Leprosy

72 Tuberculosis and leprosy are still pervasive throughout the FSM. Tuberculosis has been a major cause of morbidity and mortality in the past in the FSM. While the mass campaign eight years ago helped in raising public awareness about the seriousness and deadliness of these two diseases, the challenge still

remains in diagnosing new cases and completing their treatment. In recent years, however, public health programs have managed to lower rates to more manageable levels. Eradication or even adequate public health control, is far from established. From 1998-2000, 189 new cases of leprosy and 394 new cases of tuberculosis were registered. The prevalence rate of leprosy is among the highest in the Pacific (31.2 cases per 10,000 population).

vi Nutrition and Vitamin A Deficiency (VAD)

73 Economic development in FSM has come with westernization, primarily a transition from a subsistence to a moneyed economy. This transition has undermined the use, development and appreciation of local resources including food. Food and beverage items account for the top ten imports and in a country which fresh fish is plentiful, canned fish is one of those top ten. Imported food has become the standard diet despite the danger this poses to their economic survival (with a downturn in the economy, people will not be able to afford to eat) and for their health. Generally, the population lives on white rice, canned meat which has an excess of fat, canned fish and softdrinks. A large proportion of babies are also bottle feed in the first few months. This diet has lead to high rates of obesity, diabetes and hypertension and Vitamin A deficiency in islands where the supply of papayas and mangoes should make this a rarity.

74 VAD has been described in FSM, especially Chuuk, for many years but was verified in blood/ serum surveys in 1992. Subsequent surveys revealed high levels of VAD, using WHO standards, in all FSM states. Malnutrition attributed to a poorly nutritious modern diet replacing a healthier traditional diet, as well as anemia and heavy worm load, was also noted in children about the same time. Anemia was found to be common among pregnant women, newborns and infants. Consequently all states, in cooperation with the WHO and UNICEF, initiated a twice-a-year vitamin A supplementation program in conjunction with an anti-worming program for children aged 1-12. Iron and vitamin A supplementation is also now provided to pregnant women. A family food and nutrition project was also started, in an attempt to encourage consumption of more traditional diets. The VAD prevention and anti-worming program appears to be working well with coverage of children 1-12 years old at 85%. The addition of an anti-helminthic, usually mebendazole, has proved popular and supportive to the VAD prevention program, as the parents can actually see the worms being expelled (“the medicine actually does something”) and are eager to return for the next dose.

vii Substance Abuse and Mental Health (SAMH)

75 Ill health and dysfunction due to substance abuse and mental illness have increased in all states of the FSM over the last few decades. This trend appears to have accelerated over the past few years due to rapid societal change, family

disintegration, and economic downturn associated with more people pursuing fewer jobs and higher expectations. FSM has one of the highest suicides rates in the world, increasingly severe law and order problems, and widespread poly-drug abuse. Violence, suicide and drug abuse are problems in all states. Child abuse and neglect is also rising. Substance abuse is so widespread and pervasive throughout the FSM that mental health specialists refer to it as an “abusing society.” Head and neck cancers have risen, lung cancer is among the top five cancers, chronic obstructive lung disease is common and alcohol cirrhosis and alcohol related mental health problems are also a problem.

76 The extent of the problem is hard to document, with most state statistics poor or absent. SAMH and PHC workers agree that mental health and substance abuse problems have risen even since 1999. The most commonly abused substances in the FSM are tobacco, alcohol, betel nut, solvents and marijuana. Alcoholic beverages have been legally available for over 30 years and in this comparatively short period, social problems associated with alcohol abuse have developed. Alcohol consumption is high for males (less so for females) in all states, except perhaps Kosrae. The problems associated with alcohol abuse is domestic violence, fighting and general public disruption, crimes committed while drunk and drink driving associated injuries and accidents. Tobacco and alcohol abuse and their chronic disease sequelae – hypertension, heart disease, chronic lung disease and cancer - are major contributors to death and disability in the FSM. Abuse of betel nut, in conjunction with alcohol and tobacco often soaked with other solvents, is everywhere on Yap, and is rapidly spreading and reaching higher levels in the other states. Abuse of modern designer and prescription drugs occurs, but does not appear to be as common. Abuse of alcohol, marijuana and tobacco is common among professional and educated people, as well as the general population and gives a bad example to young adults.

77 Mental health problems are thought to be increasing as people are not coping with the dramatic cultural and societal changes occurring but prevalence estimates are unreliable due to the lack of data and professionals to diagnose mental illness. There are no true psychiatric wards or appropriate holding rooms available at the hospitals for violent patients. Jails now refuse to admit psychiatric patients for holding purposes only. In rural areas, it is reported in some states that severely mentally ill patients who are violent are often chained inside houses. In traditional terms, if a mentally ill patient causes damage to another, the family and clan is held responsible. In the 1999 Lowry study, it was noted that many of these cases are well controlled with psychotropic drugs, but without regular supplies of such drugs, the patient must frequently be restrained in this manner.

78 Little or no substance abuse or mental health services, including outreach, health education and preventive activities, are provided to rural areas and the OI,

except in the brief visits of SAMH personnel with the PH teams. Some states are experimenting with peer councilors for remote schools and communities to assist with SAMH problems. Most SAMH services are provided at the state urban centers and at the state hospital, and, despite its potential, little is provided by the PHC. There is general discussion about using PHC workers to dispense SAMH medicines after training, but this has not been seriously implemented in states.

d Secondary/tertiary care

79 The secondary health care system (services delivered at the hospital clinic and inpatient services in urban state centers), is receiving approximately 70% of patients that could have been handled at the PHC level. State hospitals have a limited budget and they can not effectively deliver primary as well as secondary and tertiary health services. The hospital based support network is also the backup services for PHC and public health. PHC services can not function without support. They must have facilities and personnel from which they obtain expert advice and medicines, supplies and equipment. PHC providers must be able to refer cases beyond their capabilities to those with higher qualifications and skills. If this second tier of health care is not working, then support to PHC and PH interventions in rural areas will not work. Medicines, supplies and equipment will be in short supply, no funds will be allocated for travel, no training will take place, and PHC services will disintegrate. Thus, second tier health services are also essential to implementation of PHC services.

80 There are a total of 4 government run hospitals in the FSM (Chuuk – 125 beds, Kosrae – 35 beds, Pohnpei – 116 beds, Yap – 50 beds) plus a 36 bed private hospital (Genesis) in Pohnpei. The state hospitals in all FSM states can potentially provide secondary, as well as low-level tertiary care (care provided by a specialist who requires a complex understanding of disease etiology, complex training and skills and often special equipment and support). Serious problems that limit the level of care that the hospital can provide include: a shortage in some medical professions, a lack of appropriate ongoing training and a lack of repair and maintenance even in some recently renovated hospitals. The major immediate barrier to service delivery in FSM hospitals is the lack of supplies, drugs and equipment. All states but Kosrae show some evidence of cutting PHC drugs and/or services to support hospital services. The increase in inpatient and outpatient utilization at hospitals has resulted in increased costs and overcrowding.

81 Quality assurance (QA) programs and approaches need to be incorporated in all health services. The use of inappropriate personnel or poor management practices have resulted in operational problems in important hospital units such as laboratories, x-ray units, pharmacies, housekeeping and supply units. In some hospitals, problems also occur in their clinical care divisions and public health

units. All hospitals are under utilized for their size and have a bed capacity in excess of their needs. All are inappropriately utilized as well and people are frequently admitted for social or other reasons rather than medical need. Most personnel are under utilized due to malfunctioning of the various support units. While standards for practice have been established for FSM nurses, with requirements for continuing and basic education, such standards have not been established for physicians, dentists or pharmacists, the allied health professions or for health assistants. For these and others, there are no basic requirements for education or for continuing training in their practices. There is also no formal requirement relating their training to their type of practice.

82 To provide efficient, best-practice secondary and tertiary care, it is necessary that the state hospitals: be well designed and maintained; that data based decision making practices occur at the management level; medical, nursing, professional laboratory and x-ray technicians and support staff are appropriately trained in procedures and guidelines to enable quality control; include a working, equipped laboratory, functional x-ray equipment and a full-service pharmacy. Without sufficient funds, it is difficult to provide high-level secondary care at any state hospital, and impossible to provide tertiary care, even if physicians, staff and facilities are capable of it. Consequently, tertiary care is clearly out of the range of most states in the FSM until adequate funding is available for quality primary and secondary health care services and appropriate training has been initiated. If the basic hospital units were working properly and utilization was appropriate; all hospitals could provide a much higher level of care. Once state hospitals start functioning at their full capabilities, there would likely be no need for a national referral hospital. A cost benefit analysis (CBA) also needs to be completed to look at the feasibility of either upgrading the 4 state hospitals or having a tertiary hospital in either Pohnpei or Chuuk.

e Out of Country referrals

83 Out of country referrals have been part of the FSM health system since the Trust Territory of the Pacific Islands (TTPI) days and are basically bankrupting the health care system. Typically, in TTPI days patients were referred to military health facilities in Honolulu or Guam, with costs mostly absorbed by the U.S. military or the TTPI administration. Following the signing of the Compact, these facilities began expecting payment for patient care. By the mid 1990s most states had run up extensive debts for medical referrals to Guam and Hawaii. Not pre-negotiating the cost of treatments, or setting ceilings on the type of treatment exacerbated the costs of such referrals. For instance, in 1999, Chuuk had a referral budget of \$300,000, spent \$1 million on referrals and had an estimated \$5 million owed from previous years. The other states appeared to be better off: Kosrae had a referral budget of \$100,000, spent \$100,000 on referrals and only had an estimated \$500,000 owed from previous years; Pohnpei and

Yap both had referral budgets of \$300,000 and spent less (\$200,000) on referrals.

84 There is a need for a comprehensive review of the referrals issues with a view toward controlling unjustified expenditure.

85 Continued overseas referrals are not an economic alternative for the treatment of NCDs. The economic choices for FSM are to ration overseas referrals for NCD health care, to make serious investments into primary and secondary prevention of NCDs and improve the ability of the state health systems to treat NCDs. Four things must happen for a sustainable health care financing mechanism to become a reality:

- Referrals to foreign medical facilities must be virtually ended.
- All employees must become members of the NIP.
- Considerable economic growth must occur so that user fees can be collected equitably. Prospects of having to pay for medical services could re-enforce the adoption of healthy lifestyles.
- The community must change its attitude that they have a right to free services and that health is a government responsibility.

f Health Workforce and Performance

86 The ratio of physicians to population updates as of 2003 (approximately 1/1739) and nurses to population (1/360) is better than that found in other South Pacific countries with comparable demographics and health statistics. The states have trained local physicians to fill the need for essential medical specialists. Nurses and allied health professionals (such as laboratory, x-ray and supply technicians and morticians), dentists and allied dental health professionals are in short supply. There are no fully trained pharmacists in FSM, the acting pharmacists in most states have limited training to short courses and on-the-job training. There is a shortage in all states of non-physician health administrators and financial officers. There are no nutritionists/dieticians, which is particularly of concern, given the high morbidity and mortality from obesity, diabetes and nutrition related diseases. Recruitment of qualified personnel for bachelor level education should be a high priority. In the FSM, the health sector is constrained in the delivery of appropriate services by the quality of staff and the lack the training in appropriate procedures and guidelines to enable quality control and assurance of quality services. Some states have employed human resource development managers and prepared health workforce development plans to address these issues.

87 Improved and expanded nursing education is the long-term key to improved rural health services in the FSM. Health assistants should be gradually replaced over the next twenty years with more professional level health staff,

preferably nurses or other mid-level health workers. Nurses should have an expanded role in public and preventive health as well as hospital-based medicine. There is a great need for nurses with advanced degrees such as nurse practitioners, nurse administrators and nurse nutritionists. Overall nursing capabilities and skills need to be upgraded through in-service and continuing education. Some attempt has been made to meet nursing requirements through distance education from Guam. The College of Micronesia (COM) in Pohnpei is starting a 1 year nursing training course in 2004, but there is also a need for the opportunity for career ladder training in the field of nursing similar to what the Fiji School of Medicine offers in health science degrees. The programs are divided into modules that beginning in year two of training offer exit points that correspond to different qualifications. There is a need to offer scholarships in key areas possibly through grants from bilateral and multilateral donors for pharmacists and nutritionists as well.

88 Most continuing education efforts, are focused mainly on physicians. Physicians in most states have access to telemedicine learning opportunities and teleconferencing opportunities via the internet, but this is rare in nursing, pharmacy, dentistry or the allied health professions. Nurses and allied health professionals (such as laboratory, x-ray and supply technicians, and morticians) are not only in short supply, but often inadequately trained and receive almost no in-service or continuing education. Pharmacists (actually Pharmcol technicians) generally have no internet access and teleconferencing is rare, although there is continuing education for pharmacists in terms of out-of-country short courses offered by international and bilateral agencies. Most state hospitals are planning to, or have initiated quality assurance programs. This hopefully will have some effect on the deteriorating quality of care found in most of the hospitals.

89 Wages for health workers are almost as low as can be set without losing most of the health workforce. Health workers at all levels, in all states, are demoralized and discouraged not only with their own pay, but with the lack of support to the hospital and medical services. Under Compact II, no direction is given as to remuneration of health workers. However performance-budgeting principles permit and encourage rewards for improved performance, and clear improvements in health sector performance could prompt state governments to increase wages.

7.1.5 Drug Supply And Policy

90 (“Drug” encompasses medicines, vaccines, intravenous infusions, family planning aids and dipstick reagents)

91 The biggest barrier to service delivery in all FSM hospitals is the severe lack of supplies, drugs and equipment, largely due to poor management systems. Hospital supplies, including medicines, are frequently unavailable, as none of

the health facilities, exercise control over inventories, and there appears to be no automatic reordering procedure or essential formulary for the hospitals. Drug purchases are usually made by each state independently of the others, usually without the advantages of the economies of scale found in group purchasing. Brand name drugs are often purchased instead of generic equivalents. Procurement of pharmaceutical and medical supplies at present is not cost efficient, nor is drug use managed wisely or appropriately. Considerable savings estimated at greater than 40% of present costs, can be obtained through improved procurement practices and rational drug management. It is appropriate to establish a national working group to establish sustainable cost-efficient procurement and rational drug management practices.

92 A workshop, attended by health officials, lawmakers, private businesses and other stakeholders was convened in September 2003 through technical assistance of the WHO to review and finalize the draft *National Drug Policy*. The FSM draft (as amended 19 September 2003) *The National Drug Policy* was endorsed at the workshop and it was recommended that it be made into law. The policy has two main objectives:

- to ensure the equitable and consistent availability of acceptable quality, effective and safe essential drugs at an affordable price; and
- to promote and rationalize the therapeutically sound and cost effective use of these drugs by health professionals and consumers through the provision of drug utilization information, training of health professionals in appropriate drug prescribing and education the public in drug use and storage.

93 The *National Drug Policy* and its recommendations will be financed through the ADB BSSP loan and Compact II resources will be also be used to defray some of the associated costs with implementation of the policy. One objective of the BSSP, is to improve the efficiency and efficacy of drug purchases, with consequent lowering of overall costs to health departments. The FSM state health departments will also have to allocate a proportion of the resources to ensure a minimal level of care in each state. The aims of the *National Drug Policy* are:

- to ensure that the Drug Administration Services Section of DHESA are adequately staffed and equipped to supervise the implementation of the National Drug Policy (eg. drug registration, licensing, inspection, information, training, adverse drug reaction and poisons information);
- to establish a National Standing Drug Advisory Committee, comprised of the Secretary of Health, all State Directors as well as medical and pharmaceutical experts to enable informed decisions, and a consumer organization. The Committee will select drugs for the public sector in accor-

dance with the essential drugs concept, defined by WHO (selected with regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness);

- to produce the National Formulary containing all the drugs selected for use in the public sector to be distributed to all National and State health institutions and consultations will be between the National Standing Drug Advisory Committee and the State Hospital Drug Committees to ensure correct, efficient, cost-effective handling and use of drugs in hospitals;
- to obtain the necessary quality and quantity of drugs, which will meet the health needs of the population, at the lowest possible cost. Drug procurement will be carried out on world-wide open purchase system by generic name and according to the National Formulary. Priority consideration will be given to drugs for PHC and control of endemic diseases;
- to ensure availability of sufficient quantities of essential drugs through Drug Inventory control (accurate and systematic recording, monitoring and reporting of stock levels);
- to ensure the prompt, safe and efficient supply of drugs to end-users and the maintenance of quality and security of drugs in storage, a Drug Storage Procedures Manual will be produced, and that unwanted drugs are disposed of efficiently, safely and correctly;
- to ensure drugs are prescribed, dispensed, and used rationally in order to maximize the therapeutic benefit to the patient and reduce loss, misuse and wastage using Standard Treatment Guidelines and with adequate patient counseling;
- to ensure that there is the appropriate number of adequately trained personnel and that all health workers involved in diagnosis, prescribing and dispensing of drugs receive relevant theoretical and practical training; and
- to support research and development activities which will facilitate the achievement of the objectives of the National Drug Policy.

7.1.6 Environmental Health

94 The environmental health program is minimal and insufficient for the problems encountered. Water is safe to drink in only three towns (Colonia on Yap, Kolonia and Palikir on Pohnpei) in the FSM. Water supplies to these towns are managed by utility corporations, and are chlorinated and therefore considered reasonably safe (although less so than in previous years). Water supplies to all other municipalities and all rural water sources are considered potentially unsafe due to animal and human contamination. Only 41% of the population in 2000 had access to a clean water source. Sanitation is also a problem even in those towns with good water (less than half of the population have access to an appro-

priate source of sanitation with pit latrines the most common sanitation in the outer islands). Waste management services are putting an increased strain on the environment and disposal of chemical wastes left over from agriculture and commercial projects is also a serious problem. Disposal of chemical wastes left over from agriculture and commercial projects is also a serious problem. Food inspection, internationally and between states, appears to be working well.

95 The responsibility for environmental health and sanitation, although vitally important to PHC, is divided between each state's Environmental Protection Agency (EPA) or its equivalent, and the state health department. Although there should be no conflict in responsibility between the two, in several states the EPA has taken their mandate to include home water and sanitation issues. Consequently, water and sanitation have often been inadequately managed by both agencies. Promotion of clean water, good hygiene and sanitation at the village and home level is an important aspect of PHC. The health department needs to refocus its attention on this issue as an essential part of PHC services.

96 Climate variability and change, including sea-level rise, are important determinants of health and of growing concern in FSM (as it is in all Pacific Island countries). The impacts are mostly adverse. Climate variability and change can result in reduced quality and quantity of water supplies, loss of coastal resources, reduction in ecosystem productivity and a decline in agricultural productivity. Potential health impacts which have been identified include: vector-borne diseases (such as dengue fever and malaria), water-borne diseases (such as viral and bacterial diarrhoea), diseases related to toxic algae (such as ciguatera fish poisoning which is important in FSM where the protein source is predominantly fish), food-borne diseases, food security and nutrition, heat stress, air pollution, and extreme weather and climate events (such as cyclones, high tides, droughts and storm surges). Especially on atoll islands of FSM, storm surges can result in injury and drowning. The adverse impacts of many of these events will be exacerbated by sea-level rise. Thus, climate change should be an important consideration when assessing environmental health issues and the consequential priorities for the health of people in FSM.

97 Several environment-related diseases of public health importance are endemic to various states of the FSM, or have the potential to cause epidemic outbreaks with the right environmental circumstances. For these diseases, there are existing hosts, intermediate hosts or vectors already present in the FSM that allow or predispose residents to disease transmission and outbreaks. These diseases include leptospirosis, filariasis, dengue fever, typhoid and cholera. For example, dengue fever (Dengue Hemorrhagic Fever) sweeps through the region in epidemic form generally every 3-6 years, but can be prevented through mosquito source reduction and personal protection measures, such as screening of houses, protective clothing and mosquito repellants. Water-borne diseases, in-

cluding cholera, typhoid and leptospirosis, are common cause of epidemics in the FSM. These outbreaks are in large part due to poor hygiene and the unprotected water supplies found in most states. Neither national nor state health departments have programs to deal with the diseases noted above, or the onslaught of an infectious disease epidemic. Such epidemics in the past have proven expensive, often using significant amounts of the states' health budget and over-taxing the health system. A contingency plan for each state, and at the national level, is needed for such epidemics.

7.1.7 Infrastructure

98 The physical condition and design of all hospitals in the FSM are generally adequate for the provision of secondary and low level tertiary care, although most hospitals are behind in maintenance, repair and renovation activities. This is in spite of the U.S. DOI providing a US\$2 million grant in 2001 for the rehabilitation of the four state hospitals and the provision of a one-year training program on hospital maintenance. The principal problems of health sector infrastructure are: the hospitals are in poor condition; many pieces of equipment are out of order; Hospital boards are either non-existent or less effective than they could be, and do not exercise any control over hospital performance standards, cleanliness, or maintenance of facilities; there is a high incidence of water-borne disease, due to the delivery of polluted water by many small water supply systems; access to medical services is problematic as transportation is difficult and expensive for rural patients; and there are inadequate repairs made to dispensaries.

99 Transportation problems, especially lack of ambulances, are major causes of limited access to health services and patient dissatisfaction, as well as poor health outcomes. On the large islands (Pohnpei and Kosrae), public transportation is weak or non-existent away from the government centers. Although transport of serious ill patients to the hospital is a problem in several states, this problem could be dealt with by better roads and ferry services. There are some international NGOs assisting with transportation, eg. Pacific Missionary Aviation (PMA) provides air services to the outer islands of Yap and Chuuk, including free medical evacuations and cut-rate fees for medical personal on official travel. They also provide air services to the OI of Pohnpei and a commercial service between Pohnpei and Chuuk. Operation of the PMA medical ship has been providing medical services to many of the OI. The single vessel, however, is unable to serve all OI, and the frequency should be increased. A second medical vessel is needed and PMA indicates that it would be able to furnish sufficient medical staff for two vessels.

100 In 2004, the ADB BSSP project will include two phases: a state-level institutional reform phase; and an investment program for upgrading facilities and establishing systematic maintenance programs for those states successfully completing the first phase. It is important to upgrade the curative health system, to minimize the needs for referrals to foreign medical facilities, and to increase the effectiveness of medical services. Two approaches have been discussed in FSM in recent years for achieving the second broad objective: either establishing and developing a national referral hospital in one of the states, probably Pohnpei or Chuuk, to make foreign referrals largely unnecessary, or transforming what are essentially four state health systems into a national system, with, among other things, the development of specialization in medical services among the four state hospitals. Discussions at 3rd Economic Summit favored a CBA to be completed to decide on the issue. Table 8 summarizes the Infrastructure Development Plan (2003 to 2017) for FSM.

7.1.8 Health Information: Statistics And Planning

101 Good financial reporting (how resources have been used), monitoring and auditing are critical functions of effective delivery of services. They provide essential data along with insights for drawing lessons; setting priorities; assessing whether activities are being implemented as planned and reaching stated

Table 8: FSM Health Sector Capital Investment Program, FY 2003-17

Health Sector Development Programs by State	Cost (\$US)
FSM MEDICAL SHIP	\$1,200,000
Chuuk State Hospital Rehabilitation	\$1,700,000
Chuuk State Hospital Expansion and Modernization	\$3,000,000
Chuuk State Dispensaries	\$4,130,000
Total Chuuk Health Sector DP	\$8,830,000
Kosrae State Hospital	\$1,100,000
Kosrae Dispensaries	\$100,000
Total Kosrae Health Sector DP	\$1,200,000
Pohnpei State Hospital and Ancillary Facilities Rehab.& Upgrade	\$1,548,000
Pohnpei State Hospital Expansion and Modernization	\$3,000,000
Pohnpei State Dispensaries	\$470,000
Total Pohnpei Health Sector Dp	\$5,018,000
Yap State Hospital Rehabilitation and Upgrade	\$1,352,000
Yap State Hospital Expansion and Modernization	\$2,460,000
Yap State Dispensaries	\$673,000
Total Yap Health Sector Dp	\$4,485,000
Total FSM Health Sector Development Plan	\$20,733,000

objectives; managing activities; and offer assurance that funds are used for agreed purposes. The foundation for developing system accountability is a system-wide information system that collects and disseminates data for public scrutiny and enables data based decision making. It is critical to share and disseminate health sector information, so that civil society can act as a “watchdog”. The accountability of the health systems to communities can only be ensured though, if the communities begin to participate in the decision making processes as well. Health sector reporting is also a necessary requirement of the Compact II and is fundamental to the production of the annual Poverty Reduction Strategy Report and feeds into the MDGs reporting.

102 At a management level, the FSM health sector is weakened by the absence of data based decision making practices. The absence of reliable data is the primary cause of this problem. This is in part due to the level of education, experience and training of health statistics technicians in each state, inasmuch as they seem incapable of generating at the state level the type of reports needed to improve decision making. This is also due to inadequate systems in place at the state level, such as lack of backup of files, frequent computer crashes and poor state level supervision and support. The problem is also compounded by a lack of expertise in how to utilize such data to inform the planning of service delivery and consequently a lack of commitment to ensuring adequate resources are provided for more efficient service delivery. The application of rational management techniques will require the development of managerial capacity so it can systematically manage its information database to guide its decision-making practices. For example, if the health information system is functioning well then decisions can be made on up to date information based on accurate financial reports and the incidence, morbidity and mortality of diseases. A quicker response time and more efficient use of resources allows for improvement in quality of management decisions and in health planning.

103 Technically, the health information system structurally reaches throughout each state to the smallest village. Functionally, however, there is generally under reporting of vital statistics and other health statistics outside urban areas. Only 70% of births are recorded and 46% of deaths, largely due to inadequate recording at the dispensary/community level. Additionally, failures in collection of morbidity and mortality data occur due to computer failures or “crashes”. Public health statistics are often inadequately recorded at the state level and the problem carried over to the national level. Pohnpei has excellent data at the hospital and public health levels and at the dispensary level on the main island, with each health assistants sending the data in daily as all dispensaries on the main island have a computer that can be linked to the main system. The OI dispensaries have a limited number of patients and prepare their reports manually and send them in regularly.

104 Data provided to the national health statistics office (NHSO) from some of the states are neither complete nor accurate, and standard reports are often behind schedule and associated with major caveats due to the reliability of the data. The statistics system at the national and state levels could improve with infusion of technical assistance, appropriate funding and dedication. The proposed ADB BSSP (commencing 2004) will provide technical assistance to improve health statistics collection and use. However, there is an urgent need for FSM to use additional funds to gain technical assistance in financial reporting and statistical/information systems to complement the BSSP and to meet Compact II reporting requirements in a timely fashion.

7.1.9 Constraints To The Effective Delivery Of Health Care

105 The five major constraints currently affecting the quality of health care and health services delivery in FSM are: 1) the significant level of poverty combined with poor performance of the economy; 2) poor management, financial reporting and information systems in the health sector; 3) the rise in NCDs has placed a heavy burden on health systems; 4) the high cost of doing business over long distances: Remote Islands; and 5) the belief that health is government business rather than an individual and community responsibility.

i The significant level of poverty combined with poor performance of the economy

106 Improvement in health is directly related to poverty. One way of assessing poverty is to consider FSM's achievement of the MDGs, which are focussed on reducing poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women by 2015. Poverty incidence is estimated to be high with approximately 40% of the population falling below the national poverty line (Chuuk 50%, in Yap 13%, in Pohnpei 35% and in Kosrae 29%), basic social services fail to reach the poorer strata of society and FSM has poor health indicators. Only 41% of the population have access to clean water and less than 50% to appropriate sanitation and the participation of women in decision-making or higher level positions remains very limited.

107 The level of poverty is expected to increase if the economy consistently performs poorly. Since the health sector review in 1999, the FSM economy, in both the public and private sectors, has faltered. Most states show either a slight decline or a flattening in growth, despite a slight increase in funding associated with the continuation of the Compact II negotiation period. This poor performance is of greater concern because of the rather high dependency and unemployment levels found in FSM. The 2000 Census indicates that many people working within the formal sector are supporting many other family members. A downturn in the economy would further exacerbate the ability the employed to

support basic requirements for their families and the payment of health insurance premiums as well.

ii Poor management, financial reporting and information systems in the health sector

108 Good financial reporting (how resources have been used) is critical to effective implementation of services and for accountability in the use of resources. Common symptoms of poor quality in public health sectors are a lack of essential drugs, inaccessible health facilities or absent staff, non-functioning vehicles and equipment and dilapidated premises. All these symptoms exist in varying forms across FSM. Poor quality is due to allocative and technical inefficiencies and occurs when required inputs (physical and human) are lacking, when resources are not targeted to real health needs, and when proper procedures are not used. Independent audits (where an independent external auditor expresses opinion on reliability of the annual financial report and compliance with the rules governing the use of funds) would provide assurance on reliability of financial reports and that resources are used for intended purposes.

109 Reporting and monitoring provides essential data along with insights for drawing lessons, setting priorities, assessing whether activities are being implemented as planned and reaching stated objectives, managing activities and offer assurance that funds are used for agreed purposes. There is a need to share and disseminate information, and make it openly available to the public so civil society can act as a “watchdog”. The accountability of the health systems to communities can only be ensured though, if the communities begin to participate in the decision making processes as well. Health sector reporting is also a necessary requirement of the Compact II and is fundamental to the production of the annual Poverty Reduction Strategy Report and feeds into the MDGs reporting.

iii The rise in NCDs has placed a heavy burden on health systems

110 The major causes of morbidity and mortality in FSM are the non-communicable diseases (NCDs) of lifestyle and modernization and most of these NCDs could be prevented by modifying a few specific risk factors. These lifestyle diseases include those associated with over and improper nutrition, a sedentary lifestyle and substance abuse and include such things as diabetes, hypertension, heart and vascular disease, stroke, cancer and lung disease. Even among children, the infectious but vaccine preventable diseases of the past have been supplanted by prematurity, newborn complications and malnutrition (often themselves caused by lifestyle diseases of the mother or family) as the major causes of death. These NCDs are also causing a huge economic burden as treatment costs are high.

111 NCDs are among the most expensive of diseases to treat. Patients with these diseases need constant care, expensive medicines and frequent oversight,

and need it for years. Compared to the vaccine preventable diseases of childhood that killed rapidly and without remorse, the chronic diseases drag on for years, destroying the quality of life and financially ruining both the patient and the health system. Thus, FSM will need additional funds to adequately control, treat and prevent NCDs/lifestyle diseases in addition to funds for control of vaccine preventable disease and other basic public health measures. Effective prevention strategies will eventually lead to a decrease in lifestyle diseases with concomitant marked savings to the health sector. There is an urgent need to integrate health promotion into the health system and make it a priority to direct efforts to modify individual behavior and environments that contribute to over- and under weight, unhealthy diets, tobacco use, unsafe food, physical inactivity substance abuse, domestic violence and mental problems.

iv The high cost of doing business over long distances: Remote Islands;

112 The FSM consists of four major island groups forming the states of Kosrae, Pohnpei, Chuuk and Yap. The 607 islands (65 of these are uninhabited), which constitute the FSM, encompass more than one million square miles of ocean and a total land area of only 270.8 square miles. The 2000 Census showed that the total population was 107,008 with a fairly even distribution of male and female. Pohnpei island alone constitutes about one-half of the total land area and is home to about one-third of the population, while more than half the population live in Chuuk State, which consists of many small atolls and lagoon islands. The distance from the eastern most state of Kosrae to the state of Yap in the west is more than 1,500 hundred miles. One international carrier provides transportation between the major islands and the cost of round trip air travel between the states is often in excess of one thousand dollars. Communications, travel, and logistical coordination within and between the states are by small boat or periodically by ship. Thus, travel costs represent a barrier to the supervision, support and training of health workers and access to services by patients living on remote islands.

113 Despite the geographical separation between and within the states compounding the costs of doing business, the FSM National government is committed to some level of quality health care for all. They hope to accomplish this through prioritization of health care services with a focus on community based primary and preventive health care service and careful consideration will be needed for infrastructure investments. State health departments have indicated that PHC has generally taken the brunt of reduced budgets, usually through the elimination or minimization of expensive supervision and PH team visits to remote and OI dispensaries. Funding shortfalls in several states have also necessitated reduction of essential drug supply to rural dispensaries, and a marked decrease in credibility and use of rural dispensaries. This refocus of fiscal priori-

ties is believed in some states to be due not so much as to funding shortfalls as to poor management and priority-setting at the senior DHS levels and to poor inter-departmental coordination (mainly between the Health and Finance) at the state level. There is an urgent need to refocus fiscal priorities to the PHC level.

v The belief that health is government business rather than an individual and community responsibility

114 When FSM was part of the Trust Territories of the Pacific Islands (TTPI), primary, secondary and even some tertiary care was provided mostly free by the TTPI administration. Thus, historically, people of FSM have viewed free health care as an entitlement. The constitution reinforces this belief and its bylaws also clearly state that “no one in need of medical care shall be denied such care because of inability to pay all or any part of any fee established.” Since the late 1990’s, it has become increasingly apparent to many citizens of FSM that to obtain quality health services, of the type provided in Hawaii and Guam, some participation and personal contribution to financing of health services is required and there is an urgent need to expand the national insurance program.

115 The quality of health services is of major interest to almost all peoples of FSM. Most people, in a 1999 quality of care survey by Jeff Benjamin, indicated that the overall quality of care and services received was poor; very few people interviewed thought that the state hospitals had qualified personnel, treated patients well, or were clean. The high demand and use of out-of country referrals even for rather routine medical services reflects this opinion. In another survey of dispensary services undertaken by the Micronesian Seminar, many people indicated that they would be willing to pay for improved services. So although, most people remain unwilling to pay for health services as they are now perceived, surveys reveal a willingness to pay for improved health services.

116 A feeling of community “ownership” of health services, whether it be a rural dispensary or the state hospital is rare. Health in general is viewed as the government’s business. Very few local NGO’s are involved in health to any extent. Likewise there is little assumption of personal responsibility for health. If one is sick, the health system should fix it. A change in attitude is urgently required, particularly with the rise in NCDs that are largely preventable by the individual or community taking responsibility. The community must be mobilized and educated to take greater responsibility and interest in health, with the dispensary health worker acting as a resource person and facilitator. In the FSM, community involvement and participation in local dispensaries is often lacking as State hospitals are seen as the providers of superior quality service reflecting the absence in many cases of pharmaceuticals and medical care at the local dispensary level. For communities on outer islands, the local dispensary may be of irreplaceable value but this may not translate to community support if it is perceived as an instrument (and the responsibility) of government. All

states are promoting greater community participation in health, in delivery of health services and in dispensary management and support. None of the structures and arrangements has proven effective as yet. Community participation in health and health care is essential to delivery of prevention services and support of PHC services.

7.2 Strategic Goals, Policies and Outcomes

117 This section of the chapter outlines the rationale and the need for a new direction of health sector development in the FSM. The review identified and the 3rd Economic Summit endorsed five areas for strategic focus (strategic goals) on which health sector funds are to be based and allocated and clearly identified specific outcome measures. The Strategic Planning Matrix for Health and suggested activities and outputs are also detailed in Sections 3 and 4 of this chapter. The purpose of the Matrix is to guide policy makers in allocating funds to support the development of health initiatives, projects and programs deemed necessary to advance the public's health.

118 Poor quality is a key problem of health services in the FSM and all available indicators suggest that primary health care (PHC) as well as secondary health services are failing to adequately address people's health needs and requirements. It is expected that focusing on the five strategic areas will bring about change in the sector. These strategic goals will be reviewed annually but are unlikely to change, whereas the activities and outputs which have been suggested may change based on achievements and variations in health problems.

7.2.1 Strategic Goal 1: Improve Primary Health Care Services

a Analysis and justification

119 There is an urgent need to focus attention on improvements in the quality of primary health services as this is the base of health care in FSM and it has been deteriorating over the last few years. The PHC system is responsible for delivering primary, preventive and public health services to both the rural and urban populace in FSM. Hospital clinics and inpatient services are receiving approximately 70% of patients that could have been handled at the PHC level or who have received improper, insufficient and/or inadequate PHC services at the dispensaries/health centers. One of the major reasons is that the dispensaries/health centers do not have adequate drugs or medical supplies and equipment. Given the limited financial and institutional resources available at state hospitals, they cannot effectively deliver such services and also secondary and tertiary health services as well. This failure at the PHC entry point to health services adversely affects the efficiency and effectiveness of health care delivery at all levels. Improving the quality of PHC services is an essential starting point for improving the quality of health services in FSM.

b Policy Implications

120 Appropriate investments and administrative and support practices need to be put in place so that the quality of the health services is delivered at appropriate state, national and international standards. It is obvious that an increased level of funding is needed to support supervision, supply and training of health service providers and the provision of medicine and other supplies, so that at least adequate services can be delivered in all states. As the existing PHC network is countrywide, a properly operating PHC system would contribute significantly to ensuring the health of the people of the FSM.

c Critical Issues for Implementation

121 Appropriate funding must be allocated for the adequate supply of drugs, medical supplies and equipment and for the travel costs of the PH teams so that they can adequately supervise, support and train the health assistants in the dispensaries/health centers.

d Outcome Measures and Justification

- Utilization of basic PHC services provided at the dispensary/health center level increased by 20%
- Utilization of basic PHC services provided at hospital outpatient clinics is decreased by 50%
- Improved performance of health workers in delivery PHC/PH services as demonstrated by:
 - immunization rate of all 2-year old children is increased to 85%
 - contraceptive prevalence increases to 50%,
 - at least 3 MHC visits reported for all pregnancies
- Hypertension screening and monitoring undertaken at 50% of PH/PHC encounters
 - 50% of overweight/obese patients receive diabetes screening, nutrition counseling
 - PHC monitoring/supervision dispensary/health center visits according to schedule 90% of time
 - 100% increase in PH promotion visits from baseline on monthly dispensary/health center report form
 - quality practices and techniques and a full range of services are in place for 75% PHC unit and PH teams in all States
- 80% of dispensaries/health centers report no major drug/medical supply shortages in last year

- At least 75% of all bio-medical equipment is functional at all times
- Dispensaries/health centers in good operating condition
- Community involvement in management and support of dispensary/health center
- Increase the percentage of mothers that breastfeed from 66% to 75%.

7.2.2 Strategic Goal 2: Improve Secondary Health Care Services

a Analysis and justification

122 Without sufficient funds and a coherent strategy, it is difficult to provide high-level secondary care at any state hospital, and impossible to provide tertiary care, even if physicians, staff and facilities are capable of it. Consequently, tertiary care is clearly out of the range of most states in the FSM until adequate funding is available for quality primary and secondary health care services and appropriate training has been initiated. If the basic hospital units were working properly and utilization was appropriate; all hospitals could provide a much higher level of care. Once state hospitals start functioning at their full capabilities, there would likely be no need for a national referral hospital.

123 Most laboratories, as well as other hospital units, are incompletely functioning because of equipment problems and lack of appropriate technology. An efficiently and appropriately designed hospital ensures rapid and timely patient support and flow, is cost efficient and facilitates quality delivery of care and services. Appropriate maintenance and housekeeping ensures that the hospital can function as designed delivering quality patient care without physical or health risks. The pharmacy/supply office must have all medicines and supplies necessary for all of the expected diseases, procedures and complications likely to be seen by the staff, and the x-ray and laboratory departments must be capable of performing all procedures necessary for the various medical services offered. Supplies and medicines should be purchased using mechanisms to eliminate unnecessary costs.

b Policy Implications

124 The major immediate barrier to service delivery in FSM hospitals is the lack of supplies, drugs and equipment. All states but Kosrae show some evidence of cutting PHC drugs and/or services to support hospital services. The National Drug Policy and its recommendations will be financed through the ADB BSSP loan and Compact II resources will be also be used to defray some of the associated costs with implementation of the policy. One of the aims of the Policy is to establish a National Standing Drug Advisory Committee, comprised of the Secretary of Health, all State Directors as well as medical and pharmaceutical experts to enable informed decisions, and a consumer organization. The

Committee will select drugs for the public sector in accordance with the essential drugs concept, defined by the World Health organization. These drugs are selected with regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness and to produce the National Formulary containing all the drugs selected for use in the public sector to be distributed to all National and State health institutions.

125 Given the history and circumstances of FSM's small population with heavy out-migration often of its trained personnel, the development of human resources is important. The health workforce is a critical element in improving the health system. The FSM needs to prepare a strategic workforce plan. Formal, measurable standards of care and benchmarks need to be developed at the strategic, policy level as 'standards for health improvement', associated with outputs, and at an operational level for quality assurance, continuous quality improvement, protection of the public and feedback to the community, government and staff.

c Critical Issues for Implementation

126 The secondary health care system is receiving approximately 70% of patients that could have been handled at the PHC level. The hospital based support network is also the backup services for PHC and public health. PHC services can not function without support. They must have facilities and personnel from which they obtain expert advice and medicines, supplies and equipment. PHC providers must be able to refer cases beyond their capabilities to those with higher qualifications and skills.

127 A cost benefit analysis (CBA) also needs to be completed to look at the feasibility of either upgrading of the 4 state hospitals or having a tertiary hospital in either Pohnpei or Chuuk.

d Outcome Measures and Justification

- QA practices and techniques in place in all states
- Average length of hospital stay is decreased
- Hospital acquired infection rate is decreased
- Appropriate number of trained key health personnel (e.g. doctors, pharmacists, dieticians, physical therapists, nutritionists, health practitioners, nurses, Health assistants, administrators)
- Pharmacy and medical supply personnel trained in procurement policies and procedures
- Rational pharmaceutical and supply management principles and practices are adapted by all states

- Availability of essential drugs and medical supplies is increased.
- Functionality increased (down-time decreased) of biomedical equipment.
- Referral processes based on equity and strict application and cost of out-of-country referrals held to 5% of health budget
- All newly constructed facilities in compliance with approved standards
- All facilities have maintenance cost set aside for each facility
- Access to hospital services is increased
- Improve local health services to minimize off-island medical referrals.

7.2.3 Strategic Goal 3: Prioritize Health Promotion And Services For Major Health Problems

a Analysis and justification

128 The major causes of morbidity and mortality in FSM are the NCDs of lifestyle and modernization. Poor nutrition, risky behaviors and substance abuse are among the leading causes of mortality. An excess of calories - in a diet deficient in proper vitamins, minerals, protein and certain fats - leads to obesity, which in turn precipitates diabetes and cardiovascular diseases and ultimately hypertension, heart disease and stroke. Smoking leads to chronic lung disease and to various cancers, including lung cancer. Betel nut chewing, either alone or in combination with tobacco, marijuana, and various solvents, including alcohol, leads to increased head and neck cancer. Promiscuous sexual behaviors lead to the spread of HPV and Hepatitis B causing an increase in cervical cancer and liver cancer, as well as HIV/AIDS and other STDs.

129 Despite the seriousness of lifestyle diseases and the high rate of associated morbidity and mortality, funding for NCDs in the preventive health programs from the U.S. DHHS and the FSM states is small and there is literally no consistent state or national support for programs to prevent this expensive set of diseases. Most of the funding received from DHHS in categorical grants are for MCH, Immunization, FP and SAMH, and for personnel for the programs. Very little funds are received for NCD, the leading health problem and killer in FSM and very little funding is allocated by the state or the state health department for prevention of NCDs.

b Policy Implications

130 Relevant stakeholders should decide on a minimum package of essential health services for FSM. This would contain those health programs and services that concentrate on diseases that are of major public health importance, are major causes of illness and disability, have the greatest social and economic burden and most affect the quality of life. Prioritizing such a list rationalizes the choice

of services for funding and implementation and assists in program planning and budgeting. Lower priority services would require careful assessment as to their contribution to improving health, and cost implications. All services would be community-based where possible and stress both primary and preventive health care and be implemented in cooperation with the community, other governmental agencies and the private sector. With a clearly defined minimum package of essential services, essential formulary and management efficiencies, health services could be provided in a more cost-effective way.

131 In 1999, a National Plan of Action for Nutrition 2000-2005 for FSM was designed. The Plan is consistent with international agreements and commitments, particularly the Children's Summit and the Suva Declaration on Sustainable Human Development in the Pacific. It is important to encourage community participation and involve the churches, the women's and consumers' associations. The FSM has previously had a National Food and Nutrition Commission representing key sectors at the national level but due to staff change it is currently not functioning. It is recommended that the NFNC be formed again and that the main functions would be:

- the assessment of the food and nutrition situation in the country;
- the formulation of policies and strategies to provide guidance in the planning of food and nutrition programs and projects
- the coordination of food and nutrition programs and projects
- monitoring and evaluation.

c Critical Issues for Implementation

132 NCDs are among the most expensive of diseases to treat. Patients with these diseases need constant care, expensive medicines and frequent oversight, and need it for years. Compared to the vaccine preventable diseases of childhood that killed rapidly and without remorse, the chronic diseases drag on for years, destroying the quality of life and financially ruining both the patient and the health system. Thus, FSM will need additional funds to adequately control, treat and prevent NCDs/lifestyle diseases in addition to funds for other health measures. Effective prevention strategies will eventually lead to a decrease in lifestyle diseases with concomitant marked savings to the health sector.

d Outcome Measures and Justification

- Consensus agreement on nation-wide health outcome priorities and a minimum package of essential services
- 95% of all 2-year olds will be fully immunized

- Contraceptive utilization prevalence rate increases to 70% from 55% of all childbearing age women
- At least 3 MHC visits reported for all pregnancies
- Hypertension screening and monitoring undertaken at 50% of PH/PHC encounters
- 50% of overweight/obese patients receive diabetes screening, nutrition counseling
- Most people know common preventable causes of diabetes, hypertension and other NCDs.
- Substance abuse decreased
- Prevalence of STDs decreased
- Number of children <5 years with VAD is decreased
- Number of women and children with iron deficiency anemia is decreased
- Increase public awareness about the health risks of being overweight
- Increase appropriate services for mental illness
- Fundamentals of PH achieved: clean water, sanitation and garbage disposal available to 100% of FSM people by 2020.
- Prevalence of diarrhoeal diseases is decreased
- Incidence of dental caries is decreased by 10% among school-aged
- Conduct epidemiological surveillance as an early warning system to prevent outbreaks of communicable disease and other diseases requiring public health action
- Conduct assessments of climate-related health risks including vector-borne and water-borne diseases and institute relevant early warning and public education programs

7.2.4 Strategic Goal 4: Develop A Sustainable Health Care Financing Mechanism

a Analysis and justification

133 A higher level of health care, with a greater variety of services and technologies, funded through an insurance scheme and user fees is needed in the FSM. Originally, the NIP had two functions: 1) to provide additional funds to states to support and improve primary and secondary health care, and 2) to support limited overseas referrals. Poor management and planning in the early years of the NIP led to massive over-expenditures for overseas referrals, and minimal and irregular capitation payments to the states. Considerable economic growth needs to occur to increase the number of those with medical insurance.

The potential risk pool (or those formally employed and receiving salaries) is small by commercial standards (estimated at about 20,000 people maximum), and thus is very sensitive to economic variations in the economy.

134 Out of country referrals are basically bankrupting the health care system. Most states have run up debts for medical referrals to Guam and Hawaii. The major cost of referrals, and in fact health care in the country, is because many referrals are for chronic diseases that are basically ameliorable but untreatable and drag out for years. Care both in-country and out-of-country of people with NCDs, despite NCDs being preventable in most cases, is taking funds away from other health priority areas. Given the present health demographics, NCDs will continue to increase, and those with NCDs will continue to live longer. Continued overseas referrals are not an economic alternative for treatment of NCDs. The economic choices for FSM are to ration overseas referral for NCD health care, to make serious investments into primary and secondary prevention of NCDs and improve the ability of the state health systems to treat NCDs.

b Policy Implications

135 Health policy and health services, and their financing and financial management, are integral to achieving improvement in the health system of FSM. An overall strategy for health care planning and financing needs to be developed in order to ensure sustainable funding resources to support priority policy reforms in the health sector. This includes health insurance, user fees and other sources of funding such as earmarked taxes and increased efficiencies in delivery. Many services may be privatized or corporatized (e.g. security, ambulance, janitorial, kitchen and perhaps pharmaceutical services) bringing about improvement in both service delivery and revenues. Improvements in management and planning (such as a system of program budgeting based on cost analysis, budgeting and financial planning) will also improve the use of scarce resources available to the health sector. The health care financing mechanism should allow the greatest majority of people access to reasonable levels of health care. If possible and financially feasible, a safety net for the poor should be developed to ensure access for vulnerable groups.

c Critical Issues for Implementation

136 Health system reform is necessary as FSM's health system is unsustainable under the present arrangements. 25% of the health services budget goes on referrals to benefit a small proportion of the population. This is not sustainable and needs to be addressed immediately. Referrals to foreign medical facilities must be virtually ended. All employees must become members of the NIP. Considerable economic growth must occur, so that user fees can be collected equitably and efficiently. The community must change its attitude that they have a right to free services and that health is a government responsibility. Treating

curative services as an entitlement tends to increase the demand for those services and reportedly many hospital stays are not related to health problems, and do not have doctor authorization.

d Outcome Measures and Justification

- States and National Government agree to basic elements for universal health insurance
- Universal health insurance prototype established, with aim of gradually including all FSM citizens
- Number of individuals enrolled in NIP increased.
- Feasibility for health reform assessed in all states, including safety net for the poor.
- Equitable access to health services to all FSM citizens (regardless of location or economic status)
- Cost efficient and appropriate co-payment/user fee system in place in all states
- Privatization of appropriate health services undertaken successfully in all states
- Off-island medical referral decreased to 5% of health budget
- Community assumes responsibility for maintenance and repair of 95% of dispensaries/health centers

7.2.5 Strategic Goal 5: Improve Capacity And Accountability Systems

a Analysis and Justification

137 Good financial reporting (how resources have been used), monitoring and auditing are critical functions of effective delivery of services. They provide essential data along with insights for drawing lessons; setting priorities; assessing whether activities are being implemented as planned and reaching stated objectives; managing activities; and offer assurance that funds are used for agreed purposes. The foundation for developing system accountability is a system-wide information system that collects and disseminates data for public scrutiny and enables data based decision making. It is critical to share and disseminate health sector information, so that civil society can act as a “watchdog”. The accountability of the health systems to communities can only be ensured though, if the communities begin to participate in the decision making processes as well. Health sector reporting is also a necessary requirement of the Compact II and is fundamental to the production of the annual Poverty Reduction Strategy Report and feeds into the Millennium Development Goals reporting.

b Policy Implications

138 All states will introduce a uniform health information and management system. Standardized software will be introduced into all state health administrations that will be capable of producing nationally compatible data to monitor health issues and performance of the health system. Training will be provided at state and national levels to develop in-house skills for the long-term implementation of the health information and management system.

c Critical Issues for Implementation

139 If the health information system is functioning well then decisions can be made on up to date information based on accurate financial reports and the incidence, morbidity and mortality of diseases. A quicker response time and more efficient use of resources allows for improvement in quality of management decisions and in health planning.

d Outcome Measures and Justification

- Performance based planning and budgeting established in all state DHS
- 95% of DHS managers trained in data based decision making using locally generated data
- Cost efficient procurement policies and procedures for pharmaceuticals and medical supplies established in states and DHESA
- Financial management and planning training plan developed for key permanent management personnel in state DHS
- Appropriate positive incentives in place to encourage the desired behaviors of organizations and individual managers
- Health Statistics units at National and State levels competently staffed
- Establishment of National and State health information system (HIS) working group
- Analysis and monitoring of health needs from statistical data
- Improved reporting of vital, health and management statistics (Decrease in DMF rate (Decay, Missing and Filled))
- 80% of vital events occurring in rural areas reported on time
- Establish a nursing school at COM-FSM

7.3 Activities and Outputs

140 This section of the chapter outlines the rationale, the inherent risk and gives a description of the suggested activities and outputs of the Strategic Planning Matrix for Health (refer to Section 3). These activities and outputs may

change from year to year based on achievements, variations in health problems and political will.

7.3.1 Strategic Goal 1: Improve Primary Health Care Services

141 Possible activities for improving PHC Services

- Activity 1: Supervise, monitor evaluate and train health assistants in key public health and PHC services using continuous quality improvement (CQI) principles
- Activity 2: Improve quality and frequency of delivery of public health/prevention services by PH field team
- Activity 3: Supply essential drugs, medical supplies and equipment to dispensaries/health centers and for field trips
- Activity 4: Maintain PHC facilities in good working condition
- Activity 5: Establish partnership between communities, Health assistants, PH teams, youth groups and state health department for delivery of PHC services.

a Activity 1: Supervise, monitor, evaluate and train health assistants in key public health and PHC services using continuous quality improvement (CQI) principles

i Rationale

142 At the PHC level, dispensary workers are poorly trained and educated, support and supervision is episodic, irregular and incomplete, and community support is almost absent except for some OIs. The responsibilities of health assistants in the rural areas are important but they are not adequately trained and supervised to really deliver quality health services. To be relevant to the community it serves, the dispensaries must be able to deliver a broad array of basic curative, preventive and public health services in a culturally acceptable, consistent and efficient manner. Without adequate supervision and training, the rural health assistants provide substandard and occasionally dangerous medical and public health practice. Appropriate investments and administrative and support practices need to be put in place so that quality health services are delivered at appropriate standards. The failure at the PHC entry point to health services adversely affects the efficiency and effectiveness of health care delivery at all levels and hospitals are receiving approximately 70% of patients that could have been handled at the PHC level if dispensaries were functioning properly.

143 There is also under reporting of vital statistics and other health statistics outside urban areas. Only 70% of births are recorded and 46% of deaths, largely

due to inadequate recording at the dispensary/community level. Morale is low and absenteeism high.

ii Description of activity

144 The objective of the activity is to improve the quality of PHC and to increase the professionalism and morale of the rural health workers. The scope of the activity will be at the PH and PHC level in all DHS, but it will also include the DHS managers supporting PHC. Included in the CQI will be a focus on improving the Health Information Systems (HIS) at the PHC level and encouraging community involvement in PHC. All states will introduce uniform health information and management systems where meaningful and relevant data for the communities is collected.

145 Adequate funds are needed to support regular and frequent supervision, supply and training of the health assistants in the key public health and PHC services by the PH team. To improve the performance of health assistants and the PH team and the quality of care of PHC services, there needs to be a focus on quality of services, using CQI principles, including such approaches as continuous process analysis, problem identification, realistic prioritizing of change activities, strong customer orientation and standards of practice, audits of practices, regular training based on weaknesses identified in audits, increased and onsite supervision and training and the establishment of clearly defined and realistic job descriptions for the PHC workers as well as performance based contracts for health assistants. CQI stresses actual team building, using the team and the community in identifying key problems and potential changes.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: At least three (combined) supervisory, monitoring and training visits per year to each dispensary</i>	<i>Inadequate resources committed to tasks</i>
<i>Output 2: Health assistant present at dispensary on official business 90% of time</i>	<i>Absenteeism exceeds proper limits</i>
<i>Output 3: Health assistant provide assistance to PH field team 95% of time and considered useful by PH team</i>	<i>Personnel poorly trained</i>
<i>Output 4: Sufficient personnel at state health department level to supervise, train health assistants</i>	<i>Insufficient funds provided by states to support PH team</i>
<i>Output 5: CQI techniques incorporated into PHC and PH management practices</i>	<i>Inadequate resources committed to tasks</i>

<i>Target Output</i>	<i>Risks</i>
<i>Output 6: Curriculum established for Health assistants</i>	<i>Inadequate resources committed to tasks</i>
<i>Output 7: 95% of health assistants trained in:</i> <ul style="list-style-type: none"> • <i>public health</i> • <i>environmental health</i> • <i>family planning (including condoms, birth control pills and FP promotion and education)</i> • <i>SAMH including dispensing of SAMH medicines</i> • <i>PHC including using PHC drug formulary update</i> • <i>STD-HIV/AIDS treatment and preventive measures</i> 	<i>Inadequate resources committed to tasks</i>
<i>Output 8: Establish community health profiles.</i>	<i>Staff insufficiently trained to collect statistics</i>

b Activity 2: Improve quality and frequency of delivery of public health/prevention services by PH field team

i Rationale

146 The PH team plays an essential role in delivering and improving the quality of the primary, preventive and public health services in FSM. Resources for appropriate staffing and training of PH field teams needs to be a priority. It is necessary for the PH team to be appropriately staffed and trained so that they can not only provide service delivery, but also supervision and on-going training of the health assistants. The PH teams, while generally qualified, have insufficient supplies and equipment to service the populations they must cover and usually miss scheduled visits to rural areas and OI because of lack of travel funds or management support. When they do travel, the PH team usually has insufficient time to provide essential services, supervise and train the dispensary health worker, and mobilize the community in support of health. Despite the role of NCD's in morbidity and mortality in FSM, little preventive health or health promotion services are provided. PH team morale is low and absenteeism is high.

ii Description of activity

147 Resources for implementation of public health programs needs to be a priority. The PH team should make regular visits and visits should include not only

service delivery but also training and supervision of the health worker. Visits should take place on schedule so as to minimize community disruption. Cancellation of travel should be closely scrutinized and approved only for limited reasons, such as weather or transport breakdown. Management tools need to be developed to ensure that the field teams are working appropriately and efficiently. Most importantly, adequate and appropriate supplies and medicines must be available at the dispensary/health center (see Activity 3).

iii *Output targets and risks (* Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: PH teams fully staffed</i>	<i>Insufficient funds provided by states to staff PH team</i>
<i>Output 2: PH teams capable of delivering wide range public health services through multi-purpose public health training of personnel</i>	<i>Personnel poorly trained</i>
<i>Output 3: 3 field trips/year/community budgeted and authorized.</i>	<i>Insufficient funds provided by states to support PH team</i>

c Activity 3: Supply essential drugs, medical supplies and equipment to dispensaries/health centers and for field trips

i *Rationale*

148 The secondary health care system is receiving approximately 70% of patients that could have been handled at the PHC level and one of the major reasons for this is that the dispensaries do not have adequate drugs, medical supplies and equipment. Patients are opting to go straight to the hospital rather than go to the dispensary/health center and receive a prescription that will need to be taken to the hospital to be filled anyway. The PH team also experiences frequent shortages of essential drugs, equipment and medicines. There is no essential drug formulary for dispensaries and inappropriate and even dangerous drugs can be dispensed to health assistants who don't use the drugs, or even worse, use them without knowing what they are for. DHS in all states need to develop essential dispensary and outpatient formularies, and improve procurement of medicines and supplies. The FSM National Drug Policy was endorsed at a workshop held in 2003 and one of the recommendations was that drug procurement will be carried out on world-wide open purchase system by generic name and according to the National Formulary (which still needs to be devised). Priority consideration will be given to drugs for PHC and control of endemic diseases. Part of the management system problem facing all FSM health services is the lack of standardization in equipment and supplies and unfunded maintenance contracts.

ii Description of activity

149 PHC formulary will be revised according to rational pharmaceutical management principles and implemented in dispensaries in all states. To support essential PHC services, adequate funds are needed for the provision of medicine, medical supplies and equipment so that services can be delivered at the dispensaries and by the PH team.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Sufficient essential antibiotics, analgesics, FP supplies etc available at all dispensaries/health centers >11 months per year</i>	<i>Insufficient funds provided by states</i>
<i>Output 2: Sufficient drugs and supplies available for 95% field visits</i>	<i>PHC formulary not revised</i>
<i>Output 3: Sufficient and functioning bio-medical equipment</i>	<i>Insufficient funds provided by states</i>

d Activity 4: Maintain PHC facilities in good working condition*i Rationale*

150 An Infrastructure Development Plan has been devised that details the need for new PHC facilities or the improvement of existing facilities. Many PHC facilities are in poor condition, some have been renovated by U.S. military personnel but rarely has the community been involved. All states are promoting greater community participation in the support of the dispensary.

ii Description of activity

151 Following implementation of the Infrastructure Development Plan, new PHC facilities will be built or existing facilities improved. Community responsibility for maintenance of local facilities should be augmented by funding programs providing matching grants to communities that can offer monetary or labor contributions for maintenance of facilities.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: 90% of dispensaries/health centers in good operating condition</i>	<i>Insufficient funds provided by states</i>
<i>Output 2: Community contributes to maintenance and repair of 95% of all dispensa-</i>	<i>Communities not prepared to contribute to maintenance</i>

<i>ries/health centers</i>	
----------------------------	--

- e Activity 5: Establish partnership between communities, health assistants, PH teams, youth groups and state health department for delivery of PHC services.**

i Rationale

152 In most states, there is very little community involvement in health at this time. Most people consider “health” to be the government’s responsibility, not theirs. Communities provide little help to their local dispensaries, either in terms of in-kind labor, and other types of support. State hospitals are also seen as the providers of superior quality service. For communities on OI, the local dispensary is of more value and it has been shown that community and chiefly support has resulted in better utilization of and support for the dispensary. Community participation in health and health care is essential to the delivery of prevention services and support of PHC services. Most communities are also unclear about the role of disease prevention in health. There is little understanding of lifestyle diseases, despite lifestyle and its sequelae being the major cause of morbidity and mortality in the FSM. To improve primary, preventive and public health services, the communities must be mobilized to support their PHC services, incorporating healthy behaviors and lifestyles into their lives and to become responsible for their own health.

ii Description of activity

153 The objective of the activity is to increase community involvement in (primary, preventive and public) health services and to encourage increased responsibility for their own health among the general population. The activity will be undertaken in all states, with maximum focus on rural communities and will focus on removal of administrative barriers to community participation and the creation of incentives that will encourage communities to become more involved. Cultural barriers to community participation in decision making will be addressed through community information campaigns. Performance monitoring of local services by communities will become possible through improvements in health information systems that will be specifically designed to offer meaningful and relevant data to communities. The accountability of the health systems to communities can only be ensured if the communities they serve begin to participate in the decision making processes of those systems. The decision-making role of communities will be gradually expanded through regulatory changes at the state levels that will devolve to community bodies both financial responsibilities and input into the hiring of key staff. Community responsibility for maintenance of local facilities will be augmented by funding programs providing

matching grants to communities that can offer monetary as well as labor contributions for maintenance of facilities.

154 The UNICEF project designed to improve dispensary services in Chuuk has been very successful at involving the community in support of PHC services. Meetings with community leaders were held and health committees formed. Community Awareness through Health Education has also been promoted as one of the activities. Lessons can be learnt from the experiences and achievements of the UNICEF activities.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Council meets 2 + times per year with participation of health department (or functioning Health Advisory Boards)</i>	<i>Communities insufficiently mobilized to participate in dispensary management</i>
<i>Output 2: Community financial and in-kind support for repair and maintenance</i>	<i>Communities not prepared to contribute to dispensary maintenance</i>
<i>Output 3: Build in tax incentives for private sector to promote in-kind support and business environment.</i>	<i>Private sector not interested in support health initiatives</i>

7.3.2 Strategic Goal 2: Improve Secondary Health Care Services

155 Possible activities for improving secondary health care services

- Activity 1: Establish quality assurance (QA) for all hospital departments and activities and all health department personnel
- Activity 2: Provide regular continuing education for health professional staff
- Activity 3: Ensure adequate medical and pharmaceutical supplies are available for hospital, PH team, and PHC program and maintain equipment in good working condition
- Activity 4: Develop infrastructure plan to ensure adequate facilities and maintenance and ensure access to hospital services
- Activity 5: Construction of a new hospital for Kosrae and other infrastructure development for the other States.

a Activity 1: Establish quality assurance (QA) for all hospital departments and activities and all health department personnel.

i Rationale

156 Quality assurance (QA) programs and approaches need to be incorporated in all health services. The use of inappropriate personnel or poor management practices result in operational problems in important hospital units such as laboratories, x-ray units, pharmacies, housekeeping and supply units. In some hospitals, problems also occur in their clinical care divisions and public health units. All hospitals are under utilized for their size and have a bed capacity in excess of their needs. All are inappropriately utilized as well and people are frequently admitted for social or other reasons rather than medical need. Most personnel are under utilized due to malfunctioning of the various support units. If the basic hospital units were working properly and utilization was appropriate; all hospitals could provide a much higher level of care.

ii Description of activity

157 Standards of practice need to be developed and codified for all health and allied health professions. A comprehensive and customized approach for establishing minimum educational requirements and appropriate continuing education for all levels of health workers should be developed for all states to support quality.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: QA established in all state hospitals</i>	<i>Institutional commitment to health CQI introduction is not maintained</i>
<i>Output 2: QA training for management, planning and reporting for all senior personnel and supervisors provided in all state hospitals</i>	<i>Institutional commitment to health CQI introduction is not maintained</i>
<i>Output 3: Practice standards established for security, food services, maintenance, renovation/repairs, management, house-keeping /custodial, laundry, ambulance, embalming, prosthesis</i>	<i>Staff do not adhere to standards</i>
<i>Output 4: Practice standards established for staff of laboratory, x-ray, mental health, pharmaceutical, paramedical, medical supplies, inventory, and manage-</i>	<i>Staff do not adhere to standards</i>

<i>Target Output</i>	<i>Risks</i>
<i>ment staff.</i>	
<i>Output 5: Practice standards established for professional staff (nurses, dentists, doctors, physiotherapists, hospital administrators, health information staff) and ratios of health workers to patients and population</i>	<i>Staff do not adhere to standards</i>
<i>Output 6: Conduct periodic qualitative surveys.</i>	<i>Inadequate resources committed to tasks</i>

b Activity 2: Provide regular continuing education for health professional staff

i Rationale

158 In the FSM, the health sector is constrained in the delivery of appropriate services by the quality of staff and the lack the training in appropriate procedures and guidelines to enable quality control and assurance of quality services. Some states have employed human resource development managers and prepared health workforce development plans to address these issues. Most continuing education efforts, are focused mainly on physicians. Physicians in most states have access to telemedicine learning opportunities and teleconferencing opportunities via the internet, but this is rare in nursing, pharmacy, dentistry or the allied health professions. There is a need to offer scholarships in key areas possibly through grants from bilateral and multilateral donors for pharmacists and nutritionists as well.

ii Description of activity

159 A careful and complete health workforce analysis of present and future workforce needs of each state of the FSM for the next 20 years needs to be made. This analysis must take into account future dispensary staffing needs, an aging and poorly trained workforce in the allied health sciences, an increasing role for nurses in public health, rural health, clinical care and administration, and health administration needs as well as medical specialty needs. Teleconferencing and telemedicine access would benefit almost all levels of health professionals. States should establish computer resource rooms at hospitals or departmental administrative areas that are open to nurses, doctors, dentists, pharmacists and others in order to meet professional education needs and assist with professional problems. Use of telemedicine is particularly applicable to FSM, given the geographical distances and costs of transport. It would be more cost effective than sending people abroad or using long distance telecommunications for continuing training.

iii Output targets and risks (* Outputs reportable on quarterly basis)

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Long term relationship established with medical school</i>	<i>Inadequate funding for scholarships</i>
<i>Output 2: Distance education established at all state hospitals</i>	<i>Inadequate resources committed to tasks</i>
<i>Output 3: Scholarships offered are for key health personnel that are required in FSM (e.g. pharmacists, dieticians, physical therapists, nutritionists, medex, dentists, nurses and health practitioners)</i>	<i>Health workforce analysis not completed Inadequate funding for scholarships</i>
<i>Output 4: Pharmacy and medical supply personnel trained in procurement policies and procedures, including financial management, records</i>	<i>Inadequate resources committed to tasks</i>
<i>Output 5 Schedule of onsite training and workshops established for all health workers in each state</i>	<i>Inadequate resources committed to tasks</i>

c Activity 3: Ensure adequate medical and pharmaceutical supplies are available for hospital, PH team and PHC program and maintain equipment in good working condition

i Rationale

160 The biggest barrier to service delivery in all FSM hospitals is the severe lack of supplies, drugs and equipment. Hospital supplies, including medicines, are frequently unavailable, as none of the health facilities, exercise control over inventories, and there appears to be no automatic reordering procedure or essential formulary for the hospitals. Brand name drugs are often purchased instead of generic equivalents and drugs are often purchased in small amounts from retail drug companies rather than through bulk purchases from wholesale companies. There is also no standardization of hospital equipment, instruments, and supplies among the four states making laboratory, x-ray and other medical equipment different in every state. There is no commonality of parts or supplies and most equipment requires separate maintenance contracts from their particular manufacturer. Considerable savings estimated at greater than 40% of present costs, can be obtained through improved procurement practices and rational drug management.

ii Description of activity

161 The DOH will work with DHS in each state to follow the recommendations of the National Drug Policy and establish the National Standing Drug Advisory Committee and the National Formulary. DOH and DHS will review and revise drug and medical supply formularies for the hospital and dispensaries in each state to improve procurement of medicines based on medical practice and using principles of rational pharmaceutical management and to establish and implement efficient procurement practices, with special emphasis on inexpensive and reliable vendors of high quality drugs. Rational drug management, financial management, planning and procurement policies and practices will be institutionalized in each state through training, supervision and support to state supply and pharmacy divisions. Laboratory equipment and supplies will also be standardized. New equipment should be bought according to existing standards only and with long term fully funded maintenance contracts.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Essential National Formulary established for hospitals</i>	<i>Insufficient commitment to establish drug formulary</i>
<i>Output 2: Training delivered to medical supply, pharmacy personnel and second tier DHS managers in each state</i>	<i>Personnel do not attend training</i>
<i>Output 3: Adequate drugs are available to meet PHC and PH team needs without rationing.</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 4: Inventory management program established for all health department equipment (e.g. lab, x-ray)</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 5: Standardized equipment list developed for FSM</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 6: Service contract developed for new equipment purchased</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 7: Regular and preventive maintenance schedule established for all equipment</i>	<i>Inadequate resources are committed to tasks</i>

d Activity 4: Develop infrastructure plan to ensure adequate facilities and maintenance and ensure access to hospital services

i Rationale

162 The physical condition and design of all hospitals in the FSM are generally adequate for the provision of secondary and low level tertiary care, although most hospitals are behind in maintenance, repair and renovation activities. Each state should have a master plan for maintenance and renovation of their health facilities, with a clear cost center for needed works as these are essential to ensure quality health services. Funding to support maintenance, renovation and repairs remains problematic and sources of funds need to be identified (external funds or from within the national budget, eg. a revolving fund allocated only for maintenance, renovation and repairs might be set up at the national level to insure that such work is not delayed). Once basic maintenance, repair and renovation services are instituted and up-to date, the physical plants and design of all state hospitals are capable of providing secondary and low level tertiary care services.

163 Transportation problems, especially lack of ambulances, are major causes of patient dissatisfaction and poor health outcomes. On the large islands (Pohnpei and Kosrae), public transportation is weak or non-existent away from the government centers. Although transport of serious ill patients to the hospital is a problem in several states, this problem could be dealt with by better roads and ferry services.

ii Description of activity

164 Each state must prepare a master plan for maintenance and renovation of their health facilities. A revolving fund allocated only for maintenance, renovation and repairs should be set up. Funding for support of maintenance, renovation, repairs and replacement is being addressed in the Infrastructure Development Plan (IDP). Also being addressed in the IDP is the need for roads, ferry services and possibly another medical ship that will visit the OI to provide medical care.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Development plan established for new facilities (1-2 yrs.)</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 2: Preventive maintenance/repair/replacement program established all states.</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: Omnibus system established on</i>	<i>Inadequate resources are</i>

<i>Target Output</i>	<i>Risks</i>
<i>major island States</i>	<i>committed to tasks</i>
<i>Output 4: Ambulance service established on major island States</i>	<i>Inadequate resources are committed to tasks</i>

e Activity 5: Construction of a new hospital for Kosrae and other infrastructure development for the other Sates

i Rationale

165 It has been suggested that a new hospital is required in Kosrae and this has been endorsed at the 3rd Economic Summit.

ii Description of activity

166 Appropriate plans will be prepared to build the hospital in Kosrae that will service the population appropriately. Funds will be allocated for the purpose.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: New facilities are built in cost effective and timely manner</i>	<i>Inadequate funds are allocated</i>

7.3.3 Strategic Goal 3: Prioritize Health Promotion And Services For Major Health Problems

167 Possible activities to prioritize health promotion and services for major health problems:

- Activity 1: Establish NCD Prevention and Control Programs in all states and promote healthy lifestyles, places and healthy choices
- Activity 2: Establish Prevention and Control programs for communicable diseases (TB, Hepatitis, STDs, Hansen’s Disease and HIV) in all states
- Activity 3: Make MCH/FP/immunization a priority in all states.
- Activity 4: Establish a nutrition program in all states focusing on both NCDs, benefits of breastfeeding and on child nutrition
- Activity 5: Establish substance abuse and mental health prevention services in all states
- Activity 6: Strengthen surveillance and monitoring functions of the environmental health program (water, hygiene, sanitation, and food safety) and strengthen enforcement of sanitation regulations

- Activity 7: Conduct a comprehensive dental health and preventative program
 - a Activity 1: Establish NCD Prevention and Control Programs in all states and promote healthy lifestyles, places and healthy choices**

i Rationale

168 The major causes of morbidity and mortality in FSM are the NCDs and these diseases are the most expensive of diseases to treat. Thus, prevention of NCDs, as well as control and treatment of them, needs to be made a national, state, community and individual priority. At the state and national level, sufficient funding is needed for program support for prevention and health promotion activities. This means support of trained health educators, funds for prevention and health promotion programs, support for community initiatives, interagency and interdepartmental cooperation, as well as partnerships with the private sector. There is an urgent need for an emphasis on prevention and promotion of NCDs to bring about behavior and lifestyle changes. The minimum package of essential health services should include health education/promotion programs for the prevention and control of lifestyle-related NCDs such as obesity, diabetes, substance abuse and STD/HIV/AIDS. Prevention of substance abuse and obesity needs to begin early and at home and be reinforced in school and the community.

ii Description of activity

169 Prioritization of health services requires a review of the health services package in order to assess contributions to maintaining the health and well being of the population versus the cost of supporting services. Each state needs to initiate a health education program and employ a qualified health educator oriented predominantly towards prevention of NCDs. These health and education programs should be promoted in settings where people live, work and learn to modify risks of unhealthy lifestyles/environment.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Review health services, decide on outcome priorities and agree on a “minimum package of essential services”</i>	<i>No agreement on “minimum package of essential services”</i>
<i>Output 2: Each state has health education program and a qualified health educator oriented predominantly toward prevention of NCDs</i>	<i>Insufficient funds provided by states.</i>

<i>Target Output</i>	<i>Risks</i>
<i>Output 3: School health program established in all schools</i>	<i>Insufficient funds provided by states</i>
<i>Output 4: Good Health promoted in settings where people live, work and learn to modify risks of unhealthy lifestyles/environment</i>	<i>Individuals are not willing to change lifestyle to improve health</i>
<i>Output 5: Exercise program promoted and infrastructure (sports and recreational facilities: gym, tracks, courts with lighting for night use)</i>	<i>Individuals are not willing to change lifestyle to improve health</i>
<i>Output 6: Health workers and teachers complete physical examinations annually.</i>	<i>Health workers and teachers do not have adequate resourcing and time to complete the examinations</i>

b Activity 2: Establish and Support Prevention and Control programs for communicable diseases (TB, Hepatitis, STDs, Hansen's Disease and HIV) in all states

i Rationale

170 Tuberculosis and leprosy, although significantly decreased, are still pervasive throughout the FSM. While the mass campaign over 10 years ago helped in raising public's awareness about the seriousness and deadliness of these diseases, the challenge still remains in diagnosing new cases and completing their treatment.

171 The vaccine preventable disease that is endemic and causes the most morbidity and mortality in the FSM is Hepatitis B. In the 1980s studies suggested that 30%-60% of the population had been infected with hepatitis B and that 10%-30% were chronic carriers. Since 1989, Hepatitis B vaccination has been part of the routine newborn and infant immunization program. The school immunization laws of the FSM (last revised in 1997) require a complete series of Hepatitis B vaccine.

172 Most state hospitals are not able to perform STD testing, especially the ones requiring complicated and expensive testing kits. Teens and young adults are a particularly difficult group to reach for prevention and treatment activities as confidentiality and privacy is often lacking in many clinic settings and nurses working with adolescents reported that even those presenting with symptoms were hesitant to go to the hospital for adequate testing. Recent reports and a pilot study suggest that the prevalence of syphilis, as well as HPV, is underesti-

mated and is increasing. HIV/AIDS infection occurs sporadically in all states and is generally attributed to infection obtained elsewhere, and brought into the FSM upon the return of those living overseas. Given the very high rate of other STDs and the inadequate diagnosis and treatment capabilities in most states, the establishment and spread of HIV in some populations of the FSM is a real possibility.

173 Cervical cancer was the leading cause of cancer in 2002. The rising incidence of cervical cancer may be directly related to the incidence of the HPV, a STD. HPV infection is extremely common in neighboring Pacific island countries, and is associated with cervical cancer and an increased susceptibility to HIV/AIDS. With regards to HPV, PH programs report that they do not have the pap smear kits to test women of child bearing age – only women who present with symptoms are tested.

ii Description of activity

174 Each state needs to initiate a health education program and employ a qualified health educator oriented predominantly toward prevention of communicable diseases. Pilot studies to establish the prevalence of STDs (including HPV) need to be completed. The STD program needs to work with MCH and FP to develop a comprehensive approach to preventive HPV infection, and increase PAP smears to prevent cervical cancer.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Each state has health education program and qualified health educator oriented toward prevention of communicable diseases</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 2: Pilot study completed to establish prevalence of STDs</i>	<i>Inadequate resources are committed to tasks</i>

c Activity 3: Make MCH/FP/immunization a priority in all states.

i Rationale

175 Little in the way of MCH services are provided at the PHC level by health assistants, and given the budgetary restrictions on travel in most states, it is likely that MCH is provided less frequently than desirable by the PH team to the OI populations. Cervical cancer was the leading cause of cancer in 2002. It is crucial that PAP smears be incorporated in all MCH programs and be offered to all women when they become sexually active and safe sex practices and the use of condoms are encouraged.

176 Vaccine preventable diseases such as diphtheria, tetanus, polio, measles and others, can be prevented by a relatively cheap series of vaccinations costing perhaps several hundred dollars for complete or long lasting immunity. These diseases appear to be under reasonable control with reasonably high rates of vaccination and immunization in most states. The 2003 immunization rates for 2 year olds vary by state and coverage rates are reported to be 91% in Kosrae, 89% in Yap, 76% in Pohnpei and 68% in Chuuk. Immunization rates for school age children is even higher. Budget limitations, cancelled voyages and inclement weather and staff scheduling conflicts have reduced some visits, especially on islands or villages remote from the state hospital, to below the minimum needed to complete the primary immunization. Thus, immunization series are reasonably complete near the various state capitals and have improved significantly over the last few years, although in the OI, there are still children missing out on immunization and morbidity and mortality can result from vaccine preventable diseases.

177 The FSM FP program focuses on the following objectives: (a) to increase awareness regarding population problems; (b) to make family planning methods readily available to all, and assure they are supplied by competent health personnel; (c) to increase retention rates of FP users; and (d) to improve the health status of mothers and children through health education, better nutrition and proper services and medical care delivery. Nation-wide contraceptive prevalence remains low, ranging between 25-35% using only modern long-term methods. FP services are being delivered effectively only at the state centers, due to lack of privacy and confidentiality (especially teens and young adults) and in some areas male where only male Health assistants are present.

ii Description of activity

178 In pregnant women and children, a minimum package of essential services should focus on safe motherhood, including safe delivery, prevention of vaccine preventable diseases in mother and child, and appropriate birth spacing/family planning.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Comprehensive women's health program (women of child bearing age receive PAP smears and have access to FP techniques)</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 2: Immunization reaches 95% of targeted populations</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: Enforce statutes requiring im-</i>	<i>Inadequate resources are</i>

<i>munization for all school age children.</i>	<i>committed to tasks</i>
--	---------------------------

d Activity 4: Establish a nutrition program in all states focusing on both NCDs, benefits of breastfeeding and on child nutrition

i Rationale

179 In the FSM, nutrition problems are due more to the consumption of inappropriate foods than inadequate food supplies. Poor nutrition and an excess of calories - in a diet deficient in proper vitamins, minerals, protein and certain fats - leads to obesity, which in turn precipitates diabetes and cardiovascular diseases and ultimately hypertension, heart disease and stroke. People in the FSM, starting in childhood, are eating the wrong foods. There had been a shift away from exclusive breastfeeding with the detrimental effect on the health of babies. However, UNICEF has been working closely with the hospitals in FSM in working towards Baby Friendly status, which includes encouraging breast feeding exclusively for at least the first 6 months. This has resulted in more women breastfeeding and for longer. Diets of both adults and children are not nutritious; and it is especially important for growing children to receive a well balanced diet.

180 Traditional root vegetables and fruit have been replaced by white rice and flour products and foods high in sugar (e.g. softdrinks). The locally grown fruits and vegetables (once the staple of the local diet) are high in fiber and nutrients and low in calories, whereas with the introduced foods, the reverse is true. The high level of malnutrition in the FSM is attributed not only to a poorly nutritious modern diet replacing a healthier traditional diet, but also heavy worm load. Iron deficiency anemia and VAD are common among pregnant women, newborns and infants. Consequently all states, in cooperation with WHO and UNICEF, initiated a twice-a-year vitamin A supplementation program in conjunction with an anti-worming program for children aged 1-12. The VAD and anti-worming program appears to be working well with coverage of 1-12 years old at 85%.

ii Description of activity

181 Strong health promotion programs, targeted for different age groups, with the message “to eat more local foods”, combined with an effort to improve production of local foods and the quality of imported foods will lead to a stronger healthier population in the FSM. Support of the Baby Friendly hospitals (with its encouragement of breastfeeding) ensures children have a better start to life. There is the need to develop the technology and systems applicable to small scale agriculture, particularly of traditional foods at household and community levels and to reduce costs to the consumer of traditional foods. There is an urgent need to employ nutritionists and dieticians and nutrition promotion pro-

grams should be joint efforts with other government departments, including agriculture, education, finance and commerce. Women's and youth groups, private company's and NGOs need to work together to ensure the prevention message gets out.

182 WHO has been developing a global strategy on diet, physical activity and health (WHO – Diet, Food Supply and Obesity in the Pacific) and it may be appropriate to extend the project supported by WHO in Fiji and Tonga to include FSM – the project encouraged people to reduce fat, eat less sugar, salt, more fish and vegetables and fruit, root crops to replace refined cereals of white rice and flour and address cultural factors that favor overeating such as feasting. Physical activity (eg. one hour per day at school, such as sport, dance, martial arts – more parks) is also encouraged.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Nutrition programs established at all levels including national and/state and PHC levels</i>	<i>Inadequate resources No nutritionists/dieticians</i>
<i>Output 2: PH team promote good nutrition on half of their field trips</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: IDA identified and treated</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 4: VAD programs delivered in all communities</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 5: Conduct periodic nutritional surveys</i>	<i>Inadequate resources are committed to tasks</i>

e Activity 5: Establish substance abuse and mental health prevention services in all states

i Rationale

183 Ill health and dysfunction due to mental illness and substance abuse have increased in all states of the FSM over the last few decades. This trend appears to have accelerated over the past few years due to rapid societal change, family disintegration, and economic downturn associated with more people pursuing fewer jobs and high expectations. FSM has one of the highest suicides rates in the world, increasingly severe law and order problems, and widespread poly-drug abuse. Violence, suicide and drug abuse are problems in all states. Child abuse and neglect is also rising. The most commonly abused substances in the FSM are tobacco, alcohol, betel nut, solvents and marijuana. Alcohol consump-

tion is high for males (less so for females) in all states, except perhaps Kosrae. The problems associated with alcohol abuse are domestic violence, fighting and general public disruption, crimes committed while drunk and drink driving associated injuries and accidents. Tobacco and alcohol abuse and their chronic disease sequelae – hypertension, heart disease, chronic lung disease and cancer - are major contributors to death and disability in the FSM.

184 Little or no substance abuse or mental health services, including outreach, health education and preventive activities, are provided to rural areas and the OI, except in the brief visits of SAMH personnel with the PH teams. Some states are experimenting with peer councilors for remote schools and communities to assist with SAMH problems. Most SAMH services are provided at the state urban centers and at the state hospital, and, despite its potential, little is provided by the PHC. There is general discussion about using PHC workers to dispense SAMH medicines after training, but this has not been seriously implemented in states.

ii Description of activity

185 A program focused on SAMH should be initiated by each state with training for the health assistant, PH team and councilors and programs in schools.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: 95% of schools to receive SAMH program services</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 2: SAMH medicine/supplies available in 95% dispensaries/health centers</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: 80% of villages receive SAMH health promotion/training</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 4: Legal interventions established to prevent spread of tobacco, betel use, and other substance abuse.</i>	<i>Lack of political will to prohibit substance abuse</i>

f Activity 6: Strengthen surveillance and monitoring functions of the environmental health program (water, hygiene, sanitation, and food safety), including risks related to climate variability and change and strengthen enforcement of sanitation regulations

i Rationale

186 The environmental health program is minimal and insufficient for the problems encountered. Water is safe to drink in only three towns and water supplies to all other municipalities are considered potentially unsafe due to animal and

human contamination. Only 41% of the population in 2000 had access to a clean water source. Sanitation is also a problem even in those towns with good water (less than half of the population have access to an appropriate source of sanitation with pit latrines the most common sanitation in the OI). Inadequacies in waste management practices and services are placing an increasing strain on the environment. Disposal of chemical wastes left over from agriculture and commercial projects is also a serious problem.

187 Climate variability and change, including sea-level rise, can result in reduced quality and quantity of water supplies, loss of coastal resources, reduction in ecosystem productivity and a decline in agricultural productivity. Potential health impacts which have been identified include: vector-borne diseases (such as dengue fever and malaria), water-borne diseases (such as viral and bacterial diarrhoea), diseases related to toxic algae (such as ciguatera fish poisoning which is important in FSM where the protein source is predominantly fish), food-borne diseases, food insecurity, heat stress, air pollution, and extreme weather and climate events (such as cyclones, high tides, droughts and storm surges). Especially on atoll islands of FSM, storm surges can result in injury.

ii Description of activity

188 A sustained community information campaign to address environmental issues such as water supply, waste management and disposal of excreta should be initiated. Improving and protecting water and promoting hygiene and sanitation is an important function in PHC. At the individual house level, and in rural villages and OI it is vitally important for the health of the people that this function is supported by PHC workers. The lack of someone at the village level encouraging water supply protection and good hygiene and sanitation practices can lead to epidemics from water-borne disease, as well as from skin infections and toxic poisoning. Many urban communities are littered with garbage and refuse, which provide food sources for rats and other vermin and create a potential public health risk. Education and clean-up campaigns could be successful in addressing these issues. Food inspection programs appear to be working well and should be continued.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Health education programs present in all states (promotion of safe water, hygiene and sanitation, and food safety)</i>	<i>Inadequate resources are committed to tasks Communities are not prepared to change behaviors to protect the environment</i>
<i>Output 2: Surveillance, monitoring and</i>	<i>Inadequate resources are</i>

<i>education of environmental health program (including visits to communities/public awareness)</i>	<i>committed to tasks</i>
<i>Output 3: 95% of environmental health workers in each state receive appropriate water and sanitation training</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 4: 95% food establishments have food safety training and routine inspections</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 5: Public health risks related to climate variability and change documented and findings included in relevant health, education and public awareness programs.</i>	<i>Inadequate resources are committed to tasks</i>

g Activity 7: Conduct a comprehensive dental health and preventative program

i Rationale

189 Oral health is a major problem associated with improper nutrition and abuse of betel nut, tobacco and other substances. Dental caries among children in the 3-5 year old age group are 3 times higher than in the U.S. This is due to the high intake of imported foods which are high in sugar and inadequate oral hygiene. All states need dentists and allied dental health professionals, as well as dental programs that particularly target the young. Each hospital in the FSM contains a dental clinic but these hospitals are directly accessible only to residents of the urban (state) centers. Preventive dental health services are also provided at Public Health clinics as well as in the schools, by staff from the Dental Division and the MCH Program. MCH Program staff work closely with the Dental Health Divisions of each state, the Family Food Production and Nutrition (FFPN) Program (a UNICEF-supported program located at each State Department of Agriculture), parents support groups, church leaders, women's groups, and community and traditional leaders. Some groups and individuals, provide dental care on a regular basis in the states (eg. Canvasback Missions sends regular dental teams to the OI).

ii Description of activity

190 An adequately resourced comprehensive dental health and preventative program that targets schools is needed. Training of dentists and technicians in infection control and other training could be addressed through telemedicine at the hospitals. Appropriate graduate programs are also needed to train dentists.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: 95% schools participate in a comprehensive dental health</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 2: 95% dental assistants receive training on infection control</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: Adequate dental supplies and 95% equipment is functional</i>	<i>Inadequate resources are committed to tasks</i>

7.3.4 Strategic Goal 4: Develop A Sustainable Health Care Financing Mechanism

191 Possible activities to ensure a sustainable health care financing mechanism:

- Activity 1: Develop appropriate and acceptable health insurance and health maintenance schemes for FSM with aim of including all FSM citizens
- Activity 2: Increase enrollment (after necessary statutory amendments):
- Activity 3: Phase I: Mandatory for national/state government employees (2-3 years), Activity 4: Phase II: Mandatory for private sector (2-4 years)
- Activity 5: Standardize and update a fee schedule for all of the FSM, with State health departments to keep Program Income
- Activity 6: Consider other sources of funding

a Activity 1: Develop appropriate and acceptable health insurance and health maintenance schemes for FSM with aim of including all FSM citizens

i Rationale

192 A higher level of health care, with a greater variety of services and technologies, funded through an insurance scheme and user fees is needed in the FSM. Poor management and planning in the early years of the NIP led to massive over-expenditures for overseas referrals, and subsequently minimal and irregular capitation payments to the states. Some reforms and a change in the management to NIP were undertaken in 2003. Policy and oversight of the NIP was removed from the government and placed under a private board, appointed by the President of the FSM. It is expected that the changes in management will lead to increased transparency, responsiveness, and a focus on improving health care.

ii Description of activity

193 Develop an appropriate and acceptable health insurance scheme for all FSM citizens and ensure that the current management and operation of the NIP is responsive to the need of the state hospitals/health departments. Collect data on causes of leading medical referral cases to ensure policies are transparent.

iii Output targets and risks (* Outputs reportable on quarterly basis)

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Change the current management and operation of the plan to be responsive to the need of the state hospitals/health departments (i.e., remunerate on time), and collect data on causes of leading medical referral cases</i>	<i>National and state governments cannot reach agreement on universal health insurance scheme</i>
<i>Output 2: NIP policies transparent and easily understandable</i>	<i>National and state governments cannot reach agreement on universal health insurance scheme</i>
<i>Output 3: NIP policy change: payments focus on state health program reimbursements</i>	<i>National and state governments cannot reach agreement on universal health insurance scheme</i>
<i>Output 4: Consider health maintenance programs other than regular health insurance programs, in order to provide universal coverage</i>	<i>National and state governments cannot reach agreement on universal health insurance scheme</i>

b Activity 2: Increase enrollment (after necessary statutory amendments);:

Activity 3: Phase I: Mandatory for national/state government employees (2-3 years);

Activity 4: Phase II: Mandatory for private sector (2-4 years):

i Rationale

194 All FSM national government employees have the choice to enroll in the current health insurance plan (52% of the premium paid for by FSM National and 48% by employees). They can also purchase insurance for their families at nominal rates. In addition, NIP is open to all state employees, employees of public corporations, and to private corporations with greater than five employees, and employees' families. Fees, compared to subscriber income for the NIP, are quite nominal, even by FSM standards, except at the lower salary scales.

There is also a supplemental policy at a higher premium, more oriented to out-of-country referrals. Though open to both public and private sectors, NIP enrollees are mainly government employees and their dependents. As of 2003, a total of approximately 17,000 persons (15 percent of the population of FSM) are covered.

ii Description of activities

195 Encourage development and implementation of the NIP making it attractive to both private and public sector. It should support secondary and tertiary care in country and have strictly adhered to criteria for out-of country referrals, as needed. Once the basic elements for a universal health insurance is agreed to by the state and national governments, a concerted effort should be made to encourage new members to join NIP.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Number of government employees with NIP has increased</i>	<i>A downturn in the economy means that fewer can afford insurance</i>
<i>Output 2: Number of private sector employees with NIP has increased</i>	<i>A downturn in the economy means that fewer can afford insurance</i>

c Activity 5: Standardize and update a fee schedule for all of the FSM, with State health departments to keep Program Income

i Rationale

196 The health departments of all FSM states have attempted various cost-recovery strategies, including user fees, wage controls and generic drug purchases, with varying levels of success. Under the Compact II agreements, user fees are to be kept and used within the health sector. This may provide increased motivation for the improved collection of such fees. States can specify how and where in the health sector such funds can be used. Allocated wisely, user fees can be a significant resource to state health departments.

ii Description of activity

197 National and state governments are to reach an agreement on how to standardize user fees and have an appropriate cost recovery mechanism in place.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
----------------------	--------------

<i>Output 1: Law changed in all states and national government</i>	<i>National and state governments cannot reach agreement on universal users fees</i>
<i>Output 2: Fee schedule and exemption study completed (1-2 yrs.)</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: Increase in amount of fees for services (if appropriate) at the hospitals</i>	<i>Patients aren't prepared to pay for services</i>
<i>Output 4: Improvement in the collection of fees at the hospitals</i>	<i>Patients aren't prepared to pay for services</i>
<i>Output 5: Inclusion of safety net for the uninsured citizens in the health reform program</i>	<i>Government/political/institutional commitment to improve quality and efficiency of health sector is weak</i>

d Activity6: Consider other sources of funding

i Rationale

198 Other sources of funding include the private sector and the placing of taxes on cigarettes and alcohol. As the habitual use of cigarette and alcohol contributes to ill health and dysfunction, the National Government recently passed legislation to introduce a sin tax. However, as suggested by Micronesia Seminar (the NGO “Think Tank” of the FSM), the FSM government needs to not rely on taxes from alcohol and tobacco as there is then a vested interest in increasing those sales to increase revenue. The “abusing” group can also become destructive to themselves (suicide) and to the society (violence, spread of STDs) if they become bored and too often resort to mood altering substances. It is preferable for the young to focus their energies on sports and other healthy behaviors and therefore it is necessary to have sports/recreational facilities that also have health counseling centers attached that give advice to the young.

ii Description of activity

199 A study on the feasibility of other sources of funding and how this funding can best be used to promote healthy practices among the young should be completed. A concerted effort is needed by government agencies, the community, the private sector and others to promote healthy living practices at all ages, but especially in the youth of FSM. Health promotion programs are not cheap, but they are much cheaper than the cost of treating chronic diseases or having the young engaging in destructive behaviors.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
----------------------	--------------

<i>Output 1: Identify private sector funding to support health promotion activities, including sports, recreational, health counseling centers.</i>	<i>Private sector insufficiently motivated to support sports/recreational facilities</i>
<i>Output 2: Establish tax incentives for private sector to promote in-kind support and business environment.</i>	<i>Private sector insufficiently motivated to support sports/recreational facilities</i>

7.3.5 Strategic Goal 5: Improve Capacity And Accountability Systems

200 Possible activities to improve capacity and accountability systems:

- Activity 1: Improve management skills of health service administrators
- Activity 2: Establish appropriate Management information systems (MIS), including health data reporting in all state health departments
- Activity 3: Develop core set of indicators
- Activity 4: Strengthen Public Health surveillance system in the FSM
- Activity 5: Ensure technical assistance/consultancy available for above areas in all states
- Activity 6: Develop curriculum and seek funding for Nursing school

a Activity 1: Improve management skills of health service administrators

i Rationale

201 At a management level, the health sector is weakened by the absence of data based decision making practices. The absence of reliable data is the primary cause of this problem, but it is also compounded by a lack of expertise in how to utilize such data to inform the planning of service delivery and consequently a lack of commitment to ensuring adequate resources are provided for more efficient service delivery. The application of rational management techniques will require the development of managerial capacity so it can systematically manage its information database to guide its decision-making practices. For example, if the health information system is functioning well then decisions can be made on up to date information based on accurate financial reports and the incidence, morbidity and mortality of diseases.

ii Description of Activity

202 The objective of the activity is to strengthen system accountability within the health sector. The scope will include all states and the DOH, DHESA. This activity attempts to make the information system work, thereby improving health

decision making and monitoring and improving the quality of health services. Improvements in the quality of health services will be monitored and advanced through improved reporting of vital health statistics and the effective use of such information for decision making. New software will be procured and installed in each state, and staff trained in data reporting and analysis. At the national and state levels, timely, appropriate and accurate reports will be available for decision making by government, international organizations and civil society to bring about overall improvement of health and well being in the FSM.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Health service managers trained in fiscal planning and management</i>	<i>Government/political/institutional commitment to improve quality of health planning and management is weak</i>
<i>Output 2: Health service administrators trained in use of management information systems.</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: Health service administrators trained in performance based planning and budgeting</i>	<i>Inadequate resources are committed to tasks</i>

b Activity 2: Establish appropriate Management information systems (MIS), including health data reporting in all state health department;s

Activity 3: Develop core set of indicators;

Activity 4: Strengthen Public Health surveillance system in the FSM

i Rationale

203 The collection and maintenance of health information in the FSM needs to be improved. Technically, the health information system structurally reaches throughout each state to the smallest village. Functionally, however, there is generally under reporting of vital statistics and other health statistics outside urban areas. Only 70% of births are recorded and 46% of deaths, largely due to inadequate recording at the dispensary/health center/community level. Additionally, failures in collection of morbidity and mortality data occur due to computer failures or “crashes”. Public health statistics are often inadequately recorded at the state level and the problem carried over to the national level. Pohnpei has excellent data at the hospital and public health levels and at the dispensary level on the main island, with each HA sending the data in daily as all dispensaries on the main island have a computer that can be linked to the main

system. The OI dispensaries prepare their reports manually and send them in regularly.

ii Description of activity

204 All states will introduce a uniform health information and management system. A working group needs to develop a plan of action that will improve collection, processing and use of data at the state and dispensary levels. Standardized software will be introduced into all state health administrations that will be capable of producing nationally compatible data to monitor health issues and performance of the health system. Training will be provided at state and national levels to develop in-house skills for the long-term implementation of the health information and management system. Additionally, health information assistants should be recruited to cover informatics duties at the national and state health statistics office to ensure that a huge loss does not result if the Statistics Officer is away or leaves the position. Performance monitoring of local services by communities will become possible through improvements in health information systems that will be specifically designed to offer meaningful and relevant data to communities.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: MIS personnel recruited</i>	<i>Government/political/institutional commitment to improve quality health statistics is weak</i>
<i>Output 2: MIS used as basis for QA program all states</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 3: State and national statistics officers trained in use of systems and reporting</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 4: State and national statistics systems and equipment working effectively, backed up and standardized</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 5: Disease reporting to international agencies to meet international health treaty obligations.</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 6: A reference library containing all health related reports at National and State levels</i>	<i>Inadequate resources are committed to tasks</i>

<i>Output 7: Establish mechanism and procedures for prioritizing disease and health indicators for surveillance</i>	<i>Inadequate resources are committed to tasks</i>
---	--

c Activity 5: Ensure technical assistance/consultancy available for above areas in all states

i Rationale

205 Data provided to the national health statistics office from some of the states are neither complete nor accurate, and standard reports are often behind schedule and associated with major caveats due to the reliability of the data. The statistics system at the national and state levels could improve with infusion of technical assistance, appropriate funding and dedication. The proposed ADB BSSP (due to commence 2004) will provide technical assistance to improve health statistics collection and use. However, there is an urgent need for FSM to use additional funds to gain technical assistance in financial reporting and statistical/information systems to complement the BSSP and to meet Compact II reporting requirements in a timely fashion.

ii Description of activity

206 Funds should be allocated to gain technical assistance in financial reporting and statistical/information systems to complement the BSSP and to meet Compact II reporting requirements.

iii Output targets and risks (Outputs reportable on quarterly basis)*

207 Target Output Risks

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: TA in fiscal planning, management and reporting, health statistics and use of information in year one</i>	<i>Inadequate resources are committed to tasks</i>
<i>Output 2: TA assistance in other areas as needed.</i>	<i>Inadequate resources are committed to tasks</i>

d Activity 6: Develop curriculum and seek funding for Nursing school

i Rationale

208 Improved and expanded nursing education is the long-term key to improved rural health services in the FSM. Health assistants should be gradually

replaced over the next twenty years with more professional level health staff, preferably nurses or other mid-level health workers.

ii Description of activity

209 The COM-FSM should train adequate numbers of nurses for their expanded role in public and preventive health as well as hospital-based medicine including continuing education. COM-FSM in Pohnpei is starting a 1 year nursing training course in 2004, an appropriate curriculum should also be developed for further nurse education. The relevant funds needs to be allocated.

iii Output targets and risks (Outputs reportable on quarterly basis)*

<i>Target Output</i>	<i>Risks</i>
<i>Output 1: Open the school in 2006</i>	<i>Inadequate political will and resources committed</i>

8 Education

8.1 Education Sector Review

8.1.1 Key Indicators of Educational Achievement

a Literacy Status

1 According to the FSM 2000 Census about 92% of the population aged 10 years and over were reported literate. The proportion literate decreased as age increased, showing better education for the younger generation. A differential in literacy status was notable among the older generations but was significantly reduced for the younger generations. For that segment of the population under the age of 45 there was hardly any differential between the sexes. One interesting observation is that literacy rates declined by 1.5 percentage points between 1994 and 2000. This could be an anomaly reflecting the inherent problems of family self reporting on literacy status. But could also reflect the impact of immigration.

b Educational Attainment

2 During the period 1980 –2000 the number of people aged 25 years and over that have completed some level of education has increased, while the number not completing any level has decreased significantly. The proportion of persons with no schooling decreased from about 25% in 1980 to about 12% in 2000. That is, one in four people in 1980 had not received any education 1980

Table 1: Literate Population of FSM, by Sex: 1980, 1994 & 2000

	Total	Males	Females
1980			
Total 10+ years	48,792	24,705	24,087
% literate	88.9	90.3	87.6
1994			
Total 10+ years	74,322	37,661	36,661
% literate	93.9	94.8	93.0
2000			
Total 10+ years	78,056	39,302	38,754
% literate	92.4	92.9	91.9

Source: 2000 FSM Census of Population and Housing

compared to one in eight people by 2000. A similar significant ratio of improvement is evident in those completing a higher level of education (secondary or higher) – rising from 25% in 1980 to about 51% in 2000. The reduction in the number of people with no education may reflect in part the impact of emigration from the mid-1980’s onwards. Many of these laborers may not have had any education.

3 The improvement in educational attainment for females in the FSM is pronounced. The proportion of females with no school dropped from 30 % in 1980 to 15% in 2000. Meanwhile, the proportion of females with at least high school education increased from 12% in 1980 to 30% in 2000.

8.1.2 Structure of Education and Training Systems

4 The overarching policy framework for education in the FSM is provided by the national constitution. The constitution provides a very broad framework for guiding the development of education in limiting itself to defining the purpose of education “preserve the heritage of the past” and “respect the diversity of cultures”. It did not clearly delineate the powers and responsibilities

Table 2: Educational Attainment of FSM Population 25 years and over, by sex: 1980,1994, and 2000 (percent)

	1980	1994	2000
Total	100	100	100
No school	24.8	14.6	12.3
Pre-school	-	8.1	.0
Elementary	49.9	30.3	36.0
High school	17.3	28.7	32.3
College	8.0	18.2	18.4
<i>Males</i>	100	100	100
No school	20.2	11.7	9.8
Pre-school	-	6.9	1.0
Elementary	44.9	24.5	30.4
High school	22.5	31.8	34.4
College	12.5	25.2	24.4
<i>Females</i>	100	100	100
No school	29.5	17.6	14.6
Pre-school	-	9.4	1.0
Elementary	55.1	36.3	41.3
High school	12.0	25.5	30.3
College	3.4	11.2	12.7

Source: 2000 FSM Census of Population and Housing

of the states and the national government. A constitutional convention in 1990 sought to clarify the national/states issue by proposing that for education the role of the national government be limited to “setting minimum nationwide standards, coordinating state activities and foreign government assistance, providing training, technical assistance and support for post-secondary education programs”.

a National Level

5 Responsibility for carrying out the functions of the national government in education rest with the Division of Education. This Division of Education is part of the Department of Health, Education and Social Affairs (DHSA). The DHSA is headed by the Secretary who has overall responsibility for the operations of the department.

6 The DHSA has two divisions – health and education. Each division is headed by an Assistant Secretary who has sectoral responsibility for policy development and operational matters. The Division of Education works in collaboration with the State Departments of Education (SDOE), and the College of Micronesia (COM) in planning, development and promotion of national education goals that will stimulate economic growth and social development. These broad goals of the department are pursued through the activities of the two offices within the division – the Office for Education System Support and the Office of Vocational and Adult Education. Both are located within the same physical space and the work activities of both often overlap.

b Chuuk

7 The State Board of Education is appointed by the State government to provide overall leadership and guidance for the education system from pre-school through to high school and some elements of vocational education. The Board of Education is also responsible for the appointment of the Director of Education. The day to day administration for the education system rests with the Director of Education. The Director reports to the Board of Education and is responsible for the implementation of the overall policy directions set by the Board. There are four divisions working under the Office of the Director.

c Pohnpei

8 The state Board of Education is appointed by the State government to provide overall leadership and guidance for the education system from pre-school through to high school and some elements of vocational education. The Board of Education has been responsible for the development of the current Five Year Plan for education in Pohnpei state.

9 The day to day administration of the education system rests with the Director of Education. The Director reports to the Board of Education and is responsible for the implementation of the overall policy directions set by the Board. In practice, the Office of the Director is the critical policy making and implementation unit within the state structure. There are four divisions working under the Office of the Director.

d Yap

10 The SDOE underwent an extensive re-structuring during the late 1990's. The department has adopted the name State Enterprising Education Department (SEED) to indicate its intention of breaking with previous bureaucratic processes. The principal innovation has been to devolve greater power to the district levels. The state is divided into four districts that correspond to the four major language groups on Yap. The districts have been renamed 'Innovation Zones' and are headed by 'Inclusive Education Coordinators'. This is a new title for the former district inspectors—the intention is to promote a cultural change in the operation and functions of the district officers towards more innovation and flexible delivery of education services. A key function of the Coordinators is to provide mentoring to the school principals.

11 At the central state office the SEED structure has the following separate offices (i) Director's Office, (ii) Special Programs, (iii) Curriculum Designers and Instruction, (iv) Vocational Education, and (v) YapStar.

e Kosrae

12 The Director's Office of the Department of Education has the primary policy making function and responsibility for the allocation of resources within the department. To fulfill its role it (i) establishes policies and procedures for resource distribution, (ii) sets policies for curriculum standards for all grade levels in math, science and language arts, (iii) defines state certification standards for teachers, (iv) undertakes monitoring and evaluation of performance against departmental goals and objectives.

13 The Division of Instructional Services provides instruction at the pre-school, elementary and secondary levels and organizes training of school principals. It also has some responsibility for cooperating with the curriculum development and evaluation division in developing the core academic program.

14 The Division of Curriculum Development & Evaluation is responsible for (i) development of curriculum materials in subject clusters (mathematics, science, language arts, vocational education), (ii) evaluating and monitoring students progress, (iv) providing training to teachers to assist them in the implementation of curriculum standards, (v) development and maintenance of a comprehensive student data base.

15 The Division for Facilities and Special Services is responsible for administering and coordinating the departmental budget, construction and maintenance of school, library services, counseling services and staff development. The division is unique compared to other states because it has in-house capacity for the maintenance and repair of school buildings and facilities. Its perennial problem is that insufficient funds are made available for it to carry out the maintenance and repairs.

8.1.3 Public Expenditure on Education

a Sources of Finance

16 It is not so much the volume of funding that presents the greatest barrier to further education sector development but the structure of financing. The FSM is largely dependent on external sources of funding for its education system – without these funds the system in its current form would collapse. The external program funding is received through fragmented and unstable revenue sources.

17 Compact assistance began in 1987 and is distributed according to set formulas across the states. The formula is based on 70 percent of funds being distributed on a per capita basis between the states and the remaining 30 percent are distributed evenly amongst the four states. For education, Compact assistance is available from three funding sections; section 211(a), a special block grant under 221(b) and scholarships for post-secondary education under section 216(a)(3).

18 Section 211(a) provides the bulk of funds and allows considerable autonomy in the allocation of money. During the previous period of the Compact(1996-2001), \$40 million was available to education under this section. However, there is a provision that 40 percent of funds be used for ‘development purposes’ and the remainder be used for operating requirements (recurrent expenditure).

19 Section 221(b) was created to offset the loss of access to certain Federal grant programs – the FSM still enjoys access to both the grant programs and section 221 (b) funds. This special block grant is limited to the education and health sectors and is valued at \$7 million per annum.

20 Section 216(a)(3) funds provide scholarships for post secondary education and total approximately \$2 million annually. The funds are distributed to the states who are responsible for administration.

b U.S. Federal Grants

21 In addition to the Compact funds the education sector in the FSM has been eligible to receive funding from a range of US federal government programs. In education, funding is provided for many areas including special education, teacher training, adult education, vocational education and curriculum development. Some of these funds go directly to the national government, others directly to the states while others flow through independent institutions such as PREL.

22 Many programs are well conceptualized, internally consistent and logical but not always adapted to the FSM context. All current programs are subject to change and possible termination. Where these programs are used as adjuncts to the core financing of an educational system (as they are in the US) their unstable nature is not threatening to the education systems. However, in the FSM these programs have become essential to the delivery of education services. Despite these limitations the money that has flowed from these U.S. federal grants has managed to provide the extra cash that can fund activity that is in some ways innovative. It is often times the only source of finance that enables the education sector to provide for something more than teacher salaries

23 Local revenue on the other hand constitutes a very small part of all finances. At the national level, funding is provided for the office of vocational and adult education and the T-3 training program. In some states no local revenue is

Table 3: Typical Annual Distribution of Compact Funds for Education, 1996-2001

Compact Section	\$ million
Section 211 (a)	8
Section 221 (b)	7
Section 216 (a) 3	2
Total	17

Source: National and State Proposed Budgets

Table 4: National Education Proposed Budget by Office and Federal Programs, 2004

Office	\$
Education Systems Support	89197
Vocational Education	250415
Nat. standards testing program	77185
Dev. Ed ties to economic growth	24949
College admission test counseling	38962
National education standards	24949
FSM history development	36872
<i>Sub-total</i>	<i>542529</i>
<hr/>	
Federal Programs	
Special Education (1997 figure)	548813
Adult Education	72001
Career Resource Network	65380
Library Services	40000
WEI	228421
Bilingual Education	100000
Sub-total	1,054,615
Total	1,596,774

Source: Proposed Budget 2004, FSM,

used for funding education.

c National Education Budget

24 The national education budget provides resources for the Division of Education within the Department of Education, Health and Social Affairs. The Division of Education is comprised of the Education Support System and the Office of Vocational and Adult Education. Funding for both these offices is provided from Compact 211 funds. The Office of Vocational and Adult Education has a national office and a presence in each of the states.

25 The bulk of the budget at the national level (76%) is sourced from US federal grants. These programs provide an annual stream of funding for education. They are however uncertain in their size and continuity and create problems for long term planning which is a key function of the Division of Education.

Table 5: Pohnpei State Education Budget by Division, 2003

Item	Appropriation (\$ million)	Proportion of total educa- tion budget (percent)
Pre-school & elementary education	3.86	68
Secondary	1.48	26
Administration	0.31	6
Total	5.65	100.0

Source: Proposed Executive Budget Fiscal Year 2000, Pohnpei State Government

d Pohnpei budget

26 Education consumed approximately 24 percent of the operations budget of Pohnpei state in 2003 (this was considerably down on the 33% share it consumed in 1999). The high share reflected the high staff component of education with more than 44 percent of all state employees being employed within the education branch. This reflects a high degree of resource commitment on the part of the state towards the education sector and human resource development within Pohnpei.

27 Elementary education and pre-schools absorb 68 percent of the education budget with secondary accounting for 26 percent as shown below. The structure of expenditure across sub-sectors seems well balanced and the component of administration costs is reasonably balanced.

28 Expenditure for personnel absorbs more than 90 percent of the total education budget leaving approximately \$540,000 to cover other items such as travel, materials and maintenance.

Table 7: Yap State Education Budget, 2003

Item	Appropriation \$	Proportion of total education budget (%)
Personnel	427054	94
Contractual Services	921720	21
DOE	508440	20
Fixed assets	137770	5

29 The 2002 regular budget allocation for education was approximately \$5.98 million. The total budgeted recurrent expenditure for Chuuk in 2002 for personnel and activities was \$25.76 million. The SDOE also received additional funds through Federal grants but these are not show as part of the state budget papers. As a guide however, in 1999 federal grants were estimated at approximately \$2 million. In addition, there were also special block grants for education totaling approximately \$1.4 million.

30 Total* Elementary education consumed 63.4 percent of all funds and secondary 27 percent of all funds. The state budget does not show expenditure of federal funds. Salaries account for 96 percent of the state budget for education. Most of the funds are consumed by the elementary and secondary school salaries leaving very little for instructional materials and maintenance.

f Yap budget

Table 9: Yap State Core Education Budget by Division, 1998*

	Appropriation \$ million	Proportion of Total Education Budget (percent)
DOE Administration	77,175	3.2
Curriculum & Instruction	181,548	7.4
Doe Budget & Supply	32093	1.3
Yap High School	427288	17.5
Outer Islands High School	200702	8.2
Table 6: Chuuk State Education Budget, 2002		
Table 7: Yap State Education Budget, 2003		
Table 8: Yap State Education Budget, 2002		
Table 9: Yap State Core Education Budget by Division, 1998*		
Table 10: Yap State Core Education Budget by Division, 1998*		
Table 11: Yap State Core Education Budget by Division, 1998*		
Table 12: Yap State Core Education Budget by Division, 1998*		
Table 13: Yap State Core Education Budget by Division, 1998*		
Table 14: Yap State Core Education Budget by Division, 1998*		
Table 15: Yap State Core Education Budget by Division, 1998*		
Table 16: Yap State Core Education Budget by Division, 1998*		
Table 17: Yap State Core Education Budget by Division, 1998*		
Table 18: Yap State Core Education Budget by Division, 1998*		
Table 19: Yap State Core Education Budget by Division, 1998*		
Table 20: Yap State Core Education Budget by Division, 1998*		
Table 21: Yap State Core Education Budget by Division, 1998*		
Table 22: Yap State Core Education Budget by Division, 1998*		
Table 23: Yap State Core Education Budget by Division, 1998*		
Table 24: Yap State Core Education Budget by Division, 1998*		
Table 25: Yap State Core Education Budget by Division, 1998*		
Table 26: Yap State Core Education Budget by Division, 1998*		
Table 27: Yap State Core Education Budget by Division, 1998*		
Table 28: Yap State Core Education Budget by Division, 1998*		
Table 29: Yap State Core Education Budget by Division, 1998*		
Table 30: Yap State Core Education Budget by Division, 1998*		
Table 31: Yap State Core Education Budget by Division, 1998*		
Table 32: Yap State Core Education Budget by Division, 1998*		
Table 33: Yap State Core Education Budget by Division, 1998*		
Table 34: Yap State Core Education Budget by Division, 1998*		
Table 35: Yap State Core Education Budget by Division, 1998*		
Table 36: Yap State Core Education Budget by Division, 1998*		
Table 37: Yap State Core Education Budget by Division, 1998*		
Table 38: Yap State Core Education Budget by Division, 1998*		
Table 39: Yap State Core Education Budget by Division, 1998*		
Table 40: Yap State Core Education Budget by Division, 1998*		
Table 41: Yap State Core Education Budget by Division, 1998*		
Table 42: Yap State Core Education Budget by Division, 1998*		
Table 43: Yap State Core Education Budget by Division, 1998*		
Table 44: Yap State Core Education Budget by Division, 1998*		
Table 45: Yap State Core Education Budget by Division, 1998*		
Table 46: Yap State Core Education Budget by Division, 1998*		
Table 47: Yap State Core Education Budget by Division, 1998*		
Table 48: Yap State Core Education Budget by Division, 1998*		
Table 49: Yap State Core Education Budget by Division, 1998*		
Table 50: Yap State Core Education Budget by Division, 1998*		
Table 51: Yap State Core Education Budget by Division, 1998*		
Table 52: Yap State Core Education Budget by Division, 1998*		
Table 53: Yap State Core Education Budget by Division, 1998*		
Table 54: Yap State Core Education Budget by Division, 1998*		
Table 55: Yap State Core Education Budget by Division, 1998*		
Table 56: Yap State Core Education Budget by Division, 1998*		
Table 57: Yap State Core Education Budget by Division, 1998*		
Table 58: Yap State Core Education Budget by Division, 1998*		
Table 59: Yap State Core Education Budget by Division, 1998*		
Table 60: Yap State Core Education Budget by Division, 1998*		
Table 61: Yap State Core Education Budget by Division, 1998*		
Table 62: Yap State Core Education Budget by Division, 1998*		
Table 63: Yap State Core Education Budget by Division, 1998*		
Table 64: Yap State Core Education Budget by Division, 1998*		
Table 65: Yap State Core Education Budget by Division, 1998*		
Table 66: Yap State Core Education Budget by Division, 1998*		
Table 67: Yap State Core Education Budget by Division, 1998*		
Table 68: Yap State Core Education Budget by Division, 1998*		
Table 69: Yap State Core Education Budget by Division, 1998*		
Table 70: Yap State Core Education Budget by Division, 1998*		
Table 71: Yap State Core Education Budget by Division, 1998*		
Table 72: Yap State Core Education Budget by Division, 1998*		
Table 73: Yap State Core Education Budget by Division, 1998*		
Table 74: Yap State Core Education Budget by Division, 1998*		
Table 75: Yap State Core Education Budget by Division, 1998*		
Table 76: Yap State Core Education Budget by Division, 1998*		
Table 77: Yap State Core Education Budget by Division, 1998*		
Table 78: Yap State Core Education Budget by Division, 1998*		
Table 79: Yap State Core Education Budget by Division, 1998*		
Table 80: Yap State Core Education Budget by Division, 1998*		
Table 81: Yap State Core Education Budget by Division, 1998*		
Table 82: Yap State Core Education Budget by Division, 1998*		
Table 83: Yap State Core Education Budget by Division, 1998*		
Table 84: Yap State Core Education Budget by Division, 1998*		
Table 85: Yap State Core Education Budget by Division, 1998*		
Table 86: Yap State Core Education Budget by Division, 1998*		
Table 87: Yap State Core Education Budget by Division, 1998*		
Table 88: Yap State Core Education Budget by Division, 1998*		
Table 89: Yap State Core Education Budget by Division, 1998*		
Table 90: Yap State Core Education Budget by Division, 1998*		
Table 91: Yap State Core Education Budget by Division, 1998*		
Table 92: Yap State Core Education Budget by Division, 1998*		
Table 93: Yap State Core Education Budget by Division, 1998*		
Table 94: Yap State Core Education Budget by Division, 1998*		
Table 95: Yap State Core Education Budget by Division, 1998*		
Table 96: Yap State Core Education Budget by Division, 1998*		
Table 97: Yap State Core Education Budget by Division, 1998*		
Table 98: Yap State Core Education Budget by Division, 1998*		
Table 99: Yap State Core Education Budget by Division, 1998*		
Table 100: Yap State Core Education Budget by Division, 1998*		

* No breakdown has been possible of 21(b) funds
 Source: Executive Budget Fiscal Year 2002, Yap State Government

31 The Yap state budget is notable for the relatively smaller share of funds that are allocated for personnel salaries. Even when including contractual services as a disguised form of salaries, Yap still spends less than 75% of its budget for this item.

32 Expenditure for core SDOE functions have traditionally been focused on elementary education. Elementary schools on Yap proper received 21 percent of funds and the outer islands received 24 percent. The 45 percent of total education funds available for elementary education is less than that made available in other states which average around 60 percent. There is a large component of funds going to curriculum and instruction and this reflects the intensive efforts of SDOE to develop its own curriculum. The high schools combined received 29 percent of funds with Yap High School receiving 18 percent of all education funds.

g Kosrae budget

33 Education expenditure accounts for approximately 30% of the total state budget. On a divisional basis, Kosrae shows a comparatively low share of expenditure for instructional services (37 percent) which incorporates teacher salaries. However, this masks the salaries component within the federal programs.

34 There are 234 full time employees within the SDOE in Kosrae representing 45 percent of all state employees (538).

8.1.4 School-age populations projections - limited growth

35 The entire population of a nation is the target group of an education system. Beginning from pre-school through to adult education programs, education systems and planners need to take account of the size and location of the population groups they are trying to reach. Most governments aim for high par-

Table 10: Kosrae State Education Budget by Division, 2003

Item	\$	Proportion of total education budget (%)
Director's Office	131287	4
Instructional Services	1367721	37
Curriculum Development	190310	5
Facilities and Services	125631	3
Federal Programs	1901987	51
Total	3,716936	100.0

Source: Executive Budget Fiscal Year 2003, Kosrae State Government

Table 11: Elementary School Aged Children (6-13 years), 1994-2010

State	1994	1995	1996	1997	1998	1999	2000	2005	2010
Kosrae	1745	1728	1702	1660	1584	1562	1507	1410	1559
Pohnpei	7332	7352	7399	7465	7529	7583	7626	7708	8167
Chuuk	12741	12768	12780	12798	12826	12841	12834	12876	13865
Yap	2377	2352	2329	2312	2303	2297	2294	2299	2388
Total	24195	24200	24210	24235	24242	24283	24261	24293	25979

Source: ADB Human Resource Development Study, 1999

ticipation rates within their elementary and secondary education systems. Education absorbs considerable amounts of the state's human and financial resources. By measuring the current and projected population base for the elementary and secondary education systems, education policy makers can define the current and potential demand for resources in these sectors.

36 Projections for the school age population are presented here based on analysis of data from the 1994 census. These projections show very little growth in the elementary school age population cohort. From 1994 to the year 2010 the national elementary age cohort is projected to grow from just over 24,000 to less than 26,000 persons. This represents a growth in the cohort of approximately 0.5 percent per annum. On a state level, both Yap and Kosrae record a drop in the total elementary school aged population cohort between 1994 and 2010. Chuuk is the only state that records a significant increase in population which will occur in 2005-2010. The accuracy of the projection for Chuuk in this latter period may be questionable.

37 Aggregate growth in potential for elementary education is minor. This should mean that relatively few funds will be required to extend educational coverage. What the population data does not show is the internal movement of populations within and between island states. For example, if there is significant movement of school aged populations from outer island or remote areas to cen-

Table 12: Secondary School Aged Children, 1994-2010

State	1994	1995	1996	1997	1998	1999	2000	2005	2010
Pohnpei	3496	3444	3409	3401	3416	3452	3485	3703	3772
Chuuk	5289	5444	5617	5777	5903	5998	6049	6247	6280
Yap	1079	1098	1120	1138	1148	1147	1140	1123	1127
Kosrae	704	736	770	798	824	836	841	757	683
Total	10568	10722	10916	11114	11291	11433	11515	11830	11862

tral areas there may well be a need for the reallocation of resources within each island state.

38 As with the elementary school population, there is minimal growth for secondary education population cohort projected over the period 1994-2001. The total target cohort for the secondary system grows a little over 1200 students during a 16 year period from 1994 to 2010. The only significant growth in potential demand is to be found in Chuuk: the Chuukese secondary education cohort grows by almost 1000 during the period 1994-2010. These figures however

Table 13: Public Elementary School Enrollments by Sex, FSM: SY
1997/1998 to 2001/2002

	Male	Female	Total
FSM			
1997-1998	8,721**	7,695**	24,037
2000-2001	8,465	7,636	16,101*
2001-2002	8,806	7,986	16,792*
Yap			
1997-1998	1,126	968	2,094
2000-2001	1,149	989	2,138
2001-2002	1,531	1,391	2,922
Chuuk			
1997-1998	6,726	5,940	12,666
2000-2001	6,518	5,867	12,385
2001-2002	6,470	5,802	12,272
Pohnpei			
1997-1998	Na	Na	7,621
2000-2001	Na	Na	Na
2001-2002	Na	Na	Na
Kosrae			
1997-1998	869	787	1,656
2000-2001	798	780	1,578
2001-2002	805	793	1,598

Source: Dept. of Education in the respective states.

* Not including Pohnpei

** Pohnpei split by gender not available as at October 2003

need to be updated by an analysis of the more recent data collected from the 2000 census.

a Elementary Education

i Enrolment trends

39 Public school enrolment trends for elementary education show stable enrolment patterns with the exception of Yap in 2001-2002 which had a nearly 50% increase in its enrolments for that year.

ii Elementary schools

40 There are 166 elementary schools in the FSM of which more than 50% are located in Chuuk. Kosrae has the smallest system with only seven schools of which one is private. While the actual number of schools is small, the number may need to be reduced further to increase the efficiency of the system. Villages are seen as the natural catchment area for a school. In some cases provision of elementary education at a village or hamlet level is often driven by non-education related factors – including furthering village prestige and/or securing an important stream of government derived income via the employment of teachers who resided within the village. A school consolidation program may prove beneficial to the efficiency of elementary schools.

41 The elementary school network is small in terms of aggregate number of providers. This suggests that coordination of the schools and communication between school and SDOE should be easier than for larger systems. However, the education system is beset by the problems that affect the public administration of all types of services in micro-states. These include;

- geographical dispersal of schools and populations makes contact difficult and costly
- the schools are managed on a fragmented basis by the different SDOEs
- the government administration structure exists parallel to an older and

Table 14: Elementary Schools by State, 2001-2002

State & Year	Elementary Schools
National	166
Yap	33
Chuuk	90
Pohnpei	36
Kosrae	7

Table 15: Language Arts Results-Mean Score by percentage and academic year

	1995	1996	1997	2000
Grade 6	49%	52%	51%	52%
Grade 8	61%	61%	59%	57%

sometimes contending traditional power structure

- economies of scale impinge on quality aspects of service delivery

iii Learning outcomes of elementary schools

42 The learning outcomes of elementary schools are very poor. The FSM National Standardized Test results are the most useful guide to the quality of the education provided by the public elementary system. The purpose of these tests is to assess and evaluate the outcome of the National Curriculum Minimum Standards and to identify positive educational trends and progress in the learning attainment. The result based analysis is intended to allow individual FSM States to determine their own program of instruction while ensuring accountability toward national goals. The tests are applied to grades 6, 8, and 10 in the FSM public elementary and secondary schools. The moderated results for language arts were better than for mathematics. The table below shows the national results and their relatively static trend during a 5 year period between 1995-2000.

43 When these results are benchmarked against U.S. standards the weakness of the learning outcomes is fully revealed. For example, a comparison of graded content area reading comprehension for 8th grade with U.S. standards showed the extent of the discrepancy in educational performance between the two systems. Comparisons with US student performance for the period 1995-1997 in reading and comprehension reveal the weakness FSM student performance. FSM grade 8 students were achieving approximately 63% of US standards for grade 2 and 39% against expected grade 6 standards.

44 National Mathematical performance at grades 6 and 8 were lower than for language arts. During the testing period 1997 –2001 national grade 6 mathematics performance ranged from 38 percent to 40 percent, while national grade 8 mathematics performance ranged from 47 percent to 48 percent.

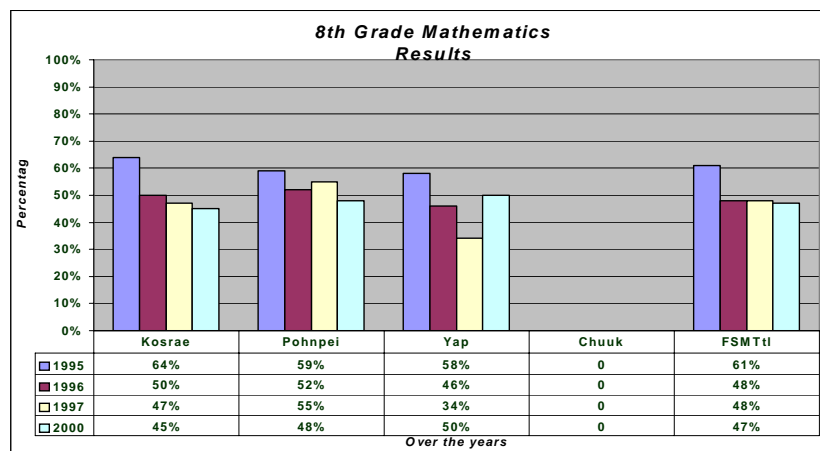


Figure 1: 8th Grade Mathematics Results

Table 18: Number of Secondary Schools

State & Year	1997-1998	2001-2002
Total	24	28
Yap	4	4
Chuuk	14	18
Pohnpei	5	5
Kosrae	1	1

8.1.5 Secondary Schools

a Enrolment trends

45 Public school enrolment trends for secondary education show some growth patterns particularly in Yap and Chuuk. Lack of recent data from Pohnpei was unable to complete the national picture for secondary education.

46 The secondary sector is the most likely to experience an expansion of effective demand for its services in the years to come. The ADB Human Resource Study, 1999 calculated the secondary level Gross Enrolment Ratio (GER) for 1997-98 to be approximately 61%. The GER of 61.3 percent indicates that the actual coverage gap is likely to be considerably higher given above the level school age enrolments as a result of repeaters and returning drop-out students. Given the near universal coverage of the elementary system the transition rates to high school are quite low.

47 Access to the secondary level is often related to the distance of the nearest secondary school from communities. The small number of secondary schools cater for a widely dispersed client base. The exception is Kosrae state and until recently it had a very high participation rate at the secondary level. An emerging factor has been the tightening of entrance requirements by public schools, the most dramatic impact being felt at Pohnpei. The drive to promote quality at the secondary level has been pursued by excluding the weakest students from gaining entry. This policy reflects the real concern by the secondary school and SDOE that the low caliber of student being produced by the elementary system is eroding the capacity of the secondary level to reach basic standards for any of its graduates.

48 However, in the medium to longer term the number of enrolments at the secondary level will tend to increase as the universalisation of secondary education becomes a more desirable objective for communities. This will place greater

Table 19: Public Secondary School Enrolments by Sex*, FSM: SY1997/1998 to 2001/2002

State ¹ & Year	Total	Male	Female
FSM			
1997-1998	5,110	na	na
Yap			
1997-1998	707	361	346
2000-2001	821	458	363
2001-2002	822	462	360
Chuuk			
1997-1998	2,382	1,106	1,276
2000-2001	2,399	1,122	1,277
2001-2002	2,904	1,525	1,379
Pohnpei*			
1997-1998	1,320		
Kosrae			
1997-1998	701	380	321
2000-2001	868	532	336
2001-2002	714	381	333

Source: Dept. of Education in the respective states.

* Pohnpei data not available as at October 2003

** Pohnpei split by gender not available

pressure on schools and their facilities.

b Learning outcomes of secondary schools

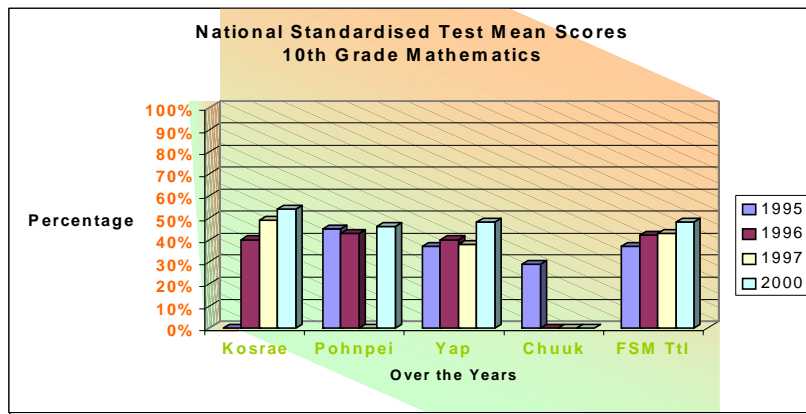
49 Similar to elementary schools the learning outcomes of secondary schools are very poor. The FSM National Standardized Test results are the most useful guide to the quality of the education provided by the public elementary system. The moderated results for language arts were better than for mathematics. The chart below shows the national results and their trend upwards during a 5 year period between 1995-2000. As for elementary schooling, performance is considerably better in language arts than mathematics.

50 For mathematics secondary schools, the mean score or students has remained well under 50% during the period 1995-2000. There has however been a moderate improvement of the mean score during that period. This does suggest some improvement in outcomes albeit coming from a very low benchmark.

8.1.6 School Teachers

51 Teachers are critical to the delivery of a quality education system. There is universal agreement on this point in the FSM as in other countries. The FSM has allocated considerable resources (mostly Compact and Federal funds) to the training, professional development and payment of teachers within the education system. The quality of teaching however remains a vexed issue at all levels.

52 The supply of teachers has stabilized and is possibly in decline across the FSM. Incomplete data at the national level does not permit detailed analysis beyond 1997-98, but the leveling off of enrolments has had a stabilizing effect on the demand for teachers. There is also an apparent improvement in the effi-



ciency of the Chuuk system with a decline in the number of teachers employed.

53 The number of unqualified teachers at all educational levels continues to act as a serious impediment to the improvement of educational quality. Nearly 30 percent of teachers nationally do not possess any post-secondary qualifications. The situation is particularly critical in Yap and Chuuk where more than 39 percent of teachers do not possess a degree from a post-secondary institution.

54 All states have issued directives and guidelines requiring unqualified teachers to obtain their Associate Arts (AA) and Associated Science (AS) degrees or lose their place as teachers. In practice, most teachers have not obtained their qualifications and the SDOEs have not replaced the teachers. The failure to implement this policy has been due to a lack of qualified teachers to replace the unqualified and partly a reluctance by the SDOE to engage in conflict with

Table 19: Elementary Teachers by State: SY 1995-96 to SY 1997-98

School	1997-98	1996-97	1995-96
FSM	1,486	1,526	1,540
Elementary	1,393	1,402	1,426
Private Elementary ¹	93	124	114
Kosrae	120	132	134
Elementary	116	128	129
Private Elementary	4	4	5
Pohnpei	350	377	368
Elementary	328	326	330
Private Elementary	22	51	38
Chuuk	814	814	830
Elementary	766	766	782
Private Elementary	48	48	48
Yap	202	203	208
Elementary	183	182	185
Private Elementary ³	19	21	23

Notes: 1 May include preschool
 2 In SY97-98 27 teachers were reported and added to total; no sort on school level
 3 Includes high school

Table 20: FSM Teachers by Degree Status, 1998-99

Qualification (%)	Yap	Chuuk	Pohnpei	Kosrae	FSM Total
No degree	40.2	39.5	11.3	8.9	29.0
AA/AS degree	48.8	45.8	70.9	58.3	54.5
BA/BS degree	10.0	13.3	17.0	31.5	15.5
MA/MS degree	1.1	1.3	0.8	1.2	1.1
Ph.D.	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

Source: Position Paper Critical Issues Affecting Education within FSM, Makir Keller, Executive Director Special Education Programs

teachers and school communities.

55 Due to a shortage in the supply of qualified teachers, the state and national governments have accepted an AA or AS degree from the College of Micronesia (COM) as the basic prerequisite for teaching. However, most AA and AS graduates have not received any instruction or practical experience in teaching as part of their two year courses at the COM. These graduates cannot be expected to be as effective within the classroom as graduates who received training in the theory and practical aspects of pedagogy. This has resulted in the wide spread perception that the teachers with an AA/AS degree are not necessarily superior to those without an AA or AS degree. This view was expressed by principals, state education officials and community organizations. This is not surprising given that the majority of teachers have not received any teacher training.

56 All states have (i) a large number of uncertified teachers, and (ii) a large number of certified teachers that have not received the training to properly undertake their duties as teachers. The SDOEs are constantly encouraging teacher certification according to the current criteria.

8.1.7 Instructional Materials at Schools

57 The primary instructional tool available to teachers is the curriculum framework, produced by the SDOEs. The frameworks list the curriculum program goals and sub-goals, defined as competencies to be achieved within a specific subject area. In many cases some detail is given suggesting an outline for each course section. Beyond this list of educational objectives and outcomes, teachers may find themselves left to their own devices. As many teachers have no pedagogical training, their ability to turn the curriculum framework into a teaching program must be questionable.

58 There is a shortage of adequate textbooks and other instructional materials in all states. All divisions of elementary education reported a textbook

shortage in schools. The development of state specific curricula requires the development of specific textbooks however, the economies of scale have apparently prevented this happening. Where textbooks have been produced there is generally no budgetary allocation for the publication of textbooks. The end result is that textbooks seem only to be used by teachers to help them structure lessons. This greatly affects the ability of children to continue their learning out of school and to involve their families in the learning process through homework.

59 The SDOE curriculum divisions have attempted to fill this void in instructional aids by assembling collections of material to assist teachers. In-service training sessions provide a mechanism for developing and distributing these materials.

8.1.8 College of Micronesia

60 The COM is a multi-campus institution with the national campus located in Palikir, Pohnpei and branch campuses located in each state. Originally established to develop teacher in-service teacher training in 1963, the COM now defines its mission more broadly “to provide educational opportunity – academic, vocational and technical- for all people”. The COM was originally part of the Community College of Micronesia (CCM) that included campuses in Palau and Marshall Islands. It established itself as an independent public corporation in 1993.

61 The COM is governed by a Board of Regents appointed by the FSM government. The Administration is headed by the President who reports directly to the Board of Regents. The President is responsible for the day to day administration of the institution. Reporting directly to the President are two Vice-Presidents (one responsible for instructional activities and the other for student affairs. In addition to a national campus the COM-FSM is comprised of four

Table 21: Revenue and Expenditure Patterns of COM-FSM (\$ million)

Revenue/Expenditure	1994	1995	1996	1997	1998	2004
Total Revenue	3.9	4.45	4.57	5.56	6.57	9.90
Tuition fees component	2.2	2.52	2.43	2.41	3.19	4.8
Total Expenditure	3.9	3.79	4.40	4.83	5.70	9.9
Wages and salaries component	2.2	1.90	2.1	1.86	2.13	N/a
Surplus/(Deficit)	0	0.66	0.18	0.75	0.87	0

Source: COM – FSM (proposed budget 2004), HRD Study (1999)

state campuses.

62 Tuition fees have always been the biggest single source of income for the COM and account for close to 50 percent of all revenues. It is important to note the tuition fees component is subsidized by the US Pell grant system. Students who attain and maintain satisfactory academic performance are entitled to grants from the US government. In this way the COM revenues from tuition fees do not represent a sustainable source that is independent of US government assistance. Even still, the COM-FSM has budgeted for a \$ 4 million dollar injection of revenue from government in order to balance its proposed \$9.9 million expenditures for the year 2004. On the positive side, wage related costs have been consistently kept to around 50 percent of all expenses revealing a healthy component of non-wage related expenditure.

63 The COM awards Associate Degrees to students who complete a two year program of study (many students however need to complete preparatory courses before beginning the degree program).

Associate of Arts Degrees (AA)

Liberal Arts (LA)

Liberal Arts/Health Career Opportunity Program (LCHOP)

Liberal Arts/Education

Liberal Arts/Media Studies

Micronesian studies

Teacher preparation

Associate of Science Degrees (AS)

Accounting

General Agriculture

Business Administration

Computer Information Systems

Early Childhood Education

Hotel and Restaurant Management

Marine Science

Teacher Education-Elementary

64 Certificates of achievement are also awarded to students completing a one year program of study. Third year certificates of achievement are offered in subject areas including;

- Elementary education
- Special Education
- Educational Leadership Academy

65 Certificates of achievement are also offered in some other select subject areas including;

- Pre-school Teacher Education
- Vocational Education Programs

66 Enrolments are distributed across the national campus at Palikir on Pohnpei and the four state campuses. The national campus enrolls approximately 800 full-time students per semester in either degree programs or programs leading to a certificate of achievement. COM –FSM Chuuk serves approximately 670 part-time students each semester, offering degree programs in teacher education as well as four certificate of achievement programs. COM-FSM Pohnpei enrolls approximately 300 students each semester in various degree and certificate programs. The COM-FSM Kosrae and Yap campuses are both significantly smaller each enrolling between 100-150 students per semester.

8.2 Strategic Goals, Policies and Outcomes

8.2.1 Introduction

67 The ongoing task for the education sector is to improve the quality of education and to make education relevant to the economic and social needs of the FSM. The education system has made significant efforts at addressing these complex needs. However, the elementary and secondary school systems are having great difficulty in producing graduates with the knowledge and competencies needed either for productive participation in society or to pursue further studies.

68 The issues to be addressed by the education sector have been grouped into five strategic goals. A rationale is provided for each of the strategic goals , accompanied by an outline of planned activities to improve the current situation and the outcome measures that may be used to assess attainment of the strategic goals.

8.2.2 Strategic Goal 1: Improve the quality of learning in the FSM

a Rationale

69 While the education system has achieved near-universal coverage in basic education, the quality of education is varied across levels. The available performance indicators for learning attainment suggest the elementary level is failing to produce graduates of the standard expected by either the national or state education standards frameworks.

70 The FSM National Standardized Test results are the most useful national guide to the quality of the education provided by the public elementary

system. Tests for language arts and mathematics during the period 1995-2002 show performance to be especially low in mathematics. Language arts during the same period showed higher scores for Grade 6 and Grade 8, with a steady national score improvement across Grades 6, 8 and 10 suggesting developmental growth in the English language.

71 The public secondary system is inheriting students from the elementary system who are already lagging well behind in performance. This critical failure at the entry point of the education system makes any ongoing education problematic. The quality problems of the secondary system are also highlighted by weak performance in the National Standards Tests. Mathematics scores were shown to be particularly low across the three testing years 1995-2002.

72 The vocational education and post-secondary systems also have problems with the quality of their educational outcomes. Both are critically affected by the weaknesses of the secondary education system. In vocational education, the quality of teaching and the poor facilities are further impediments to producing high quality graduates.

b Proposed Activities

73 Improving the quality of the education system means improving its outcomes in terms of providing foundation knowledge (such as literacy and numeracy) as well as making it more relevant to the life long experiences of its students. There are three activities for this strategic focus area:

- Provision of instruction and support services by schools – the instruction provided by teachers in schools remains the most significant aspect of education service delivery. The states retain their primary responsibility for provision of classes in all public schools and play a supporting role for the functioning of private schools
- Provision of materials for instruction and out of school administrative support – the state and national departments of education will continue to provide the essential resourcing of schools and teachers. Existing materials will be revised and new ones introduced as required.
- Development of a school maintenance scheme by each state – this will enable states and schools to monitor the condition of their physical facilities. It will also allow them to plan and budget for their upkeep and to seek the participation of communities in this process.

8.2.3 Strategic Goal 2: Improve the quality of teaching in the FSM

a *Rationale*

74 International research indicates that the teacher and the quality of teaching are among the most important forces in the educational process, perhaps even the most important. The importance of teacher professional growth in the process of national development has been well documented in the literature. The data available for teachers in the FSM shows that many teachers have a significantly lower level of qualification than is required by existing standards. Further, that the training they have received is unlikely to have included a pedagogical component. Whether the immediate task is that of building community participation, or of coping with a lack of textbooks and materials, or managing increasingly large classes, or struggling with totally inadequate infrastructure, the teachers in the FSM are largely on their own – isolated personally, professionally and, in the context of outer islands, even culturally isolated.

75 The number of unqualified teachers at all educational levels continues to act as a serious impediment to the improvement of educational quality. Nearly 30 percent of teachers nationally do not possess any post-secondary qualifications. The situation is particularly critical in Yap and Chuuk where more than 39 percent of teachers do not possess a degree from a post-secondary institution.

76 High levels of teacher absenteeism and low levels of teacher motivation are recurring problems across all states. While the impact of this phenomenon may vary in its impact across schools it remains a significant problem within all of the states. The official reasons for absenteeism are similar across all states – funerals, significant community celebrations, sickness and attending to sick family members. However, valid reasons for teacher absenteeism may be abused by many teachers.

77 Teachers, like professionals in other fields, require in-service training and professional development programs that specifically target their needs and also the developing needs and requirements of the system as a whole. Teacher guides, manuals, modules and other materials can all play a role in improving teacher classroom effectiveness, but regular training is essential if those materials are to create and provide for the desired impact.

78 Training is essential also if teachers are to move beyond the limitations of their own experience and embrace new methods that are more suitable to the needs of a modern and diversified society and economy. Many developing countries have experienced and are experiencing the problems that now beset many FSM teachers. They are being encouraged to promote student cognitive development and intellectual skills but they themselves are products of a hierarchical, authoritarian tradition of teaching encountered during their own school days and while undertaking teacher training programs. Teachers must be able “to

comprehend subject matter for themselves, be able to elucidate subject matter in new ways, recognize and partition it, clothe it in activities and emotions, in metaphors and exercises, and in examples and demonstrations, so that it can be grasped by students.” The ongoing professional development of teachers must not only provide the basics of new methods but also encourage a vision that allows a teacher to take a role alongside the student rather than a role in center stage – a role as facilitator and guide within the learning process. The teacher’s role in the future must be as much about ensuring that students “learn how to learn” as much as it has been about learning this fact or that. In the longer-term, this approach is essential if the quality of student learning is to be maximized.

79 In order for this approach to bear fruit, it will also be essential to provide ongoing professional development programs for head teachers. School principals must have the necessary expertise to effectively allocate resources, including personnel, and to mentor and support teachers so as to maximize learning opportunities for all children.

b Proposed Activities

- *Introduction of a revised teacher certification system* – the current system for recognizing teacher qualifications has significant weaknesses. A national system is to be introduced that will be based on the consideration of actual competencies required by individuals in order to perform effectively as teachers.
- *Develop action guides for teachers based on curriculum frameworks for core curriculum areas* – the guides will be particularly useful for teachers experiencing difficulties in developing lesson plans and organizing their schedule to cover the requirements of their given syllabus
- *Introduce performance oriented employment conditions for teachers* – a review of existing legal and administrative frameworks governing conditions of teachers will be undertaken. The review will lead to legislative and administrative reform to introduce performance oriented employment conditions for teachers.

8.2.4 Strategic Goal 3: Consolidate performance monitoring and data based decision-making system

a Rationale

80 To be effective, education requires planning, monitoring and evaluation, and education management information (EMIS) systems to be in place and functioning in order to target, track and assess the many ingredients that compose quality education and effective schools.

81 Educational planning is, at base, directing appropriate resources to appropriate targets to accomplish the stated government goals and strategy. Good planning requires accurate and timely information, correct allocative guidelines, and regular analysis of problems and progress. The lack of adequate education data impedes sound decision-making at all levels in the education system. The education sector currently lacks a reliable system for the regular and systematic collection and dissemination of information and data. The current EMIS system suffers several shortcomings:

- Data quality and accuracy: Inconsistent methods for data collection and statistical calculation are employed, with no means of error checking or validation. There is no consistent data collection instrument, and existing instruments neglect important areas of information.
- Fragmented databases: There is no one database that consolidates most of the information needed to analyze the education system. Other data bases, developed as one-off surveys conducted for U.S. federal programs or periodic surveys conducted by other government agencies (e.g. Population Census), often contain education-related data but may not be readily obtained or easily combined with existing education systems data.
- IT equipment: There is unequal local education office access to IT equipment and trained human resources to prepare material in forms accessible to decision makers.

82 The transparency of the education system needs to be enhanced through a regularized periodic reporting system. Government policy makers will be in a better position to assess the internal and external efficiency of the system if the process and educational outcomes of the education system are transparent. This will enable a better understanding of required improvements, through better allocation of funds and hence improved cost efficiencies.

83 A national school based reporting system can monitor progress made in improving the quality of education, and can identify concerns and proposed solutions. Setting clear and attainable goals for student performance will make the education system accountable to the community through an effective reporting system.

84

85 Outcome Measures – Consolidate performance monitoring and data based decision-making system

b Proposed Activities

- Review and consolidate existing state, and national efforts for the establishment of education management information systems – there is a di-

iversity of education management information systems across the states making it difficult at present to collect and analyze data at a central level. A synthesis of the existing approaches will result in an integrated data base for the FSM that will enable policy makers to (I) monitor and compare progress, and (ii) better diagnose weaknesses.

- Introduction of a school accreditation system that specifies the benchmark standards required for any school to attain in order to be accredited by government as meeting minimum service requirements – the quality of education is greatly affected by the school facilities, systems, human resources and interactions with communities. The school accreditation system will establish the required standards that all schools in the FSM will need to attain in order to be considered to be meeting the minimum requirements of the schooling system.

8.2.5 Strategic Goal 4: Strengthen participation and accountability of the education system to communities

a Rationale

86 The education system needs to be made more accountable for the type and quality of the educational system. National and state education offices, schools, principals and teachers need to become accountable for educational outcomes and student achievement. In order to ensure accountability, the education system needs to be more transparent and inclusive in its operations.

87 The cultural distance that exists between the schooling system and communities is the result of various historical and institutional factors. There is a cultural gap between the traditional system of learning and the schooling system introduced through the process of colonization. The traditional system relied on families and the community assuming responsibility for imparting knowledge and cultural values. The educational structures and values introduced by the various colonial administrations and institutions were alien to the traditional society. Remnants of this alienation still exist because current education practices do not sit comfortably with practices of learning and teaching within the family/community. The public school today continues to be seen as an institution of the government and this limits the participation of community members. Various other specific factors may limit community participation:

- Lack of formal education for parents means they may lack the interest or confidence to become involved in school or homework activities
- The experience of education for some parents was alienating and they may not have found the schooling process relevant to their day to day activities.

- Community participation tends to be limited to forms of engagement such as social events at school and school maintenance because these are understandable within traditional cultural norms
- School facilities are not designed to encourage community use
- Parent and Teacher Associations (PTAs) can be weak organizations because they may exclude important members of the community
- In rural areas, distance from schools can affect the participation of some parents and communities

88 Parental and community participation in schooling is a fundamental part of any effective learning system. Communities need to support and be involved in education if the spirit of the education process is to be kept alive. Community involvement is essential in making the education system ultimately accountable to parents and the community.

b Proposed Activities

- School funds to be managed with participation of the community – legislation to be enacted in all states enabling school committees that include parents to manage school funds. Training to be delivered to communities to enable them to participate effectively on these committees.
- Community input into selection of principals – legislation to be enacted permitting the participation of communities in the selection of school principals. Guidelines and training to be produced to assist community representatives to participate in the selection process.
- Annual state competition recognizing excellence in educational performance of students, schools, teachers and communities – each state to organize competitions that are open to all schools from main and outer islands. The purpose of the competitions will be to promote community recognition of the outstanding efforts within the education sector.

8.2.6 Strategic Goal: 5: Education is relevant to the life and aspirations of the FSM people

a Background

89 The education system has for too long been viewed as a stepping stone towards the attainment of a salaried government position. Parents, communities and staff within the education system have not sufficiently focused on the broader relevance of the education system. In terms of employment, the education system has not been able to adequately satisfy the skill requirements of the local and international productive sectors. Feedback from employers participating in vocational education programs suggests that many students lack the per-

sonal qualities and attitudes needed to gain and retain employment within the private sector.

90 More broadly, those students that do not proceed beyond basic education are inadequately prepared to function within their own communities. Education has been heavily focused towards academic subjects with the intention of producing graduates capable of assuming post-secondary studies. In fact, many students do not proceed to undertake further formal studies and their education is completed without them obtaining a grounding in certain functional skills that may be needed for their day to day activities.

91 Unfortunately, the low quality of education also hinders the participation of FSM students within the post-secondary system. The problem is particularly pronounced for those students pursuing degrees in technical and science fields.

b Rationale

92 An effective and relevant education system must take account and meet the needs of the local economy and the development needs of the local productive sectors. The development of the private productive sector in the FSM is the most viable and sustainable site for future employment growth. To assist in the development of this sector it is essential to develop the human resource base of the FSM to meet the emerging skill requirements of enterprises.

93 The education system must also produce graduates who are able to effectively participate in the emerging global economy - in the domestic and international labour markets. Parents and communities want their children to have the option of working locally and abroad. The standard of education therefore has to rise to meet comparable international performance in key subjects such as English language, mathematics and science.

94 The education system also needs to cater for the very different needs of those students who will be engaged in a peripheral way with the modern global economy. These students have semi-subsistence livelihoods with more acute needs in terms of practical skills and possibly traditional knowledge.

c Proposed Activities

i Career Education Programs

95 It is important that students be provided with practical information regarding potential employment opportunities both within and outside the FSM. Career education programs need to be designed and implemented in schools that focus on the need for economic growth and social development.

ii Provide vocational and technical training to out of school youths and adults

96 The pursuit of education as a life long activity can be enhanced through the more effective coordination and delivery of formal and informal education and skill training programs. Particularly important is the linking of programs for out of school youth and the secondary, post-secondary and adult education systems. Pathways need to be provided so that young people who exit the education system early, can effectively re-enter at a later point in their working lives. The design of such courses for out of school youth needs to be properly articulated with the basic education system and be recognized by the post-secondary and vocational education systems.

97 An assessment of skill training programs will help to determine the effectiveness of the current system in meeting the needs of industry and the objective of life long learning. The establishment of national and state councils is a concrete measure to be considered for improving the coordination of formal and informal skill training programs.

iii COM provides continuing education to local businesses, government and communities

98 All the COM campuses need to play their role in providing education that meets the needs local business, governments and individuals. Such courses need to include a mix of short courses that are non-academic in nature and geared to very specific training needs of the workplace or community setting.

iv COM to develop and deliver degree programs and certificates to prepare students for the job market or transfer to higher institutions of learning

99 All COM campuses (but the FSM campus in particular) will continue to seek improvements in the quality of their academic program. The prestige of its flagship academic courses will help to further the reputation of the institution and generate future demand.

8.3 Activities and Outputs

8.3.1 Strategic Goal 1: Improve the quality of learning in the FSM

a Activity 1: Provide instructional and support services for schools

i Rationale

100 The process of educating children is a complex process that involves a wide array of participants. Parents, families and neighbours are teachers as are elders in the community. In the FSM as in other countries in the Pacific, the responsibility for educating the youth of its society has changed over a relatively

short time from being the immediate and sole responsibility of community members. As the goals of education have become more complex the importance of the formal education system has also increased in importance.

101 The school is now a critical instrument that has the potential for providing children and young adults with the concepts and skills to thrive in modern society. Now that the socialisation process of education has been institutionalised through the formal school classroom, a central task of government is to provide an adequate supply of teachers.

ii Objective and Scope

- To provide an adequate supply of teachers to all schools
- To provide the appropriate administrative services that enable schools to operate effectively

iii Description of Activity

102 Teachers need to be made available for schools to be able to function. A class can always be conducted under a tree, but a class cannot be conducted in the most expensive classroom without a teacher. This is the essential supply side pre-condition for the education process to commence. The formal education system is responsible for providing the teachers and ensuring that the supply of their services is available within the classroom. This means that problems of absenteeism need to be monitored and contained and where it does present as a problem then mitigating strategies are put in place.

103 This activity also requires a whole set of interacting administrative support processes be undertaken. For example, teachers need to be identified, credentialed, appointed, allocated to schools, replaced, paid and monitored.

iv Output Targets and Risks

Target Output	Risks
Adequate numbers of teachers appointed to schools	Inadequate supply of qualified teachers for all schools and islands
Required annual classroom instruction hours delivered by teachers	Absenteeism exceeds proper limits
Lesson planning undertaken by teachers	Teachers are not capable of developing lesson plans Teachers are not motivated enough to prepare lesson plans No supervision by principal to ensure that lesson plans are being developed
In-service teacher training (hours)	Absenteeism exceeds proper limits

Target Output	Risks
undertaken by required teachers	
School level administrative support services (filing, data input, contracts, purchase requisitions, etc)	Inadequate resources committed to these tasks Personnel are poorly trained
State level administrative support (monitoring, payment, clerical records)	Inadequate resources committed to these tasks Personnel are poorly trained

b Activity 2: Provide materials and equipment for instruction and administrative support

i Rationale

104 While resources alone are not a guarantee of effective schooling, international research shows that a critical mass of resources and inputs is required to provide the basic building blocks of instruction and allow teachers to adopt less rigid and more responsive instructional strategies. Additional resources are likely to have the most impact on student outcomes in resource-poor schools, while the returns diminish as spending rises in well-resourced schools.

105 Learning can occur in modest facilities as easily as in elaborate. In other words, additional expenditure on already excellent schools may not be warranted in terms of improved student outcomes. In contrast, the effectiveness of increased expenditure—if concentrated wisely and managed well—will be significantly higher in poor schools, and serve to reach the FSM’s national student outcome objectives.

106 Although numerous research studies have linked individual inputs with learning outcomes and measure relative impact, educational experts agree—and the literature supports—that multiple interventions (e.g. learning packages, school-based management, teacher training, and testing) that support the school, the teacher and the student will have the greatest impact on student participation and learning outcomes.

ii Objective and Scope

- Supply and deliver in a timely fashion to schools the appropriate student and teacher materials for instruction
- Provide the necessary administrative support the central and in-school levels to facilitate the proper functioning of the school system

iii Description of Activity

107 All state DOEs have the following functions represented as part of this activity (i) management and administrative support, (ii) schools supervision – elementary and secondary, (iii) evaluation and testing and (iv) special or support services.

108 Management and support encompasses the responsibilities for budget and finance, personnel and transportation services. At the state DOE level, many of the directors responsible for these functions lack the appropriate training to assume some of these responsibilities. Most have come via a career path through teaching and then administration and are particularly under-prepared for the tasks related to fiscal management.

109 All states have a division for elementary schools and a division for secondary schools. These divisions liase primarily with principals on administrative matters. Problems and issues related to curriculum will be communicated by curriculum specialists through their chiefs to the directors of elementary and secondary education.

110 Evaluation and testing is largely concerned with instruction. Evaluation activities are generally limited to the administration of standardised tests in various grades to develop benchmark data on academic success and instructional performance.

111 Special or support services are those that normally cannot be classified within the framework of the state DOE organisation. These are typically related to new initiatives or services that don't fit under instructional services or other administrative services.

iv Output Targets and Risks

Target Output	Risks
Maintain inventory of all office equipment	Schools do not complete reports – especially outer islands
Develop annual plan and budget	None
Compile quarterly and annual fiscal reports	Reporting from schools is not timely to meet quarterly target
Compile annual performance report	None
Annual report on student testing and scoring – incl. items analysis	Technical capacity at state and national levels is not strong enough to enable effective analysis
Report on allocation and financing of scholarship Award	None
Efficient supply of all textbooks and	Insufficient supply of materials

Target Output	Risks
other instructional materials for students	
Efficient supply of teacher guides and other instructional materials for teachers	Insufficient supply of materials
Maintenance of science and computer lab equipment	Technical knowledge of equipment is too weak at schools to identify maintenance needs Insufficient budget

c Activity 3: Development of a school maintenance scheme (SMS) by each state

i Rationale

112 The condition of school facilities is acutely affected by the absence of any systematic maintenance program. Minimal financial allocations for maintenance and repairs are budgeted for at the state level. The current ad hoc maintenance procedures are unable to address the outstanding needs of schools and are ultimately inequitable and unsustainable. Structured programs for facilities improvement need to be implemented to address the need for maintenance, renovation and construction of new facilities to support quality student instruction.

ii Objective and Scope

- Development of a Facilities Inventory (FI) for the state and school levels to identify current and future maintenance needs
- Development of a School Maintenance Scheme to fund maintenance activities based on matching community contributions

iii Description of Activity

- Facilities Inventory (FI) is developed for the state and school levels to identify current and future maintenance needs
- FI is designed, field tested and finalised for use at state and school levels
- FI Report is compiled identifying current and outstanding maintenance activities. Costings are provided and projections developed for future 5 year maintenance costs. Priority maintenance activities are identified.
- FI Report recommendations and priorities are adopted by state legislature
- FI is updated on annual basis with contributions from the schools and confirmed with state DOE inspections of facilities

414 *FSM Strategic Development Plan*

- Funding guidelines and operational procedures developed for a School Maintenance Scheme (SMS). SMS will offer grants to schools to fund maintenance activities based on agreed level of community contributions.
- Review of project effectiveness after one year of FI operation

113 This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Short term technical assistance will be provided by an international School Maintenance Expert. The activities of the expert are proposed to include the following:

- Develop Facilities Inventory (FI) for the state and school levels to identify current and future maintenance needs
- Implement the field testing and finalisation of the FI for use at state and school levels
- Design training, and train trainers to implement FI at school level
- Oversee the development of the FI Report at state level identifying current and outstanding maintenance activities. Costings are provided and projections developed for future 5 year maintenance costs. Identify priority maintenance activities.
- Development of guidelines for maintenance and updating of the FI, and for SDOE inspections
- Develop funding guidelines and operational procedures for a School Maintenance Scheme (SMS). SMS will offer grants to schools to fund maintenance activities based on matching community contributions.
- Develop monitoring and evaluation guidelines for the SDOE personnel implementing the SMS

iv Output Targets and Risks

Target Output	Risks
Facilities Inventory (FI) is developed for the state and school levels FI is designed, field tested and finalised	TA is not forthcoming or delayed
FI Report is compiled identifying current and outstanding maintenance activities.	Outer island schools not properly assessed
FI is updated on annual basis with contributions from the schools and confirmed with state DOE inspections of facilities	Staff turnover Outer island schools not visited
At least 75% of FI targets for maintenance activities are accomplished	Targets are set too high Poor community mobilisation in support

	of targets
Funding guidelines and operational procedures developed for a School Maintenance Scheme (SMS).	TA is not forthcoming or delayed
Initial capitalisation of SMS followed by annual disbursements	Delays at state political level in capitalising the funds
SMS is operationalised and accessed by more than 75% of schools	Community contributions are not provided
Community contributions account for at least 50% of actual maintenance expenditure for school facilities	Community/school organisations are not established Information outreach program explaining the SMS is ineffective

8.3.2 Strategic Goal 2: Improve the quality of teaching in the FSM

a Activity 1: Introduction of a teacher certification system

i Rationale

114 Research has shown that the greatest single impact on student learning and achievement is teacher quality. The purpose of the FSM Teacher Certification System is to ensure that all practising teachers possess the necessary knowledge and skills to provide quality instruction. The underlying principle of the FSM Teacher Certification System is that to be effective teachers, a person needs the knowledge of what they are to teach (content), the skills needed to teach effectively (how to) and the desire to teach (want to).

115 Can a teacher be a good teacher without having all three components (knowledge, skills and desire)? The answer is complex, but in general a well-qualified teaching will need to process to a high degree all three components. A teacher who has skills and desire but does not process the content knowledge will not be able to provide the full richness of a subject to students. A teacher who has knowledge and desire but no skills will not know how to effectively convey his knowledge to students. A teacher who has knowledge and skills but not desire is likely to be just passing time in the classroom and will have little concern if students learn. Each teacher will have different levels of knowledge, skills and desire. It is the role of a teacher certification system to help ensure that teachers process at least the minimum knowledge, skills and desire to be effective teachers.

116 The main standard for entering the teaching profession in the FSM is an AA or AS degree – teachers must meet this standard before they teach. In actual practice however, because of shortage of teachers and inconsistent application of this standard, teachers without these degrees are recruited and teaching in schools in the FSM.

117 Compounding this problem is the weakness of the selection criteria themselves. Possession of an AA or AS degree does not in itself indicate qualification or ability to teach. Most AA and AS degrees do not include any component related to teaching and there is no screening of potential applicants using other indicators of teaching potential.

118 There is justified concern that the current teacher certification system is no longer effective. The current teacher certification system in the FSM is a legacy of the Trust Territory of the Pacific Islands (TTPI) times. It was originally adopted over 30 years ago at a time when few teachers had an education background and there was deemed a need for teachers' skills to be upgraded. At that time there was not COM-FSM and few students were college graduates.

119 The original plan was for all teachers in the TTPI over a 5-year period to gain AA/AS degrees in education (at the time the program started the training institutes only provided degrees in education). At the end of the original 5-year period the program was extended and has continued to be extended ever since. The assumption that all teachers could obtain an AA/AS degree in a 5-year period was wrong. Even today we still have a substantial percent of teachers (~30%) who do not possess an AA/AS degree.

ii Objective and Scope

120 Develop a new teacher certification system that:

- provides recognition for the key required competencies of teaching
- establishes the requirements for a training system to provide the appropriate pre-service training for new recruits and in-service training for current teachers that do not meet the current requirements.

iii Description of Activity

121 The revised FSM Teacher Certification System is to be based on three components: Content competency, Teaching competency and Academic background.

iv Content Competency Component

122 To be certified all public and non-public school teachers from preschool through grade 12 must pass the FSM National Standardized Test for Teachers (NSTT).

123 All new teachers wishing to teach in the FSM School System must pass the FSM National Standardized Test for Teachers (NSTT) prior to beginning teaching.

124 To continue teaching existing teachers must pass the FSM National Standardized Test for Teachers (NSTT) within three (3) years of the effective date of these regulations.

v Academic Component

125 To be certified all public and non-public school teachers from pre-school through grade 12 must possess an AA/AS degree or equivalent from an accredited Institute of Higher Education.

126 All new teachers wishing to teach in the FSM School System must possess a AA/AS degree or equivalent from an accredited Institute of Higher Education prior to beginning teaching.

127 To continue teaching existing teachers must possess an AA/AS degree or equivalent by October 1, 2007.

vi Teaching Competencies Component

128 To be certified all public and non-public school teachers from pre-school through grade 12 must pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching competencies through actual classroom observation (s).

129 All new teachers wishing to teach in the FSM School System must pass the written examination for teaching competencies prior to teaching in the FSM School System and within 1 year satisfactorily demonstrate use of core teaching competencies through actual classroom observation (s).

130 To continue teaching existing teachers must pass the written examination for teaching competencies and satisfactorily demonstrate use of core teaching competencies through actual classroom observation (s) within three (3) years of the effective date of these regulations.

vii Types of Teacher Certification

131 Teacher certification in the Federated States of Micronesia will be of six (6) types.

viii Provisional Certificate

132 A three (3) year non renewal provisional teaching certificate may be issued upon request of the respective State Director in situations where no qualified teachers are available.

ix Basic Certification

133 A Basic certificate is issued for a three (3) year period. To be issued a basic certificate an individual must:

418 *FSM Strategic Development Plan*

- Pass the FSM National Standardized Test for Teachers (NSTT).
- Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching in the classroom through observation
- Possess an AA/AS degree or equivalent from an accredited Institute of Higher Education.

x Intermediate Certification

134 An intermediate certificate is issued for a four (4) year period. To be issued an intermediate certificate an individual must:

- Pass the FSM National Standardized Test for Teachers (NSTT).
- Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching in the classroom through observation
- Possesses a BA/BS degree, or AA/AS degree plus 21 credits in education.
- A person holding a basic certificate does not have to retake FSM National Standardized Test for Teachers (NSTT) or the written examination for teaching competencies to obtain an intermediate certificate.
- A person holding a basic certificate is still required to satisfactorily demonstrate use of core teaching in the classroom through observation to obtain an intermediate certificate.

xi Advanced Certification

135 An advanced certificate is issued for a five (5) year period. To be issued an advanced certificate an individual must:

- Pass the FSM National Standardized Test for Teachers (NSTT).
- Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching
- Possess an MA/MS degree, BA/BS in Education, or BA/BS degree plus 30 credits in education course work. Advanced certificates are issued for a period of five (5) years.
- A person holding an intermediate certificate does not have to retake FSM National Standardized Test for Teachers (NSTT) or the written examination for teaching competencies to obtain an advanced certificate.
- A person holding a intermediate certificate is still required to satisfactorily demonstrate use of core teaching in the classroom through observation to obtain an advanced certificate.

xii Master Level Certification

136 A master certificate is permanent. To be issued a master certificate an individual must:

- Pass the FSM National Standardized Test for Teachers (NSTT).
- Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching
- Possess an MA/MS degree plus 21 hours of education course work, BA/BS in Education plus 21 hours of content area course work, or BA/BS degree plus 45 credits in education course work.
- A person holding an advanced certificate does not have to retake FSM National Standardized Test for Teachers (NSTT) or the written examination for teaching competencies to obtain a master level certificate.
- A person holding an advanced certificate is still required to satisfactorily demonstrate use of core teaching in the classroom through observation to obtain a master level certificate.

xiii Traditional Knowledge/Skills Certification

137 Upon the recommendation of the Director, the Secretary may grant a Traditional Knowledge/Skills Certificate to any individual who, because of unique knowledge and experience in traditions, history, cultures and traditional technologies of the FSM is especially qualified to teach those traditions, history, cultures and traditional technologies. A person under this category may be so qualified regardless of whether he or she possesses academic credentials. A Traditional Knowledge/Skills Certificate shall be valid for such duration as the Secretary, in consultation with the Director, determines in each case, provided that such a certificate shall be valid for no more than three years.

xiv Endorsements

138 Special endorsements may be added to the FSM Teacher Certification System. The National Division of Education will maintain a listing of endorsements and requirements for the endorsements. Endorsements may only be awarded to individuals who hold a valid FSM Teaching Certificate.

xv Validity of Existing Certificates

139 All existing teachers will be awarded Provisional Certificates on the effective date of this regulation. Teachers will be required to provide official college transcripts within 6 months of the effective date of the regulations. The NDOE and/or State will evaluate the transcript and determine the academic background for certification purposes within one year of the effective date of the

regulations. Each individual teacher is responsible to provide the proper documents such as degree, official college transcript etc. for certification.

xvi Output Targets and Risks

Target Output	Risks
Finalisation of new regulations for teacher certification	Lack of state agreement
Guidelines for implementing the new certification requirements issued by NDOE	None
Certification testing system for teachers put in place	Resistance from teacher lobby groups
State policies and guidelines developed for administering the new system – including sanctions and incentives	Resistance from teacher lobby groups Ineffective incentives put in place Inability to propose sanctions
Training for in-service teachers to be provided – administrative arrangements (leave and replacement teachers where needed) and training provision	Some older teachers may not be prepared to undergo further training Training cannot be provided at the right times Teachers do not benefit from the training
Transitional policies established for teachers not meeting requirements	Some older teachers may not be prepared to undergo further training

b Activity 2: Develop action guides for teachers based on curriculum frameworks for core subject areas

i Rationale

140 Many teachers have no pedagogical or subject area training and are provided little guidance in terms of curriculum delivery in the classroom. The provision of action guides that can be used by teachers with little or no training will assist in the delivery of the curriculum to all students. Resources to assist curriculum delivery will also improve the quality of education delivery.

ii Objective and Scope

141 The objective of the project activity will be:

- To translate the current curriculum frameworks into clear action guides for teachers in classrooms and into learning experiences for students

iii Description of Activities

- Review of teacher needs in terms of action guides for curriculum delivery

- Overall plan developed for implementing curriculum frameworks into clear action guides for teachers in the classroom
- Establish a Curriculum Working Party (CWP) comprised of curriculum specialists and experienced teachers at the state levels to develop action guides from curriculum frameworks
- Resource materials tested in classroom settings
- Refinement of action guides by CWP
- Joint workshops convened with teachers and principals for training in the use of the action guides
- Review of usage of action guides after one year of operation

iv Output Targets and Risks

Target Output	Risks
Overall plan developed for implementing curriculum frameworks into clear action guides for teachers in the classroom	Weak understanding of what are clear action guides Teachers of highly variable competencies make guides difficult to standardise
Resource materials tested in classroom settings	Insufficient testing at outer island settings Weak feedback from piloting teachers
Joint workshops convened with teachers and principals for training	Schools do not participate
Refinement and modification of resource materials into teaching guides for core subject curriculum frameworks	Technical assistance is available to assist in the process
Curriculum guides published and distributed to 100% of elementary schools	Distribution by principals to teachers takes place Outer island schools receive their share Guides are looked after and utilised by teachers
Evaluation of new resources after one year of implementation	Consistent evaluation is undertaken across states

c Activity 3: Introduce performance oriented employment conditions for teachers

i Rationale

142 The management and administrative systems of education need to be reviewed to deal with internal inefficiencies. The problem of low teacher moti-

vation and morale has detrimental effects on the quality of education. Persistent absenteeism and inadequate classroom management and teaching performance can be addressed through the introduction of performance based employment conditions for teachers.

ii Objective and Scope

143 The objectives of the project activities will be:

- To reform the existing administrative framework and procedures governing the employment conditions of teachers
- To provide incentives for teachers to perform to the best of their ability
- To put in place monitoring mechanisms and sanctions for teachers who are not performing their duties

iii Description of Activity

144 This activity has begun to be initiated in Kosrae and Pohnpei states. The initial steps taken in both states have generated considerable controversy within and outside the education community. In both cases, the preferred orientation of the administrations has been to move towards performance based contracts. This is the strongest form of performance based employment structure as it exposes employees to the harshest possible sanctions.

145 The effective implementation of policies in relation to the terms of service of teachers will need to pay careful attention to the various possible interventions that strike the appropriate balance between sanctions and incentives. Tasks related to this activity include the following:

- Review the existing legal and administrative framework and procedures governing the employment conditions of teachers
- Initiate a public policy dialogue between state DOEs, teachers the legislature and community members on the issues surrounding employment of teachers and performance
- Prepare state based reports reviewing the current employment conditions of teachers.
- Provide detailed recommendations for legislative and administrative reform that will introduce performance oriented employment conditions for teachers
- Undertake public consultations to harness and maximise public and political support for proposed reforms
- Provide training to state DOE staff for the implementation of new legislation and administrative procedures concerning employment conditions

- Review the impact of the new employment conditions for teachers on absenteeism and other identified problems after one year of operation.

iv Output Targets and Risks

Output Target	Risks
State legislature enacts legislation providing performance oriented incentives and employment conditions for teachers	Lack of consultation with teacher representatives Initiative is politicised by non education factors Focus of change is skewed towards sanctions and little on incentives
Changes in the regulations and administrative procedures for the recruitment and employment of teachers are introduced	Weak drafting of regulations undermines the intent of the changes Lack of consultation with teacher representatives
School performance reports on teachers submitted by 100% of schools	Principals do not co-operate with the new procedures System is abused by principals to target teachers for non-performance related reasons
State-wide annual teacher attendance improves by at least 25% on last year of pre-reform period	Lack of consultation with teacher representatives provokes absenteeism
Training provided to state DOE staff for the implementation of the new legislation, regulations and procedures	None

146 This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Extensive short term technical assistance are intended to be provided by an international Education Human Resource Expert. The activities of the expert are proposed to include the following:

- Review the existing legal and administrative framework and procedures governing the employment conditions of teachers
- Work with state based working parties to open a public policy dialogue between state DOEs, teachers, the legislature and community members on the issues surrounding employment of teachers and performance
- Assist the state working parties prepare state based reports reviewing the current employment conditions of teachers.
- Provide technical advice and support to enable detailed recommendations for legislative and administrative reform that will introduce performance oriented employment conditions for teachers

- Liaise with the Offices of the State and National Attorney General to ensure a viable legal position for the introduction of performance oriented employment conditions of teachers
- Draft the personnel procedures and guidelines for each state to operationalised the performance based employment conditions for teachers
- Provide training to state DOE staff for the implementation of new legislation and administrative procedures concerning employment conditions

8.3.3 Strategic Goal 3: Consolidate performance monitoring and data based decision making system

147 The objectives of the activities will be:

- To develop a school based performance monitoring education management information system that is applied nationally, and is understood by the community, schools and SDOEs

148 To establish data based decision making processes from the school to national levels of education administration

a Activity 1: Review and consolidate existing state, and national efforts for the establishment of education management information systems

i Rationale

149 For an education system to be effective, it requires planning, monitoring and evaluation, and education management information (EMIS) systems to be in place and functioning in order to target, track and assess the many ingredients that compose quality education and effective schools.

150 Educational planning is--at base--directing appropriate resources to appropriate targets to accomplish the stated government goals and strategy. Good planning requires accurate and timely information, correct allocative guidelines, and regular analysis of problems and progress. As is evident from earlier studies commissioned by the Asian Development Bank, adequate planning mechanisms and methods, as well as related systems of data collection and collation, are not in place across the states.

151 Analysis of the current EMIS system shows that it suffers several shortcomings:

- Data quality and accuracy: Inconsistent methods for data collection and calculation are employed, with no means of error checking or validation. There is no consistent data collection instrument, and existing instru-

ments may neglect important areas of information, such as school physical and material inventories, school quality attributes.

- Fragmented databases: There is no one data-base that consolidates most of the information needed to analyze the education system.
- IT equipment : There is unequal local education office access to IT equipment and trained human resources to prepare material in forms accessible to decision makers.

152 In short, there is a diversity of education management information systems across the states making it difficult at present to collect and analyse data at a central level. A synthesis of the existing approaches will result in an integrated data base for the FSM that will enable policy makers to (I) monitor and compare progress, and (ii) better diagnose weaknesses.

ii Objectives and Scope

153 A synthesis of the existing approaches will result in an integrated data base for the FSM that will enable policy makers to

- monitor and compare progress
- better diagnose weaknesses.

iii Description of Activity

- Review and consolidate existing state, national and regional efforts for the establishment of education management information systems – including the data base design undertaken by PREL
- Work with schools and state administrations to identify key educational performance indicators that are relevant and understandable at the school/community level
- Design and field test a school based performance monitoring system.
- Develop a decision-making system based on the school performance monitoring system
- Provide information, technical support and customised software to operationalize the performance monitoring and decision-making system
- Undertake training of state education personnel, school staff and selected community members on the implementation of the data based decision making system
- Provide technical input for the compilation of the first annual state and national performance monitoring reports

iv Output Targets and Risks

Output Target	Risks
National review of education management information systems	Delays due to other priorities
Finalise a school based performance monitoring system	IT compatability issues are not resolved Failure to get state and national agreement on format and analysis
Complete training of SDOE personnel, school staff and selected community members	Staff turnover
Produce annual state and national performance monitoring reports	State tensions over comparability of data Delays by some states delay the production of national report

b Activity 2: Introduction of a school accreditation system*i Rationale*

154 Severe under-resourcing of schooling results in a poor quality, non-supportive educational environment, in which adverse conditions—physical, material and human—are detrimental to student learning, teacher motivation and performance, and parental satisfaction and demand for schooling. In FSM schools (as in other developing countries) instruction often takes place in dark and inadequate classrooms that typically provide inadequate shelter and little possibility for student-centred learning.

155 The stock of instructional materials is in short supply in many schools, but most acute on the outer islands. The policy of apportioning learning materials (e.g. libraries) and instructional aids to main island schools means that it is unlikely—if not impossible—for outer island school sites to access and borrow these materials on a timely or flexible basis, given both competing needs and geographic distances. Moreover, household poverty diminishes the chance that students in these campuses will have the textbooks and school supplies to overcome the material-deficient classroom.

156 Compounding general deficiencies in instructional materials, the schools on outer islands do not attract the more highly qualified and experienced teachers.

ii Description of Activity

157 A minimum school quality level as required by accreditation criteria sets a floor or minimum set of attributes that a school must achieve within a short time frame, as a benchmark of its progress toward attaining optimal standards. Fundamental quality level criteria can be used to guide resource alloca-

tion within the schooling system over the short term so that quality improvements can be systematically targeted at the poorest and most disadvantaged schools.

158 The states and national DOE will work together to elaborate the framework conditions and appropriate indicators that will be used to apply school accreditation policy. An initial workshop convened by the national DOE has identified a preliminary list of conditions to be considered for adoption.

- School be in active operation
- Developed statement of purpose
- Management system in place with description of duties and responsibilities
- Chief administrative officer is qualified as a school administrator
- School plan includes clear objectives for student learning and assessment plans to measure progress
- Acceptable admissions policy
- Qualified instructional staff
- Plans to provide extra-curricular activities
- Viable funding base

iii Output Targets and Risks

Output Target	Risks
Agreed national accreditation standards	Failure to reach consensus Standards are unrealistic
Implementation framework adopted	Failure to reach consensus
Accreditation standards applied to all schools in FSM consistently and fairly	Different state contexts are not adequately catered for in the standards
Guidance provided to schools not meeting standards	DOE officers cannot provide suitable advice
Targeted assistance made available to schools to assist them meet the standards	Outer island schools remain off the accreditation radar
Annual and national state reports produced on the accreditation status of all schools – including report on improvements required	Political concerns delay the release of reports

8.3.4 Strategic Goal 4: Strengthen participation and accountability of the education system to communities

a Activity 1: School funds to be managed with participation of the community

i Rationale

159 Parental and community participation in schooling is a fundamental part of any effective learning system. There needs to be an increased involvement of communities and other broader social structures in the education process in the FSM. All state education systems are attempting to promote greater community participation in schooling. The variability in community structures across and within states demands a variety of strategies be employed for integrating communities and the schooling process. Various models of community participation are presently being trialed throughout the FSM and it will be important to monitor their achievements and possible extension to other sites.

160 Improved partnerships between schools and communities will lead to a more effective educational system and greater support (economic and moral) for local schools. These strategies offer the potential to both help improve the quality of education and to help reduce the cost to government of education.

ii Objective and Scope

161 The objectives of the activities will be:

- To develop a regulatory framework to enable community participation in the management of schools and school based funds
- To train school personnel and community members in school management procedures.

iii Description of Activities

- Draft legislation to enable school funds to be established and managed with participation of the community and to enable community input into the selection of principals
- Regulations developed to provide guidelines on the operation and management of school funds
- Design and delivery of training for schools and communities on the establishment, operation and use of school based funds and selection of principals
- Establishment of school funds using guidelines on operation and management

- Review of community involvement in school management after one and two years of operation

162 This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Extensive short term technical assistance are intended to be provided by an international Community Participation expert. The activities of the expert are proposed to include the following:

- Undertake community consultation across all states to assess community motivation for school participation
- Prepare detailed plan for development of community participation in management of school funds and selection of principals
- Undertake consultation with church and NGOs on community participation in education institutions
- Assist SDOE with the development of community mobilisation campaign to precede establishment of community participation mechanism
- Draft legislation to enable school funds to be established and managed with participation of the community and to enable community input into the selection of principals
- Develop regulations to provide guidelines on the operation and management of school funds
- Design and delivery of training for schools and communities on the establishment, operation and use of school based funds and selection of principals
- Develop monitoring system to assess community participation

iv Output Targets and Risks

Output Target	Risks
Legislation adopted	Not all states proceed with the activity
Regulations put in place and operationalised	Delays between legislation being passed and regulations being developed Inconsistency between legislation and regulations
Completion of training for at least 50% of schools and communities	Training is not well organised
School based funds established and operating in at least 50% of schools	Too few schools and communities show interest in the activity
State reports on performance of educa-	None

Output Target	Risks
tion system document the existence and operations of school based funds	

b Activity 2: Community input into selection of principals

i Rationale

163 School leadership is one of the key factors determining the success of any school at the elementary or secondary levels. This applies most strongly for a country such as the FSM where schools can be in remote locations far from the oversight of the central administration. The teachers of such a school are likely to be inexperienced and have had little or no experience with an education system that is performing well. Under such circumstances, the role of the principal becomes more critical to the success of the school. The community has an important role to play in selecting a principal to ensure that he or she is compatible with that community and that they enjoy its support. The commitment of the principal to the school and the community is likely to be enhanced if that community has had a role in their selection.

ii Description of Activity

164 The objectives of the activities will be:

- To develop a regulatory framework to enable community participation in the selection of school principals

iii Description of Activities

- Draft legislation to enable community input into the selection of principals
- Design and delivery of training for schools on the selection of principals
- Review of community involvement in school management after one and two years of operation

165 This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Extensive short term technical assistance are intended to be provided by an international Community Participation expert as listed in the previous activity.

iv Output Targets and Risks

Output Target	Risks
Legislation adopted	Not all states proceed with the activity

Output Target	Risks
Regulations put in place and operationalised	Delays between legislation being passed and regulations being developed Inconsistency between legislation and regulations
Completion of training for at least 50% of schools and communities	Training is not well organised
Adoption of regulations to enable community input into the selection of principals	
100% of all new principal appointments incorporate community input into selection process	

c Activity 3: Annual state competition recognising excellence in educational performance of students, schools, teachers and communities

i Rationale

166 There is very little public recognition of those outstanding efforts of students, teachers, schools and communities within the education system. One important potential motivating force in education is the public recognition that individuals, institutions and communities can receive for their special efforts. The current detachment of many communities from the public education system needs to be addressed so that the partnerships between schools and communities can be strengthened for the benefit of all FSM students.

ii Objectives and Scope

- Establish and fund high profile annual state academic competitions
- Institute a community information campaign to publicise the competition and the value of public education

iii Description of Activities

- SDOE to establish academic competition committee
- High profile political and community representatives to endorse the competition and publicise its importance to their constituencies
- Competition designed to incorporate a recognition of diverse achievements of students, teachers, schools and communities

- Presentation ceremonies and awards designed to incorporate traditional aspects marking recognition and achievement within each of the states. For example, issuing of special stone money awards in Yap
- Annual state presentation ceremonies to be widely publicised and broadcast with electronic media

iv Output Targets and Risks

Output Target	Risks
100% participation of all public schools in the academic competition	Outer island schools find it difficult to participate
Improvement on state performance in the National Standardised Tests for core subjects	Improvements are produced for top range students and mean performance is not substantially improved
Academic competition is established as a major cultural/community event of the social calendar	Weak schools disengage from the process Political intervention undermines the credibility of the competitions

8.3.5 Strategic Goal 5: Education is relevant to the life and aspirations of the FSM people

a Activity 1: Continue to develop FSM career and technical education programs in schools

i Rationale

167 It is important that students be provided with practical information regarding potential employment opportunities both within and outside the FSM. Career education programs need to be designed and implemented in schools that focus on the aspirations of children, the need for economic growth and those opportunities that are realistically present for youth.

ii Objectives

- Offer career programs that assist secondary students to transition smoothly to further education and/or employment
- Provide technical education alternatives to academic subjects in schools to help retain students in the system and to provide possible pathways for them to move into paid employment or post-secondary technical training

iii Description of Activities

168 Career counselling is provided at the secondary level by a number of in-school and out of school staff. Career awareness programs are provided from

years 9-12 for all students. Job fairs are organised where the school organises meetings with employers on the island and they have a chance to explain their requirements. On the job training is provided for selected students in partnership with employers and other vocational programs such WIA and T-3 programs. All of these initiatives are highly dependent on access to U.S. federal grant money.

169 The introduction of vocational education within the secondary system is aimed at giving graduates the skills to be employed in a wide range of occupations outside of the public sector. Yap high school has been one of the most innovative and pioneering in its expansion into vocational education and training. It offers courses in business, construction, auto mechanics, agriculture and home economics. There have been some creative attempts to apply the skills learnt in the courses and to generate income for the school from the vocational courses. The agriculture program sells produce at the local market to generate income. The courses are run for a short time (1-2 years) on private land and the land is then returned to the private owner for their use. The agricultural course helps in a limited way to disseminate new agricultural techniques and practices to the community. The construction program is designing and building the new dormitory space for teachers. The home economics course has assumed responsibility for the school canteen.

170 The other state public schools are not as advanced as yap in the provision of technical education. All high schools suffered from similar problems implementing their vocational education curricula. These include; (i) inadequate and insufficient facilities and materials to effectively provide instruction, (ii) lack of labour market information and feedback systems to allow the schools to specifically tailor the courses to meet market need, (iii) no tracer studies of students to measure the effectiveness of the vocational education courses.

171 Labour market information needs to be collected to better understand the job market and the kind of training that needs to be provided. The labour market information system needs to be simple in design so that it can be operated at little cost but can actually measure the opportunities and constraints for labour across the islands.

iv Output Targets and Risks

Output Target	Risks
Labour market information system established with annual updates, by 200?	Inadequate and insufficient facilities and materials to effectively provide instruction Lack of labour market information and feedback systems to allow the schools to specifically tailor the courses to meet market need

Output Target	Risks
	No tracer studies of students to measure the effectiveness of the vocational education courses.
Secondary students receiving career education information	
Secondary students participating in technical education courses	

b Activity 2: Provide vocational training and general education to out of school youths and adults

i Rationale

172 The pursuit of education as a life long activity can be enhanced through the more effective coordination and delivery of formal and informal education and skill training programs. Particularly important is the linking of programs for out of school youth and the secondary, post-secondary and adult education systems. Pathways need to be provided so that young people who exit the education system early, can effectively re-enter at a later point in their working lives. The design of such courses for out of school youth needs to be properly articulated with the basic education system and be recognized by the post-secondary and vocational education systems.

173 *Objectives*

- Provide pathways for youth who do not complete their schooling to benefit from formal education at a later stage in their life
- To provide vocational training and life-skills to youth and young adults that can improve their earning capacity and quality of life

ii Description of Activity

174 Efforts in vocational training have been largely driven by the National Trades, Training and Testing Program (T-3), the Workplace Investment Act (WIA) – formerly the JTPA programs and the classes provided by the COM state campuses.

175 The stated objectives of the T-3 program are:

- To upgrade the skills of existing tradesmen
- To train high school children and those not reaching high school so they may find employment in the FSM or abroad
- To provide short term training for quick job placement

- To work cooperatively with the JTPA and COM to provide quality vocational training

176 The T-3 programs have been active in promoting trades related to electricity, mechanics and construction. The programs are geared towards interested individuals from both government and private sectors. The program provides training at three levels; (I) basic training for 3-4 months, (2) intermediate level for 4 months, (3) advance level for 1 month. Subsequent to passing the advance level, the student is classified as a journeyman.

177 The WIA programs cover three target groups (I) younger youth (14-18 years old), (ii) older youth (19-21 years old), and (iii) adult and dislocated workers. WEI structures its services into three categories.

178 Core services relate adult and dislocated workers and involve job development activities, job clubs, job referrals, counselling, and job search activities. Intensive services provide case management for individuals, group counselling, employment experience, short term pre-vocational services and internships. Training is the final step and includes adult education programs, occupational skills, on the job training, and entrepreneurial training.

iii Output Targets and Risks

Output Target	Risks
Youth receiving work related training	Training is of a poor quality Support services are not relevant to the FSM context
Youth receiving support services	
Adults receiving work related training	
Adults receiving support services	
Tradespeople qualified to a journeyman standard	Qualified trainees go off island to seek employment Training delivered does not match the priority skill needs of the FSM

c Activity 3: COM to provide continuing education to local businesses, government and the community at large

i Rationale

179 All the COM campuses need to play their role in providing education that meets the needs local business, governments and individuals. Such courses need to include a mix of short courses that are non-academic in nature and geared to very specific training needs of the workplace or community setting.

ii Objectives

- Produce job ready and competent graduates from vocational programs
- Provide graduates that meet the skill needs of local businesses and government

iii Description of Activity

180 Chuuk COM sees vocational education as an emerging priority. It remains limited in its capacity to spread into this field given the lack of space and facilities it has for academic courses. Some vocational education in the broadest sense is provided through its book keeping and accounting course. It offers GED preparation for high school drop-outs and an intensive English/Mathematics programs. Chuuk COM runs an upward bound program serving 60 students annually in co-operation with Chuuk High School.

181 The outstanding achievement of the Pohnpei campus is in providing short term courses targeting the needs of local business. Pohnpei COM has been very active in moving towards providing vocational education and training. It has worked hard at establishing links with national and state public departments and authorities so that it can meet their training needs. It provides flexible course delivery and has supplied specifically designed training to Telecom, Pohnpei Dept of Education, and a number of embassies. It has also helped provide apprenticeship standard courses (in plumbing, auto mechanics and electricians) for the Power Company of Pohnpei. It is continuing to be approached by other public and private sector entities seeking in-service training for their employees. The campus offers certificate courses in vocational education – specifically in electronics, construction electricity and carpentry.

182 Kosrae campus offers GED preparation for high school drop-outs and an intensive English/Mathematics programs. Kosrae has traditionally had the least emphasis of any of the COM campuses for vocational education type programs. It is now planning to provide vocational programs in agriculture and carpentry.

183 Yap campus provides an Intensive English Language Program (IEP) that is very popular. Many of the students use the campus to pursue preparatory courses before transferring to the national campus in Pohnpei. Yap COM management is targeting vocational education for increased attention. It offers GED preparation for high school drop-outs and an intensive English/Mathematics programs. It will continue to stay active in offering business related courses to support the Yap Business Incubator Program. It has also provided computer training to Telecom staff and is looking at establishing relationships with the private sector.

d Activity 4: COM to develop and deliver degree programs and certificates

i Rationale

184 All COM campuses (but the FSM campus in particular) will continue to seek improvements in the quality of their academic program. The prestige of its flagship academic courses will help to further the reputation of the institution and generate future demand.

ii Objectives

- To develop and deliver degree program and certificates to prepare students for the job market
- To develop and deliver degree program and certificates to prepare students for transfer to institutions of higher learning

iii Description of Activity

185 The COM-FSM national campus is focusing on delivering an academic program. It is concentrating efforts on improving the quality of its graduates and is moving towards three year and four year programs leading to Bachelor degrees. This is currently possible through an MOU with the University of Guam.

186 The Pohnpei campus is located on the site formerly used by the national campus in Kolonia. In some ways it is used as a preparatory institution by the students before progressing to the large campus.

187 Chuuk campus offers a two year Degree program leading to an AA or AS degree in Elementary Education. This degree is taken as a pre-service course as well as in-service by a smaller number of enrollees. In-service training is provided during the summer break or through normal classes where teachers have been granted leave to undertake training. Chuuk also offers a third year program for principals and teachers in cooperation with the Chuuk State Leadership Academy (CSLA). The CSLA has been established by the Board of Education and the SDOE to provide further training for principals and teachers earmarked for principal positions. The CSLA selects the teachers and makes arrangements with the SDOE to arrange leave for the trainees.

188 Yap has the smallest of the COM campuses and offers degree programs in Elementary Education and Early Childhood Studies. The remainder of courses offered by the campus are either certificate or non-credit courses

189 Kosrae offers an associate degree program teacher education (elementary level) and all other course offerings certificate of achievement programs in general studies or vocational programs outlined above.

9 Gender

9.1 Gender Sector Review

1 The Chapter on Gender covers a wide range of social programs currently administered under the FSM Department of Health, Education and Social Affairs (HESA). Section 1.1 begins with a review of progress made by the FSM Gender Development (GD) programs in the FSM from the period 1992–2003, with particular emphasis on implementation of the FSM Gender Policy Matrix (GPM) adopted at the 2nd FSM Economic Summit in 1999. Section 1.2 describes current issues and existing constraints impeding effective and efficient operation and programming. Section 1.3 looks at capacity building and institutional strengthening priorities, particularly in the areas of gender mainstreaming, trade, trade facilitation, policy advocacy, taxation, and small micro-enterprise development (SMEs). Section 1.4 outlines prevailing conditions that discourage women from seeking leadership position and offer alternative means to improving women’s chances of getting into elective office. Section 1.5 examines the efficiency of the judicial, legal, and political systems in addressing and protecting human rights, especially women’s and children’s human rights. Sections 1.6 and 1.7 focus on youth affairs, with particular attention paid to maximizing youth participation in national and state development processes. Section 1.8 gives a general view of the status of the elderly. This section also proposes constructive measures for the provision of social benefits and protection for the FSM elderly population. Section 1.9 addresses the special needs of disabled persons and persons with special needs.

2 Section 2 describes enabling environments, policy considerations and key institutional measures recommended for improving and strengthening gender development and mainstreaming capacities of women, youth, the elderly and persons with disabilities and special needs. Section 3 presents the gender strategic policy matrix (GSPM) envisage to guide and assist implementation of the outcome of the 3rd FSM National Economic Summit’s gender strategic plan (GSP). Section 4 establishes linkages between the GSPM and the overall FSM infrastructure development plan (IDP).

3 The Concluding Section summarizes the issues of significance.

9.1.1 Description of Gender Development and Recent Performance

a Women and Development

4 The FSM Gender and Development (GAD) program started out as a nationally based regional women’s “communication exchange and information clearinghouse” project in 1992. The project hired a national women information officer (NWIO) to execute the project and helped established the 1st FSM

National Women's Advisory Council (NWAC) to oversee implementation of the project in FSM and to provide supervision for the NWIO. That same year, the women leaders met formally for the first time at the inaugural 1st FSM Women's Conference held in Pohnpei, FSM. To date, FSM Women's Leaders have met five times, with the recent FSM Women's Conference held in Yap, FSM in 1999.

5 In 1993, FSM institutionalized the operation and renamed its project officer, National Women's Interests Officer (NWIO) and the operation,

Table 1: Comparative Operation Performance, FSM Gender Affairs, 1992-2004

States	Official Name	Year Est.	Budget	Staff	Operation	Mandate
Chuuk	Women's Affairs SAG-Women's Affairs	1997	1999 - 2004	01	Space Sal-ary/Wage s	1. Coordi- nate Women's Affairs 2. Advisory
Kosrae	Women's Interest WIO	1995	1999- 2004	01	Space Sal-ary/Wage s	1. Coordi- nate Women's Affairs 2. Advisory
Pohnpei	Women's Interest WIO	1994	1999- 2004	01	Space Sal-ary/Wage s	1. Coordi- nate Women's Affairs 2. Advisory
Yap	Women's Interest WIO	2003	2003- 2004 10,000	01	Space Sal-ary/Wage s	1. Find Funds 2. Relocate YWA 3. Build Training halls 4. Advisory
FSM	Women's Interests Women's Development Program	1992 1998- 2004	1999- 2004	01	Space Sal-ary/Wage s Budget	1. Promotes Women's Affairs 2. Informa- tion Dis- semination

Women’s Interests Desk. The objectives for the Women’s Interests Desk were “information dissemination” and “coordination” of women’s activities and programs. Achievements of this period included a draft Women’s Policy and Policy Framework and the NWAC Constitution. The NWAC Constitution established as one of its primary objectives the “promotion of women’s cultural, economic, legal, political, religious and social development”. These have not been reflected in the mission and development objectives of the women’s programs. The Women’s Interests Desk was upgraded to a Women and Development Unit in 1998 and recently renamed the Women’s Development Program. The Department of HESA continued to host the women’s development initiative since its inception in 1992.

6 While these positive developments are encouraging, the women’s programs continue to suffer from lack of institutional capacity to effectively advocate, promote and support women’s development programs. This weakness stems from many factors but primarily due to two factors: absence of an official gender policy and strategic development framework and inadequate, insufficient levels of core operation budgets. Table 1 below provides comparative performance data on women’s programs from 1999 – 2004.

b Policy Developments since the 2nd FSM Economic Summit

7 At the 2nd FSM Economic Summit in 1999, women leaders introduced a gender policy matrix (GPM) that proposed to broaden opportunities and create spaces for women’s participation in national development and governance. The GPM focused actions on the following policy elements:

- Address the under-representation of women in decision-making
- Enhance the human resources of the nation by ensuring the full participation of women
- Ensure women’s access to capital
- Protect women’s property rights
- Address discrepancies in compensations

8 The strategies adopted to guide decision-making and to execute the GPM are outlined under each of the policy elements.

9 Policy Element 1: Address the under-representation of women in decision-making

10 Proposed activities to be implemented to achieve policy element 1 included:

- Establishing cabinet-level women’s offices at both national and state levels

- Adopting national and state policy to include women on all decision-making bodies
- Encouraging women to run for political offices

11 Policy Element 2: Enhance the human resources of the nation by ensuring the full participation of women

12 The activities to be pursued included:

- Addressing the issue of reproductive responsibilities
- Enhancing the career development of young women

13 Policy Element 3: Ensure women's access to capital

14 The Gender Committee identified two critical areas which women felt were needed. They included:

- Making sure the national wealth is well-spent
- Providing technical and marketing assistance

15 Policy Element 4: Protect women's property rights

16 The Gender Committee acknowledged that women were more disadvantaged when it came to marital property rights. Prevailing social norms granted men property rights, including rights to raise children in paternal homes even in situations where the woman is the primary financial provider. One major activity the Gender Committee wanted to see adopted was:

- Ensuring that the law adequately protects women's property rights

17 Policy Element 5: Address discrepancies in compensations

18 The issue on "equal pay for equal work of equal value" was seen as a major employment deterrent for working women. Women testified that men were paid more for the same work than women. One activity women recommended to see acted upon was:

- Avoiding gender-based discrepancies in compensation

19 Implementation Status

20 Almost six years later, most of the GPM elements, strategies and activities remained un-implemented. Women's affairs and development activities remained ad hoc, low key, and for most of 1999 to 2001, dormant. During this period, FSM lost two of its first proactive gender advocates and leaders. The National Women's Advisory Council was also silent. In 2002, a new NWIO

was hired to take over the responsibilities for Women’s Affairs and to reactivate gender- mainstreaming activities for the nation.

21 On the positive side, Chuuk State passed a gender resolution at its First State Leadership Conference in 2000. The resolution recognized women’s positive contribution to family life. Kosrae State enacted its maternity/paternity legislation in 2000. The Government of Yap hired its first Women’s Interest Officer in January 2003. A major victory was achieved in October 2003 when the FSM Congress ratified the “Convention on the Elimination of All Forms of Discrimination Against Women” (CEDAW) at its 11th Regular Session. This important milestone signified a new beginning for the FSM women, particularly in relation to women’s human rights and the judicial and legal systems.

c Gender and Macroeconomic Policy

22 FSM macroeconomic policy is primarily directed towards sustaining economic development and achieving economic growth and self-reliance for the Federation. Resources, both human and financial are heavily invested in these areas. These are reflected in plans and in allocation of resources, both domestically generated and infused through the US-FSM Compact and other foreign aid. The underlying principle is that outcomes from economic development will “trickle-down” to other sectors and thereby, improving social conditions and situations for all people.

23 This principle is enshrined in FSM Macroeconomic policies and development agenda. Even the GPM Policy Element 3 endorsed implementation of Policy Element 4 of the public sector management policy matrix (PSMPM), namely, to ensure our national and state capital investment budgets are spent wisely and responsibly by:

- Establishing a professional review process for all government capital investments
- Continuing dialogue and redrafting of appropriate legislation in each of the four states
- Convening policy dialogue and presentations with political and public sector leadership

24 Neither the GPM and/or the PSMPM offered specific recommendations as to how women’s access to financial resources and technical assistance was to be achieved. There was also no policy on women’s economic empowerment in any of the FSM macroeconomic policies and development plans.

d Relevance of Gender Mainstreaming on Achievement of FSM Macroeconomic Policies

25 The absence of a comprehensive FSM policy and strategic development framework on women makes it difficult for policy and decision-makers to take women's affairs seriously. Women's programs and services would benefit from the allocation of additional resources. In general, women's productive contributions to society tend to be unrecognized, undervalued and under-utilized. Engendering macroeconomic policies and the economic development agenda in general will ensure sustained economic growth and self-sufficiency for the nation and for its people.

26 Gender mainstreaming is extremely relevant to achieving FSM macroeconomic policies and for ensuring that their impact and outcomes do indeed, "trickle-down" to the micro-levels (community and family levels). The recent ADP Poverty and Hardship Assessment identified major hardships for the common people. These included:

- Poor access to quality and affordable basic services (water, health, education, transportation, roads, etc)
- Lack of income (lack of employment opportunities, no job creation incentives, etc)
- Lack of participation (in areas of decision-making, planning, politics and trade)

27 These findings support the position that "trickle-down" effect does not offer a practical model on which to base sound economic policy-making decisions. Major shifts in policies, leadership and economic agenda may be required to ensure sustainable livelihoods and reciprocally, achievement of economic growth and self-reliance are realized for and by all stakeholders.

28 Experience elsewhere has shown that:

- The more inclusive and participatory are the development policies, agenda and decision-making processes and structures the more equitable the benefits of economic development.
- The more gender friendly and responsive are the economic processes, structures and mechanisms, women's productivity increases (i.e., provisions for paid maternity leaves, nursing centers, day care centers, etc.), resulting in improvement in quality of life for their families
- More women own, manage and run successful micro-businesses that have created jobs, generate family income, improve standards of living, improve quality of life, provide for basic needs, to name a few.

29 Women’s active participation in economic development is a prerequisite for economic equity and economic justice. They bring into these processes not only their knowledge and skills but also the “heart” and “soul” that ensure social justice for all. Women’s underparticipation in policy and decision-making process will have a significant impact on the capacity of the FSM to meet its development goals and to generate equitable development outcomes.

e The Impact of Financial Instability on Gender Development

30 Declining public finances and government’s restructuring programs during the final phase of Compact I prevented additional expenditures and/or creation of new positions and/or functions in the public service. Implementation of the GPM was on the lowest priority list and consequently put aside in favor of more strategic economic priorities.

31 It is hoped that financial restraints imposed by Compact II will not necessarily impede implementation of the priority gender SPM outcomes, especially the allocation of resources to meet the operational requirements of the proposed Division of Gender and Social Affairs (GENSA), inclusive of the youth, the elderly, disabled persons and associated activities and programs.

32 Additional funding for GENSA may be available via its inclusion as an integral component of FSM country programs with the Asian Development Bank, European Union, UN Agencies and other development partners.

f Financial Commitments for Gender Development

33 Although FSM has made public policy commitments for the advancement of women in FSM, these commitments may not be able to be realized until adequate gender budgets are provided for in governments’ regular budget processes and/or included as priority components of FSM external development cooperation programs. Again, investment of resources toward gender empowerment may be facilitated by the adoption of a comprehensive gender policy and development agenda. Financial commitment to gender development has remained at its post -1999 level.

34 Again, FSM can access financing support through its non-US donors such as ADB, EU, Japan, Australia, New Zealand and so forth. To do this, Gender has to be prioritized as an enabling project for poverty reduction, environmental justice, sustainable development and achievement of the UN Millennium Development Goals (MDGs) and other global and regional economic and social agenda.

35 FSM needs to improve and strengthen its resource mobilization and strategic partnership portfolio in order to proactively negotiate extra-donor assis-

tance and/or to attract renewed donor interest in social program funding in the FSM.

i Youth and Development

36 The 1999 Gender Policy Matrix did not cover Youth. However, Youth and Sports had been in existence and fully integrated into government operations and programs since Compact I. There existed various draft youth development documents compiled jointly by national and external youth initiatives and consultants. These policy documents can provide basis for compiling a Youth Policy Matrix for purposes of the FSM Strategic Development Plan.

37 Should the consolidation of women, youth, seniors, children and disabled persons under the proposed Division of Gender and Social Affairs materialized, then GENSA will have the official mandate to coordinate and assist the Youth Operation as required. A detailed institutional strengthening plan on youth is provided under strategic goals 6-7 in Section 3 of this Chapter.

ii The Elderly

38 The 1999 Gender Policy Matrix did not cover the Elderly population.

39 Currently there is no national operation addressing the issues of the elderly ("senior citizens"), except for public service retirees who received some social benefits from the FSM Social Security Administration. At the States' level, some level of programs and services are provided. It is vital, therefore, that follow-up discussions be carried out between these stakeholders to clarify issues, roles and functions appropriate for each. A FSM-wide study on the status of the elderly population is called for under this Chapter so that appropriate intervention programs can be instituted.

iii Disabled Persons and Persons with Special Need

40 The 1999 Gender Policy Matrix did not cover persons with disabilities and special needs.

41 Although the Divisions of Education and Social Affairs at national and States Government do provide limited services to specific target populations, there is urgent concern that existing programs and service and lack of awareness on the issues and needs of disabled persons and persons with special needs do not extend to adult and elderly populations.

42 A substantive policy objective is provided under the Gender SPM Objective 9 to address this oversight.

9.1.2 Description of Gender Development in the FSM: Issues and Constraints

a Gender Policy and Strategic Development Agenda

43 FSM has taken initial policy measures to meet its international commitments on women and to work nationally towards the full integration of women and girls into FSM Society. These are evident by:

- Ratification of the Convention on the Rights of the Child (CRC), 1993
- Adoption of the Pacific Platform for Action on Women (PPA) in 1994
- Cairo Platform for Action on Population and Development, 1994
- Adoption of the Global Platform for Action on Women (GPA) in 1995
- Ratification of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW Convention) 2003

44 However, FSM has yet to nationalize these enabling measures or adopt its own national social policies that will trigger harmonization of these global commitments at national and state levels.

45 On the program implementation level, the 1995 5th FSM Women’s Conference adopted its priority list of critical areas of concerns (CACs). This list was later developed as the Draft 1995-1997 Women’s Plan of Action. This draft document has not been finalized and/or approved as the official FSM Plan of Action for Women. Refer to the Reference section for specific information on these CACs.

b Administrative and Institutional Capacity

46 National and State women’s mechanisms exist as “one-person” operations in small office spaces provided as “in-kind” contribution by host agencies. The National Women’s Program budget consists of travel and office supplies. The NWIO’s salary is included in the Department of HESA’s annual budget. There is no budget for programs and/or services for women. The same situation applies at the State level.

47 The FSM women’s mechanisms need adequate and separate core operation budgets that adequately provide for operation and programs needs. Lacking these essential institutional strengthening components, the women’s operation struggle daily to effectively respond to and address routine and emergent critical development needs of women. With increasing commitments and obligations arising from global, national and regional women’s development agenda, FSM needs to urgently address:

- Chronic under-staffing of the National and State Women’s Operations

- Inadequate office spaces, office equipment and office furniture
- Lack of annual core gender operation budgets
- Implementation of post-3rd FSM Economic Summit GSPM

c Gender Budgets and Resource Allocation

48 The GSPM recommendations for provisions of adequate levels of core gender budgets in Governments' regular budgets and in external cooperation programs cannot be overemphasized. At present, there is no secure core funding for women's affairs or program in governments' regular budgets. Likewise, there are no provisions for women's development agenda in existing governments' bilateral and multilateral aid packages. Table 2 gives a summary of financial allocations to gender activities since 1999.

49 Women's mechanisms are expected to provide assistance and support to women's activities, groups and programs with little or no budget. Implementation of GSPM is reliant on securing financial commitment from government and/or through FSM external development cooperation programs.

50 Information on state gender budgets and operations are currently unavailable. These will be subject to future gender budget audits and provided in the gender program audit reports scheduled for fiscal year 2005 and 2006.

d Data and Information Management System

51 There is certainly improvement in the flow and exchange of information on women and between women today when compared to 10 years ago. However, the failure to capture institutional memory is a major handicap. The

Table 2: Summary of Gender Share of National Budget, 1999-2003, FSM Gender Affairs

Budget Category	Approved 1999 Budget	Approved 2003 Budget	Approved 2004 Budget
Office Rental	Space provided in-kind	Space provided in-kind	Space provided in-kind
Human Resource	19,400	19,400	19,431
Travel	None	7,366	18,601
Fixed Asset	None	None	None
Contractual Services	None	None	None
Consumable	In-kind	In-kind	7,000
Total Budget	19,400	26,766	44,032

Data provided by FSM Gender Development Office.

quality and frequency of communication exchange and information dissemination is also problematic. Contributing factors include:

- Poor information, communication and technology capacity
- Lack of equipment, software and ICT skills
- Lack of media and media presentation skills
- Poor documentation, information management and research capacity
- Lack of funding

52 The GSPM prioritizes training on media, information management and research to enhance capacity for greater gender awareness and to strengthen gender policy advocacy and mainstreaming skills at all levels.

53 ICT strengthening activities are specified under Strategic Goal 5 in the SPM.

e Leadership Commitment to Gender

54 The ratification of the CEDAW Convention last year conveys a clear message that FSM accepts its leadership and political responsibilities for the advancement of women's affairs, particularly in regards to women's human rights and equal opportunity provisions. However, action is yet to be taken to incorporate CEDAW principles in domestic law. Other policy recommendations remained unimplemented to this date. However, outcomes of the 3rd FSM Economic Summit's Gender SPM promises a way forward in the right direction.

9.1.3 Gender, Trade and Economic Empowerment

55 Women are often left out of trade and trade related activities for the simple reason that their presence at this level of dialogue is absent. The 1999 GPM adopted at the 2nd FSM Economic Summit committed Government with the responsibility for ensuring that technical and marketing assistance are provided for women. The Beijing global platform for action women (GPA) mandated national governments to:

- Facilitate women's equal access to resources, employment, markets and trade (Strategic Objective F.2)
- Provide business services, training and access to markets, information and technology, particularly to low-income women (Strategic Objective F.3)
- Strengthen women's economic capacity and commercial networks (Strategic Objective F.4)

56 National governments are obligated to comply with the specific actions required by these strategic objectives. These include:

- Enhance rural women's income-generating potential by facilitating their equal access to and control over productive resources, land, credit, capital, property rights, development programs and cooperative structures
- Increase the participation of women, including women entrepreneurs, in advisory boards and other forums to enable women entrepreneurs from all sectors to contribute to formulation and review of policies and programs being developed by economic agencies and banking institutions
- Ensure that international labor standards such as International Labour Organization (ILO) Convention No. 100 on "equal pay" and workers' rights apply equally to female and male workers
- Recruit women for leadership, decision-making and management and provide training programs, all on a equal basis with men
- Use gender-impact analysis in the development of macro and micro-economic and social policies in order to monitor impact and restructuring policies.

57 There are considerable differences in women's and men's access to and opportunities to exert power and influence over economic processes and structures. FSM women are virtually absent and poorly represented in economic decision-making, including the formulation of financial, monetary, commercial and other economic policies as well as tax systems and rules governing pay. Insufficient attention to gender analysis has meant that women's contributions and concerns remain too often ignored in economic structures such as financial markets and institutions, labor markets, taxation and social security systems. As a result, many policies and programs continue to contribute to inequalities between men and women. Where progress has been made in integrating gender perspectives, programs and policy effectiveness has also been enhanced.

a *Building Trade and Trade Facilitation Capacity*

58 Priorities have to be established to ensure women are capacitated to take full participation in the market economy, trade and economic decision-making, vis-à-vis, policy dialogues, policy-making, programming and impact assessment. Gender-impact analysis applied to the development of macro and micro-economic and social policies is vitally important for these reasons:

- It allows practical assessment and monitoring of the impact of globalization, trade liberalization, foreign aid and FSM restructuring policies and programs on women.

- It can elicit discriminatory practices by employers on the basis of women’s reproductive roles and functions, including refusal of employment and dismissal of women due to maternity leave and pregnancy and breastfeeding responsibilities.
- It can facilitate efforts to close the gap between women and men’s pay and take steps to implement the principle of “equal remuneration” for equal work of equal value by strengthening legislation, including compliance with ILO laws and standards
- It can encourage equal access for women to effective job training, re-training, counseling and placement services that are not limited to traditional employment areas
- It can help create non-discriminatory support services, including investment funds for women’s businesses, targeting women in trade promotion programs

59 Building women’s capacity in the areas of trade, trade facilitation, marketing and fiscal management is particularly attractive as women’s entrepreneurs and micro-business owners are becoming viable employers and income generation sources for rural and remote island people and communities throughout FSM. Table 3 provides a list of women owned and women headed businesses and SMEs in FSM.

b Sustainable Livelihoods, Trade and Economic Policy Coherence

60 Women and children are often the unwilling victims of globalization, trade liberalization, structural adjustment programs and trade related policies and practices. Macroeconomic policies supporting private and productive development of FSM natural resources have to be sensitive to gender, indigenous rights and resource owners’ affinity to their ancestral heritages, cultures and traditional knowledge to ensure that sustainable resources development and cash-cropping management benefit current and future generations of FSM people. Women are

active in a variety of economic areas, which they often combine, ranging from wage labor and subsistence farming and fishing to the informal sector. However, institutional and customary barriers to capital, credit and technology impede the economic progress of women.

61 Women contribute to development not only through remunerated work but also through a great deal of unremunerated work. On the one hand, women participate in the production of goods and services for the market and household consumption, in Agriculture, Fisheries, food production and/or family enterprises, yet these activities are unremunerated, undervalued and under-recorded. On the other hand, women still also perform the great majority of unremunerated domestic and community work such as caring for children and the elderly, preparing food for the family, protecting the environment, providing health care and voluntary social services and so forth. This type of work is often not measured in quantitative terms and is not valued in national accounts. In spite of its exclusion from national statistics and limited social recognition, women's domestic and community work is the glue that holds families, communities and nations sustainable over the centuries. Thus investing in women's economic empowerment makes good economic sense.

c *Small Micro-Enterprise Development and Entrepreneurship*

62 With limited and scarce natural resources and collective property rights, great distances to markets and high costs of exporting and importing goods and commodities, FSM comparative advantage for ensuring sustainable livelihood for its people and for creating realistic employment opportunities is through entrepreneurship and small micro-enterprise development (SMEs). Macroeconomic policies have to be based on developing capacities in this area as well as encouraging resource owners to realize the financial values of their natural resources and assets.

63 Promoting and supporting women's self-employment, the development of small enterprises and strengthening of women's access to credit and capital and promoting women's entrepreneurship, including as appropriate, non-traditional and mutual credit schemes as well as innovative linkages with financial institutions are crucial to developing women's economic independence and for ensuring economic stability and reliance for families and communities throughout FSM.

64 Small micro-enterprises development, home-based businesses and entrepreneurship training in the following areas will be crucial to building and strengthening women's economic capacity and independence. Priority training include:

- Strategic Planning and Financial Management

- Product Design, Packaging and Marketing
- Assets Development
- Pricing and Inventory
- Cash Flow Management

65 Table 4 provides a preliminary list of existing women owned, women headed businesses and SMEs in FSM.

d Need for Flexible Livelihood and SMEs Micro-Financing Programs

66 Providing flexible micro-financing programs and entrepreneurship training targeting this level is likely to generate needed sources of community revenues and family incomes not possible before. Appraisal of existing micro-financing schemes and business development practices are needed to harmonize the financial needs and requirements of this type of venture with mainstreamed and/or specialized business development services.

67 National and States' Governments, Bank of FSM, FSM Development Bank, States' Business Development Centers and locally based private banking institutions need to:

- Structure their services to reach rural and urban women involved in micro-businesses, small and medium enterprises, with special attention to at-risk young women, low income women, ethnic and racial minorities and indigenous women who lack access to capital and assets.
- Invest capital and develop investment portfolios to finance women's business enterprises
- Give adequate attention to providing technical assistance, advisory services, training and re-training for women connected with the entry to the market economy

- Provide business services, including marketing and trade information, product design, technology transfer to women's business enterprises, including those in export
- Develop flexible funding arrangements to finance intermediary institutions that target women's economic activities
- Promote self-sufficiency and increased capacity in and profitability of women's economic enterprises

68 Lack of flexibility of loan lending, collateral requirements and cumbersome application processes often discourage women entrepreneurs and home-based SMEs from accessing business financing from existing financial institutions and specialized business development services. Creative financing programs complete with training and technical services are ideal for this type of venture.

e *Special Needs of Women in the Work Force*

69 Women, due to their special biological make-up, require special employment protections and provisions. They need to be protected from workplace hazards. They need to be given time to breastfeed and require maternity leave to protect their health and ensure positive outcomes of their pregnancies. The specific enabling policy recommendations towards this end include:

- Providing flexible work schedules and alternative working arrangements
- Enacting paid maternity and paternity leaves, where appropriate
- Providing breastfeeding rooms and children nurseries
- Providing tax exceptions, incentives and financing for "home-based" baby-sitting and formal child care services

70 Women's, health, performance and productivity in the workplace are closely linked with their reproductive functions and roles. The public service system regulations exclude maternity leave entitlement, paid or otherwise, for women employees, from its public service system. Both private and public service sectors do not provided maternity provisions in their hiring and social benefits packages. At the policy level, Congress placed reservation on the CEDAW compliance provision on paid maternity leave and/or maternity leave entitlement for women.

9.1.4 Gender, Governance and Leadership Development

71 Despite the general acceptance for the need to create gender balance and equality provisions in civic and public processes, especially at the policy and decision-making levels, a gap between “de jure” and “de facto” equality persists. The actual participation of women at the highest levels of national and states’ decision-making has not changed since FSM signed onto the Beijing Global Platform for Action (GPA) in 1995. Women continued to be under-represented at the legislative, cabinet and highest levels of corporate sector and other economic and social institutions. Traditionally assigned gender roles limit women’s choices in education and careers and compel women to assume the

Table 6: Women in Decision-Making and Leadership Roles, 1999-2003, FSM.

State	Branch of Government	Level of Influence	Number
Chuuk	Executive	Cabinet/Administration	01
	Legislative	Politics/Legislation	00
	Judiciary	Law/ Enforcement & Protection	00
Kosrae	Private Sector	Corporate	00
	Executive	Cabinet/Administration	N/A
	Legislative	Politics/Legislation	N/A
Pohnpei	Judiciary	Law/ Enforcement & Protection	N/A
	Private Sector	Corporate	N/A
	Executive	Cabinet/Administration	N/A
Yap	Legislative	Politics/Legislation	01
	Judiciary	Law/Enforcement & Protection	N/A
	Private Sector	Corporate	N/A
FSM	Executive	Cabinet/Administration	02
	Congress	Politics/Legislation	00
	Judiciary	Law/Enforcement & Protection	00
Total	Private Sector	Corporate	02

Provisional Information provided by women’s programs.

burden for household responsibilities. Initiatives and programs aimed at increasing women's participation in decision-making and elective offices have not been instituted for this to happen.

72 The lack of human and financial resources for leadership training, policy advocacy and support for women in leadership and political careers prevent women from seeking professional careers in these areas as well as in other traditionally male-dominant roles. Table 6 provides current information on Women in Decision-Making and Leadership Roles.

a *Under-Representation of Women in Power and Decision-Making*

73 Women's influence and impact on policies and decision-making is nil due to their poor participation in power and decision-making processes. The GSPM addresses this issue as one of its priority strategic development goals. Of vital importance is the establishment of the multi-sector FSM Commission on the Status of Women, a policy forum on gender development, mainstreaming and policy advocacy. Detailed activities, programs and outcomes are provided under SPM Objective 1 and 4 in Section 3 of this Chapter.

b *Creating Leadership and Management Opportunities for Women*

74 To build women's management and leadership capacity, women need both on the job mentoring and formal training in these areas. Of critical importance is addressing the cultural and social stereotype attitudes, beliefs and practices prevalent in FSM society. Both men and women have to be sensitized, at all levels, on the issue of gender so that both realize and accept the unique gifts that both can bring and/or contribute to building families, communities and the nation.

75 The Gender Mission Statement said, "empower women to be self-reliant and productive members of FSM Society." It is not about discrimination but about:

- Giving women the opportunity to contribute as best they could through affirmative actions
- Recognizing and valuing the special talents, skills and experiences women bring to public and private lives
- Bringing balance and harmony to family, work and public and private enterprises.
- Instilling self-confidence, self-esteem, self-reliance, security and dignity of the human person
- Team building and forging strategic partnership based on mutual acceptance and trust

76 The GSPM also provides specific policy recommendations and actions towards ensuring women have these opportunities and spaces opened and/or created for them.

9.1.5 Gender, Human Rights and the Judicial, Legal and Political Systems

77 The GPA reaffirms that all human rights-civil, cultural, economic, political and social, including the right to development- are universal, indivisible, interdependent and interrelated. The human rights of women and the girl-children are inalienable, integral and indivisible part of universal human rights. The full and equal enjoyment of all human rights and fundamental freedoms by women and girls is a priority for Governments and the UN and is essential for the advancement of women.

78 Every person should be entitled to participate in, contribute to and enjoy cultural, economic, political and social development.

79 Full realization of human rights is to be achieved through systematic changes and harmonization of FSM laws with the CEDAW and CRC conventions as well as other universal human rights instruments.

80 In addressing the enjoyment of human rights, all actors and stakeholders must promote an active and visible policy on mainstreaming gender sensitivity in all policies and programs so that before decisions are made, an analysis is made of the effects on women and men, respectively. Sensitizing and raising gender awareness for the police, service providers, policy-makers, politicians and so forth are critical to eliminating abuse and violence from the home, work, public and private spheres.

81 Domestic violence is prevalent in FSM and yet, the laws and police seem not to be able to provide protection and safety for the victims. Reforming these systems and frameworks are necessary so that appropriate protective laws and safety measures are adopted and enforced. One such measure is that of a “No Drop” Policy which essentially allows the formal legal system to process allegation of abuse or violation with “due process” regardless of whether the victim suddenly recants or drops the charges. Additional measures are detailed in the appropriate SPM in section 3.

a Relevance of FSM Laws and Legal Frameworks on Gender Mainstreaming

82 Women who continuously live under abusive, violent and discriminatory environments are deprived of their productive contribution to family, community and nation. The ratification of the CEDAW Convention last year creates opportunities for improving, reforming and engendering FSM laws and legal

frameworks. The GSPM offers policy recommendations that will result in more specific protections and safeguards for women's human rights.

83 It is also necessary to completely review the FSM national and State laws and regulatory frameworks to ensure they are relevant and non-discriminatory. At present, there are no specific measures that adequately offer women, children, the elderly and disabled persons protection and safety from abuse and violence.

b Efforts to Harmonize National Laws and Regulatory Frameworks

84 The FSM ratified both the CEDAW and the CRC as part of its foreign policy. These Conventions obligate FSM to harmonize its national laws to the provisions of these human rights instruments. These are legal obligations that have to be complied with.

85 Ongoing consideration should be given to removing the reservations on the CEDAW Convention when conditions permit. Consideration should also be given to ratifying the Optional Protocol to the CEDAW Convention and the Declaration Against Violence Against Women (DVAW). The CEDAW Optional Protocol recognizes the right of an individual to take human rights violation to UN and the International Court of Justice (ICJ) for redress. The DEVAW defines the parameters and scope of behaviors that constitute gender-based abuse and violence. DEVAW further clarifies roles and obligations of global and national governments toward eliminating gender violence and protecting women's human rights.

c Human Rights, Public Safety and the Rule of Law

86 Violence against women and girls is an obstacle to the achievement of equality, development and peace. The long-standing failure to protect and promote women's human rights and fundamental freedoms in the case of violence against women and girls is a major public and social concern.

87 Domestic violence, abuse of children and discrimination perpetrated within the homes and in intimate relationships do not receive proper attention by the police and the law enforcement agencies due to prevailing cultural, religious and social stigmas or "taboos". Often the "rule of law" does not apply in these cases. Adoption of anti-domestic violence laws and application of "No Drop" Policy will be welcome safety measures for those at risk for abuse and violence.

88 The GSPM proposes specific actions and policies to address these issues. Refer to Section 3 for detailed information.

9.2 Strategic Goals, Policies and Outcomes

9.2.1 Strategic Goal 1: Enhance and promote the cultural, economic, legal, political and social development of women and children throughout their life cycles

a Analysis and Justification

89 The most recent situational analysis on the status of women was done more than ten years ago. In 1999, the Beijing +5 Progress Report was produced. This latest Report documents FSM compliance with the GPA and PPA. The overall impression is that very little had changed since 1999 but more commitments and obligations are regularly added to the women's development agenda.

90 It is vitally important that FSM undertakes a situational analysis on the status of FSM women to have a clear picture of what women are facing, how they are living and how they are coping with life and to generate baseline data on women to assist gender strategic planning and programming. Findings can also guide annual budgeting, programming of resources and the delivery of programs and services targeted populations.

91 The GSPM contains policy recommendations for action on this objective. For specific details, refer to Section 3 in this Chapter.

b Gender Policy Implications

92 FSM has allowed gender mainstreaming to progress at its own pace and according to the direction of the staff executing the operation. No particular attention or priority was attached to the gender operation, except for the usual hosting responsibilities. As a result, Gender Affairs remains low status, low key, under-resourced and under-represented in decision-making and programming. Policy implications for changing Governments' perception and improving its status and roles include the establishment of effective mechanisms for engaging women in the democratic and development processes

93 This stated outcome can be achieved in two ways. First, through having gender representation in high level national and states' policy and decision-making processes and structures. The second way is to create a gender policy forum that regularly meets to discuss policies and decisions and then feed into the EPIC and States' Leadership Forum. The proposed gender policy forum may be tagged as the FSM Commission on the Status of Women. The Commission must be:

- Multi-sector and multi-disciplinary in its membership to allow comprehensive coverage on gender issues
- Based on merit, skills and experience to maximize effectiveness and impact of gender mainstreaming agenda

94 Establishing formal dialogues with Governments and engaging policy and decision-makers is a pre-requisite action to reach consensus on reorganizing the current Division of Social Affairs to that of the Division on GENSA.

- Adoption of official gender policy, strategic development agenda and action plans to guide FSM gender budgeting, programming and implementation of FSM commitments for and compliance with national, regional and global gender development platforms for action on women

95 A second post- 3rd FSM Economic Summit priority implementation task is to operationalize the FSM gender SPM. Specific activities include the following:

- Formulation and drafting of Gender Policy, Gender Development Agenda and Gender Action Plan
- Recruitment and hire of additional professional staff
- Realignment of existing staff, duties and responsibilities
- Generation of baseline gender disaggregated data, databases and purchase of information management systems' equipment and facilities
- Consideration of establishment of national multi-sector Commission on the Status of Women (CSW)
- Convening of biennial women's leaders caucus, conference and policy forum
- Commissioning of gender studies, surveys and research on cultural, economic, legal, political and social status of women

96 The above activities are expected to contribute to the achievement of the following major results:

- Division of GENSA legalized and operational
- Official Gender Policy legislation enacted
- FSM Gender Development Agenda & Action Plan adopted
- FSM Commission on the Status of Women operational

c Critical Issues for Implementation

97 The major constraints for implementation are primarily financial resources, institutional capacity and leadership action.

i Financial Resources

98 Implementation of the Gender SPM relies on timely allocation of adequate financial resources. Under the present amended Compact financial environment, Gender SPM resource requirements may be difficult to secure but not totally impossible. Alternative financing schemes can be developed and negotiated with FSM traditional partners and/or with new donor agencies. But to do this requires adoption of a proactive FSM external resource mobilization strategy and program plan.

ii Institutional Capacity

99 FSM national and states' gender operations are presently could be strengthened by separate core operation budgets that allow for the following:

- Recruitment and hire of additional professional and support staff
- Setting up of separate office spaces that meets its operating requirements
- Administration costs, including overheads, office rent and other consumables
- Travel (domestic/international)
- Fixed assets (office equipment, furniture)
- Contractual and professional services
- Programs and projects

100 Enhancing this capacity is critical to successful gender mainstreaming and delivery of gender programs and services. For additional details, please refer to Section 3: Gender Strategic Policy Matrix under this Chapter.

iii Decision-Making

101 Achievement of the Gender SPM and success of the 3rd FSM Economic Summit rests with FSM policy and decision-makers. It is imperative, therefore, that an output of the Summit includes a “SMART” Monitoring and Performance Assessment Mechanism (MPAM) whose task is to evaluate, monitor and report on progress made on the implementation of the 3rd FSM Economic Summit's nine (9) SPMs. The MPAM must be conducted on a regular basis to monitor achievement and to generate output performance indicators.

d Outcome Measures and Justifications

102 Two mutually reinforcing outcomes are identified under strategic Policy Objective (PO) 1: establishment of the Division on Gender and Social Affairs (GENSA) and the creation of the National Commission on the Status of Women (NCSW). GENSA gives gender affairs a high profile and a credible

image, both of which are vital to enhancing FSM gender advocacy and mainstreaming capacity. NCSW provides a credible authority on gender and serves as the policy and decision-making forum on gender affairs. Outcome measures include:

- Existence of the Division on Gender and Social Affairs in HESA
- Official Gender Development Agenda, Gender Policy and Gender Action Plan adopted
- Commission on the Status of Women established
- Additional staff hired, office equipment purchased and installed and office furniture purchased

103 Refer to the gender Strategic Policy Matrix (SPM) for additional information.

9.2.2 Strategic Goal 2: Enhance the Leadership Capacity and Roles of Women

a Analysis and Justification

104 There are very few women serving in high-level management and leadership roles. Fewer than 5 women occupied high-level policy and decision-making posts at national and state levels. This situation exists for many reasons but the most critical ones are cultural and social. More studies are needed in this area to identify the underlying root factors and to institute appropriate actions to remove these cultural biases and social barriers.

b Gender Policy Implications

105 Persistent cultural and traditional values and practices hinder women's active participation in power and decision-making processes and structures. Policy directions that can facilitate increased women's participation in private and public office include:

- Establish mechanisms for engaging women in leadership and political processes at all levels
- Provisions for leadership training for women, youth and people with disabilities and special needs
- Provision for leadership and political empowerment education and training for women leaders
- Assurances that qualified women are put forth for leadership positions and electoral office

- Ensure women are actively involved in policy and leadership dialogues, exchanges and training programs

c Critical Issues for Implementation

106 FSM women are generally comfortable to leave private and public affairs to the men to handle. This is a historic fact and an evolutionary process. The primary reasons why women shy away from actively seeking and filling public offices are:

- Pervasive cultural, social and traditional gender-based biases and stereotypes
- Lack of support systems for women in leadership roles
- Poor leadership and management capacity and skills
- Low self-esteem and lack of self-confidence
- Lack of “will power” for leadership and public offices.

d Outcome Measures and Justifications

107 The greater are the increases in the numbers of women serving on high level decision-making positions at the executive, legislative and judiciary branches of government and in the civil and corporate sectors, the greater are the chance that strategic goal 2 is to be achieved. Other measurable indicators include:

- Changes in public attitudes, behaviors and practices towards women running for public offices
- Enhanced leadership and management capacity and effectiveness
- Women’s Leadership Profile available
- Women’s Leadership Training provided regularly
- Numbers of women in leadership and political officers have increased from earlier years
- More women candidates registering for political and leadership roles
- By 2010, the Assistant Secretary for GENSA will be a woman.
- By 2015, there will be a woman ambassador and at least 4 woman in FSM Congress and state legislatures
- Availability of gender baseline data, disaggregated statistics and status report available

9.2.3 Strategic Goal 3: Mainstream Gender Issues into Decision-Making, Policies and Strategic Development Plans

a Analysis and Justification

108 The female population of FSM is more than half. Yet only 5 women are tasked to serve this entire population in the formal public sector. They have no additional help. Their funding is minimal. They have no formal programs to pursue. And they often do not have the gender and development (GAD) experience and knowledge necessary to be effective in advocating gender issues among women, let alone, with policy and decision-makers who are predominantly men.

109 In addition, gender is a poorly understood subject throughout FSM. Issues dealing with gender are viewed as women's issues, and women's issues are no different than everyone else's. Men sometimes do not see any need for treating women differently or for having women's involvement in public life because they are there to take care of everything outside of the home and women to take care of domestic affairs. Gender upsets this balance and brings confusion. Resisting women's development is due to this misunderstanding and lack of awareness about the gender development agenda.

110 The Gender SPM provides policy measures and activities that will help improve understanding about gender and contribute to achieving a more balance and equitable situation between men and women. Improve relations is vital to achieving the FSM economic and social development agenda specified under the Strategic Policy Matrixes adopted at the 2004 3rd FSM National Economic Summit.

b Gender Policy Implications

111 Gender policy advocacy and mainstreaming capacity can be enhanced through concerted efforts from the policy level to the management level and to the program implementation level. Policy directions to assist with this include:

- Ensure that official FSM gender policy and strategic development agenda are formulated and implemented at all levels
- Ensure that Opportunities for Women's Leadership Development are prioritized in HRD and Capacity Building Initiatives and Programs

112 Gender policy advocacy and mainstreaming capacity and effectiveness can also be achieved and/or strengthened by addressing and achieving Strategic Policy Objective 1 and 2 activities.

c Critical Issues for Implementation

113 The critical issues for implementation are similar to those identified under Strategic Policy Objective 2. These include:

- Budget Constraints
- Institutional Capacity
- Political and Leadership Support

114 These constraints are adequately explained under the same heading 2.1.3 on page 24.

d Outcome Measures and Justifications

115 FSM gender policy advocacy and mainstreaming capacity can be enhanced through internal and external capacity building, gender training and formal structured dialogues. Greater acceptability of gender issues is likely to result in less rejection of gender by planners, policy-makers, decision-makers, government officials, leaders and so forth. Positive gender mainstreaming is achieved when:

- Gender policy advocacy and mainstreaming capacity is enhanced
- Gender mainstreaming is acknowledged as integral for sustainable development and responsive governance
- Gender mainstreaming overcomes negative cultural, political, religious, social and traditional attitudes.
- Gender perspectives are reflected more and more in decisions, policies and programs

116 Specific outcome measurement indicators include but not limited to:

- Improved role and status of women's programs by FSM people
- Adequate level of core gender operation budgets secured in Government Budget and Cooperation Programs
- Commission on the Status of Women established
- Enhanced image, role and status of women's affairs
- Improved policy advocacy and negotiation skills
- Removal of CEDAW reservations
- SPM Compliance Report produced and GPA and PPA Reports updated

117 Refer to the Gender SPM Section for specific and additional information.

9.2.4 Strategic Goal 4: Maximize Women's Contribution to and Participation in Democratic and Development Processes by Creating Opportunities for women's Active Involvement.

a Analysis and Justification

118 As home managers, caregivers, peacemakers, social service providers, educators, mentors and so forth, women, over the years, have learnt to develop advocacy, management, leadership, decision-making and peace building skills. Naturally these skills enable women to deal with responsibly associated with domestic and community work, the result is that family and community welfare are maintained and enhanced. Building upon these experiences and skills, women can learn to become strong and committed public and private leaders and decision-makers. The sustainable future of FSM rests upon maximizing the complementary roles and functions of men and women in the development process, at home, in the community and at state, national and international arenas.

b Gender Policy Implications

119 Comparative advantages can be realized by utilizing the un-tapped resources and skills women possess. Policy implications toward achieving gender SG4 include but not limited to the following:

- Facilitating women's equal access to resources, employment, markets and trade
- Harmonizing national laws, policies and programs to encourage economic and political empowerment of women
- Eliminating all forms of abuse, discrimination, harassment and violence against women and girls in the work force and in the private and public spheres
- Addressing unequal treatments and discrepancies in compensation/benefits for women in the public and private service sectors
- Ensuring macroeconomic policies and trade policies are gender inclusive and gender-sensitive.

c Critical Issues for Implementation

120 The "unconscious" exclusion of women from public and private affairs is but a matter of "conditioned" training and learnt behavior. Critical issues for implementation include but not limited to the following:

- Access to resources, employment, markets and trade
- Marital property rights
- Collective Rights versus Individual Rights

- Availability of maternity leave and benefits
- Lack of flexible SMEs and Home-Based Business Funding Schemes
- Accession to ILO laws and standards as appropriate and relevant

121 Also refer to Section 3: Gender Strategic Policy Matrix for additional information.

d Outcome Measures and Justifications

122 A safe home, work, school and other public places, strengthened women’s economic capacity and independence and harmonized work and family responsibilities for both men and women are the primary outcomes of Gender SG4. Outcome performance indicators include:

- Anti-domestic violence and anti-abuse of women and girls in intimate relationships bills or law enacted
- “No Drop Policy” adopted
- Gender studies offered at COM-FSM
- Gender sensitization training (awareness, analysis, budgeting, planning, etc) conducted
- Flexible and alternative micro-finance schemes provided
- Customary and constitutional law review and revisions
- Increase to 18 years the legal age of consent and marriage
- Domestic violence report produced

123 Refer to Gender SPM Section for additional information.

9.2.5 Strategic Goal 5: Strengthen the Institutional Capacity of the Women’s Programs in FSM

a Analysis and Justification

124 Provision for adequate office space, additional staff and secure core operation budgets are critical to improving the role, status and credibility of the FSM national and States’ Gender Affairs in the public eye and internationally. Strengthen capacity enables Gender Development Officers to carry out their responsibilities and provide ongoing support to women in their jurisdictions.

b Gender Policy Implications

125 Policies could include:

- Upgrading of National and States’ Women’s Programs/Offices/Positions to cabinet level status

- Ensuring that adequate Core gender budgets are integrated into regular government budget processes and external development cooperation programs

126 Achievement in all 5 gender SPM Goals will result in a more accountable, effective and transparent gender mainstreaming mechanism. Implications for policy actions include:

- Gender policy advocacy and mainstreaming capacity prioritize in HRD Education & Training Programs
- Effective mechanisms to build, strengthen and localize gender technical and advisory capacity
- Information dissemination, public relations and information and communication technology gaps be addressed and resolved
- Ensure professional staff of Gender Affairs are appropriately named to ensure acceptance by regional and global counterparts
- Provisions for adequate office space be provided to ensure ease of operation
- Resource commitments be legislated to ensure sustainability of operation

127 Also refer to Section 3: Gender Strategic Policy Matrix for additional information.

c Critical Issues for Implementation

128 The national and states gender development mechanisms would benefit from being given higher priority within Government. Additional constraints are:

- Inadequate operating space or office
- Core gender budgets are not provided on a program basis
- Decision-making is slow and often ineffective
- Status is low at national and states' level
- No official gender policy and development agenda

d Outcome Measures and Justifications

129 Adequate and secure core gender budgets improve and strengthen “institutional capacity” for effective and efficient program administration and management is a must. This means hiring of an appropriate mix of professional, technical and support staff to run the gender operation and to improve institutional effectiveness and impact. Additionally, information, communication and technology skills, capacity and institutional memory have be enhanced through

documentation, research, ICT and media training and publication to ensure sustainability of operation. Likewise, expanding alliances, networks, partnerships and relations are critical to improving FSM gender image and profile, especially at global and regional levels. These capacities can also be strengthened through ongoing public advocacy, regular structured dialogues, solidarity building and improved communication and information with and between strategic stakeholders such as FSM national and states' governments, SPC Women's Bureau, UN Agencies and other civil society gender agencies. Outcome measurement indicators include:

- High profile and status achieved by GENSA and NCSW is boosting confidence and moral of staff and FSM women
- Enhanced institutional capacity, effectiveness and impact achieved through provision of secured core gender budgets, additional staff, additional equipment and furniture and bigger office space
- Effective programming and service delivery achieved through adoption of official gender policy, development agenda and action plans
- Improved communication and information realized through production of gender newsletters, gender status reports, email connectivity, website and ICT and media training
- Enhanced relations and partnership accomplished through regular women's conferences, caucuses, meetings, trainings and policy dialogues.

130 Also refer to the gender SPM Section for additional information.

9.2.6 Strategic Goal 6: Strengthen the institutional capacity, effectiveness and impact of Youth Organizations

a Analysis and Justification

131 Programs and services for youth have been ongoing for some time, both at government and non-governmental levels. There are official youth offices in all four FSM states and the National Government. These offices are funded on ongoing basis through special US federal programs and services as projects or as part of Government social programs. Faith-based organizations, US Peace Corps, Boys Scouts, Girls Scouts, FSM Olympic Sports, SPC Youth Bureau, PMA and other locally based international organizations, such as the Salvation Army have formal youth activities as part of their regular community programs or social services.

132 Important are these programs and services are, they primarily exist to address youth social problems and, to some extent, offer rehabilitative services and/or alternatives social skills. Programs such as T3, PMA Youth Program,

PATS, Job Corps, Land Grants and WIA offer productive skills development training for youth but it is not clear to what extent these activities have had on the marketability of these youth in the formal private and public labor forces. Experiences to date indicate that youth are not actively involved in the dialogues, planning, formulation, implementation, monitoring and evaluation of these activities.

133 Gender Strategic Goal 6 offers constructive activities that if funded and properly managed, can result in a youth development portfolio that is youth directed and managed. To enable youth to take an active role in their development, a FSM-wide appraisal of the status of youth, including youth programs and services have to be conducted to elicit the realities of youth today and to appropriately mainstream youth in development activities and programs. A current baseline data on the Status of Youth is also useful for youth development programming.

b Youth Policy Implications

134 The FSM has one of the youngest populations in the Pacific region with a median age of 18.9. A young population places extreme pressures on national and state budgets. A major challenge for FSM is to clearly identify issues affecting youth and to develop with youth, appropriate responses to these issues. If the situation is not addressed effectively, it will have a major impact on the well being of young people. Policy implications include:

- Mainstream youth in planning, delivery, promotion, monitoring and evaluation of youth programs and the National Youth Policy
- Adoption of National Youth Policy and Action Plan
- Strengthening youth consultation and dialogue processes
- Adequate allocation of core resources for operations and programs

135 To help young people develop the necessary skills and appropriate attitudes, they need to effectively face the challenges of life while at the same time actively participating in the development of the nation. FSM can do this by creating enabling conditions that give young people:

- A sense of direction and purpose
- A say in decisions which affect them
- Equal opportunity to navigate the complexities of life and to contribute to national development

c Critical Issues for Implementation

136 The 2004 Draft National Youth Policy identified the following critical issues or areas of concerns for policy action:

- Education – there is a need to promote more suitable non-formal and informal educational initiatives
- Adolescent Health – there is a need to strengthen health education and promotional programs aim at addressing youth health
- Economic Development – there is a need to create and maintain structural solutions to promote the participation of youth in the development of the economy through the development of more youth training programs to foster self-employment and income generation activities
- Institutional Strengthening, Capacity Building and Coordination – there is a need to improve coordination of youth programs and activities at national, state and local levels and strengthen national and local youth organizations and networks

137 Adolescence is a difficult stage of life when young people go through the human development process of progressing from a young person to a mature adult. Helping them achieve positive outcomes for their efforts during this period will give them confidence to progress to a lifetime of continuing personal growth.

d Outcome Measures and Justifications

138 The National Youth Policy Mission Statement “ To create an environment in which all young men and women of the Federated States of Micronesia are inspired to become responsible and self-reliant members of the community through the development of their full mental, social, spiritual and physical potential” is a sound guiding principle for youth empowerment. The outcomes below supports this guiding principle:

- Adopt National Youth Policy
- Strengthen youth councils, organizations and programs
- Develop full potential of FSM youth
- Adequate allocation and provision of budget

9.2.7 Strategic Goal 7: Strengthen Youth Development through Social, Economic and Political Participation

a Analysis and Justification

139 Refer to 2.6.1

b Youth Policy Implications

140 In addition to 2.6.2, the following are the specific recommended policy implications for Strategic Goal 7 above:

- Provision for leadership and political empowerment, education and training for youth leaders
- Recognition of formal processes and structures for dialogue and engagement with youth

c Critical Issues for Implementation

141 In addition to those critical issues described under 2.6.3, the following two issues below are specific to Strategic Goal 7:

- Lack of positive Role Models and Mentors
- Absence of Youth in Youth Policy and Decision-Making Processes and Structures

d Outcome Measures and Justifications

142 Specific to Strategic Goal 7, the following outcomes are envisaged to facilitate progress youth empowerment and participation:

- Increase participation of youth leaders in the economic, political and social activities, dialogues and programs
- Improve networking, partnerships and collaboration with strategic stakeholders
- Improve MIS, information and communication capacity

143 Also refer to Section 3: Gender Strategic Policy Matrix for details.

9.2.8 Strategic Goal 8: Establish social protection and social welfare services for seniors

a Analysis and Justification

144 Social welfare and protection services for the elderly require additional research to establish sound basis for addressing the needs of this growing population. Strategic Goal 8 is included as a starting point for dialogue and programming on the issues and needs of elderly people in the FSM.

b Seniors' Policy Implications

145 FSM does not provide specific social welfare programs or services as part of its social affairs administrations. The FSM Social Security Administra-

tion pays out social benefits to beneficiaries and retirees of the public and private service systems. Strategic Goal 8 might be enhanced through the following:

- Create an office for the elderly at the national Government level
- Create a National Senior Citizens Policy

c Critical Issues for Implementation

146 Critical issues for implementation are not specified. Constructive multidisciplinary dialogues and discussions on the topic are highly recommended as part of the post-3rd FSM Economic Summit implementation activities.

d Outcome Measures and Justifications

147 The issues and concerns of the elderly were not well defined during the discussions of the Gender Committee or the closing plenary. Urgent studies on the situation of the elderly is required if their needs are to be properly addressed. The following would be consistent with the achievement of Strategic Goal 8:

- Creation of the National Senior Citizens Office at HESA
- Improvement of seniors' benefits and protection
- Adoption of National elderly policy
- Establishment of seniors development program

148 Refer to Strategic Goal policy matrix under Section 3: Gender Strategic Policy Matrix of this Chapter.

9.2.9 Strategic Goal 9: Address the special economic, political and social needs of disabled persons and persons with special needs

a Analysis and Justification

149 This is another new topic that was not discussed in the Gender Committee process. The issue was brought up at the closing plenary. The issue of disability is not addressed as a comprehensive program for all disabled persons or for persons with special needs. Generally, existing programs and services are targeting children and not all disabled persons per se.

150 Since there is limited information on FSM disabled persons, the situation and needs of this most disadvantaged group as presented in this Chapter is just a superficial overview. In-dept analysis and studies are urgently needed before meaningful programming is to take place. Strategic Goal 9 is an attempt to bring focus on the needs of disabled persons and their potential contributions to society if mainstreamed properly into development activities.

b Disabled Persons' Policy Implications

151 There are a number of impediments to full participation of the disabled in development activities. The implications for policy include:

152 Establish effective mechanisms for engaging disabled persons and persons with special needs in the democratic and development processes

153 Adopt official policy, strategic development agenda and action plan on disabled persons and persons with special needs to guide FSM development agenda on people with disabilities and special needs

154 Ensure building, roads, construction and transportation plans, decisions, policies and legislation are disabled friendly

c Critical Issues for Implementation

155 Disabled persons can speak for themselves if given the chance and/or opportunity to do so. For them to contribute meaningfully to debates and discussions on development issues, they must be provided with supportive physical and social environments. Major constraints impeding disabled persons' participation include but not limited to:

- Inadequate programs and services for the disabled
- Absence of disabled persons policy and development agenda
- No formal engagement with mainstream development partners
- No disabled-friendly building, transportation, communication and roads
- No disabled- friendly employment programs and services

d Outcome Measures and Justifications

156 Again, the following outcome measures are intended as starting points for FSM national and states' governments to focus priority actions on. These initial outcomes can facilitate immediate integration of disabled persons into mainstream economic and social development activities, programs and services. Recognizing disabled persons positive contribution to society will build and strengthen disabled persons' self-worth and self-confidence. These will further strengthen their will to be productive and self-reliant members of society.

157 Thus possible outcomes consistent with through Strategic Goal 7 include:

- Adopt FSM-Wide policy on disabled persons and persons with special needs
- Mainstream disabled persons and persons with special needs into ongoing and regular public and private activities, programs and services

- Recognition of the positive contribution of disabled persons and persons with special needs