



SOUTH PACIFIC REGIONAL
ENVIRONMENT PROGRAMME

PROPOSED TOURIST RESORT
DEVELOPMENT

Tonkin & Taylor

Report

REPORT

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SOUTH PACIFIC REGIONAL
ENVIRONMENT PROGRAMME

PROPOSED TOURIST RESORT
DEVELOPMENT

UTWA-WALUNG CONSERVATION AREA,
KOSRAE, FEDERATED STATES OF
MICRONESIA

PRELIMINARY ENVIRONMENTAL
IMPACT ASSESSMENT

REFERENCE NUMBER: 750214

JULY 1998

REPORT PREPARED FOR;
SOUTH PACIFIC REGIONAL ENVIRONMENT
PROGRAMME

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Appendix A UTWA Adventure Resort

- Business Plan

Appendix B UTWA Marine Conservation Area

- Promotional Material

List of Abbreviations and Acronyms

CASO	Conservation Area Support Officer
DRC	Development Review Commission
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
FSM	Federated States of Micronesia
GR	Gross Revenue
KIRMP	Kosrae Island Resource Management Program
NEMA	National Environmental Management Strategy
SPBCP	South Pacific Biodiversity Conservation Programme
SPREP	South Pacific Regional Environment Programme
TAC	Technical Advisory Committee
TOR	Terms of Reference
UWCA	Utwa Walung Conservation Area

EXECUTIVE SUMMARY

The Utwa Walung Conservation Area (UWCA) is a community based conservation initiative supported by the South Pacific Regional Environment Programme (SPREP). The UWCA is centred on the most extensive area of mangrove and seagrass habitat in Kosrae, and generally comprises reef lagoon, estuary and associated wetlands, and surrounding terrestrial environment.

The UWCA is considered to contain the largest and most pristine examples of marine and terrestrial wetland ecosystems in Kosrae. Unique features of the area include the marine lakes, the largest of which is Lulu Utwa, with depths of up to 60 ft, which forms part of the enclosed waterway linking Utwa and Walung harbours.

Utwa Adventure Resort Corporation has applied to the Kosrae state government to construct and operate an over-the-water resort in Lulu Utwa, and also a land-based resort development in Walang, both within the UWCA.

Kosrae currently receives much of its income from US Compact Funds.

As these funds are scheduled to stop in the near future, the Kosrae state government is keen to support projects which could mitigate the likely effects of decreased revenues and increased unemployment which will occur with US Compact Funding cuts. Accordingly, the Kosrae state government is generally supportive 'of the principle' of the proposed resort development project.

To evaluate the likely environmental effects of the proposed project(s) on the UWCA, SPREP engaged a consultant to undertake a preliminary environmental impact assessment (EIA) of the proposal(s).



There are presently more than sufficient hotels, and capacity, to support increased transit numbers to Kosrae. The need for the proposed resort has not been demonstrated, and the business plan suggests the proponents have not undertaken appropriate market research.

The technical and economic feasibility to the proposed development(s) is questionable, as is the ability of the project proponent to successfully construct and operate such facilities. Accordingly, the purported benefits of the proposed development may not be realised.

The need for the particular project has not been demonstrated. Kosrae needs more tourists and/or tourist dollars. There are presently sufficient hotel rooms to cater for increased tourists. The desired benefits of revenue and employment of increased tourist numbers could be realised through better promotion of Kosrae, given the available spare capacity of the existing hotels. Tourists could also be encouraged to spend more on locally made goods and services which would also increase revenue and employment without the need for more resort hotels. All hotels have the capacity to increase room numbers should significantly increased tourism eventuate.

The key issue associated with the proposed development(s) is location, and this cannot be mitigated. The only way that this issue can be addressed at present is to locate the resort(s) outside the UWCA.

The proposed resort developments have a high potential to degrade the UWCA environment. The aesthetics of the Lulu Utwa area would be significantly degraded by houseboats, and the water quality of Lulu Utwa would probably be adversely affected due to the likelihood of contaminants entering the water from the development. Fragile ecosystems could also be adversely affected, and hence development in this area should be prohibited as a reasonable precaution.

The Walung site does not appear to be particularly suitable for the proposed development because of erosion, and adverse water quality effects are likely to result from waste water discharges.

If more resorts are demonstrated to be essential for tourism, the need for which cannot be provided for by expansion of existing resorts, then alternative sites outside the UWCA should be investigated.

The UWCA does not yet have a management plan, which would set out policies to address the various issues confronting the local communities, including eco-tourism. Until the management plan has been prepared and implemented, major development proposals such as the proposed resorts are premature and would result in ad hoc development with potentially significant adverse affects.

The UWCA management plan should review, and then possibly build on, the Kosrae State Land Use Plan and the Kosrae Island Resource Management Plan. Under these existing plans, the UWCA is already included in the areas of particular concern (APC).

This process needs to be undertaken by the community to ensure that their aspirations, as well as their concerns, for the UWCA are addressed.

The objective of the UWCA management plan is to put in place policies which will ensure that any development is ecologically sustainable.

The communities need to formulate, and then agree on, policies to address the issues such as resource harvesting and eco-tourist activities. For example, one area of concern (i.e. an issue) regarding eco-tourism in the UWCA could be whether all, or only a few, of the villagers will benefit from a particular project or activity.

A policy could therefore be developed which establishes criteria which tourist activities have to meet, for example:

- equity of distribution of the benefits of tourist activities amongst the villagers of Utwa and Walung
- predominance of benefits to Kosraens, not outsiders
- demonstrated technical and economic feasibility of the project
- employment opportunities are available to all the UWCA communities
- if the developer is from outside, then only developers with a proven track record in ecologically sustainable developments can work within the UWCA.

In preparing a successful community based UWCA management plan which will form the basis for any subsequent development, the present institutional arrangements also need to be reviewed.

At present the Utwa-Walung Marine Park Board is comprised of Directors mostly appointed by the Utwa Municipality. There is a very real potential for the Marine Park Board, as it is currently structured, to be seen to be acting for particular interest groups, or those of only a few landowners and their families.

At present the Marine Park Board does not appear to be directly accountable to, nor truly representative of, the communities they were established to represent. It would appear to be more appropriate for a truly representative group to be elected by representatives of all of the families of the villagers having customary rights over, as well as those owning land within, the UWCA. The name should also be changed to reflect the wider conservation area, for example the UWCA Management Board.

We consider that the proposed resort development as currently proposed in the business plan has nothing in common with 'eco-tourism', and is not an 'eco-tourism development project'. Indeed the proposed resort development presents a very real threat to the UWCA, and to the current eco-tourism industry successfully operating within the UWCA.



1.0 Introduction

1.1 Purpose of this Report

This Preliminary Environmental Impact Assessment (EIA) has been undertaken by the South Pacific Regional Environment Programme (SPREP) to evaluate the likely effects of a tourist resort project which is proposed to be located in a regionally significant conservation area.

A comprehensive Environmental Impact Statement (EIS) will need to be undertaken by the tourist project proponent as an integral part of feasibility studies as required by the Kosrae Island Resource Management Program Regulations for Development Projects (1994).

The proposal is to design, build and operate an "over the water" floating bungalow resort which will be located in the mangrove fringed lagoon adjoining Utwa harbor. As this site is inside the Utwa-Walung Conservation Area (UWCA), established with financial and technical assistance from SPREP, the Conservation Area Support Officer (CASO) requested that a preliminary EIA be undertaken by SPREP.

The primary purpose of this preliminary EIA is to provide information for the communities so that they are informed about the likely environmental effects of the proposed tourism development project. An external EIA of the development proposal was also recommended by Terra Firma (1997).

1.2 UWCA Administration

Reference is often made to the Utwa-Walung Marine Park, and the Utwa-Walung Marine Park Board has been established as a Chartered Corporation to coordinate the sustainable management and funding of the conservation area. The Marine Park Board is in effect the Conservation Area Coordinating Committee advocated by SPREP (1996).

As stated by Nena and La Fleur (1997), the terms "Marine Park" and "Conservation Area" are often used interchangeably to describe the same area. However they are not synonymous, and the Marine Park is merely that part of the conservation area which incorporates the marine, reef, estuarine, lagoon and mangrove forest ecosystems below the high water mark (i.e. state land).

For the purposes of this preliminary EIA, the term UWCA is used to describe the conservation area and includes both private and state land, and freshwater wetland forest ecosystems as well as mangrove forest and marine ecosystems.

Whilst this preliminary EIA examines the specific proposal(s) put forward by the Utwa Adventure Resort Corporation, it also addresses the wider issues associated with development anywhere within, or in close proximity of, the UWCA.

1.3 Terms of Reference for the Preliminary EIA

The Terms of Reference (TOR) state that:

Generally, the consultant will be responsible for carrying out an EIA of the proposed resort within the UWCA Project in Kosrae, Federated States of Micronesia.

Specifically, the consultant will carry out the following tasks:

- Review literature pertaining to the proposed resort development;
- Confirm where possible the authenticity of the proponent(s);
- Review and comment on proposed resort design, location and method of construction;
- Determine direct and indirect effects of (the proposed) development on the conservation area;

- Determine direct and indirect impacts (including social, cultural and economic) of (the proposed) development to local communities of Utwa-Walung;
- Consult with local communities to determine whether or not they have been fully informed of the proposal and whether there is support for the development;
- Consult with relevant government officials to determine if there is support for the proposal;
- At the end of the field assignment, report on findings to conservation area project staff, local communities, and relevant government officials;
- Prepare and submit a formal report to SPREP;
- Other tasks as the consultant deems necessary to complete the assignment.

1.4 Program

The following study program was established to undertake the TOR:

Wednesday, 20 May	Arrival and briefing by Madison Nena, review of literature pertaining to the proposed development
Thursday, 21 May	Consultation with Government Departments and Agencies to determine support for the proposed development
Friday, 22 May	Consultation with the local communities to determine awareness of the proposed development and level of support
Saturday, 23 May	Visit to the Utwa-Walung Conservation Area, consultation with villagers using the resources
Sunday, 24 May	Church attendance, and writing up notes from previous days activities
Monday, 25 May	Meeting with the Office of the Governor (a.m.) and meeting with the Utwa Community (p.m.)
Tuesday, 26 May	Meeting with the Tafunsak Community (a.m.) and Meeting with the Walung Community (p.m. and overnight)
Wednesday, 27 May	Meeting with Municipal, Government Department and Agency Representatives to report on preliminary EIA findings
Thursday, 28 May	Debriefing with Madison Nena and Departure

2.0 Environmental Management

2.1 Environmental Laws and Regulations

2.1.1 Kosrae State Constitution

Under Article X1, Land and the Environment, Section 1 states that *a person has the right to a healthy, clean, and stable environment. While providing for the orderly development and use of natural resources, the State Government shall by law protect the State's environment, ecology, and natural resources from impairment in the public interest.*

2.1.2 Kosrae Island Resource Management Program (KIRMP)

Kosrae State Law 5-56 formally established the KIRMP, reflecting both a concern and commitment to manage Kosrae's fragile and limited resources for present and future generations. The KIRMP development review process is designed to encourage sustainable economic and social development, while at the same time minimize harmful impacts to Kosrae's unique environmental and cultural resources. The program does not intend to prevent individual landowners from making use of their land, only to prevent harmful impacts from jeopardizing Kosrae's future.

Under KIRMP, the preparation of an EIS is required if one or more of the criteria listed in the regulations are applicable to a project proposal. For the proposed development project, the following criteria are applicable:

- It is reasonably foreseeable that the project will cause a significant environmental impact on marine and coastal resources, mangrove resources, social/cultural/historical resources and plants and animals.
- It is reasonably foreseeable that the project will fail to comply with all the applicable minimum and environmental quality standards for water and air quality, waste management and noise control.
- It is reasonably foreseeable that the project will be incompatible with surrounding land and water uses.
- It is reasonably foreseeable that the project is controversial and will invoke public opposition.
- The project involves a foreign investment permit.

2.1.3 Environmental Management Strategy

Kosrae participated in the development of the FSM's National Environmental Management Strategy (NEMS) in 1994 and which is now being implemented. The main components of the NEMS include integrating environmental considerations in economic development; improving environmental awareness and education; managing and protecting natural resources; and improving waste management and pollution control.

The NEMS also recognises that the states are ultimately responsible for protection and preservation of their resources. Historically, there has been a strong division between federal and state government. A review of the environmental laws and regulations would suggest that the national (FSM) government plays an important role in environmental management. However, in practice, the role of the FSM is significantly less. This is due partly to the fact that there are no federal offices or resource managers stationed in Kosrae to enforce or administer the regulations, or to coordinate with state officials (Phillips, 1993).

2.1.4 Marine and Fisheries Code

This code has now been finalized and is with the Legislature. The code, which addresses both fisheries and marine resources management, and marine safety, is expected to become law next session.

2.2 Institutional Arrangements

Under KIRMP three new administrative bodies have been created to achieve the goals of better inter-agency coordination and effective development review and planning.

2.2.1 Program Office

Under KIRMP, a two person Program Office has been established consisting of Program Director (who also serves as executive director of the Development Review Commission, and a Program Advisor (who has training in coastal resource management principles and EIA).

A major purpose of the Program Office is to help streamline project approval for potential developers. The Program Office serves as a point of contact and source of information for permit applicants. Based on criteria established in the regulations, the Program Office staff will inform an applicant whether a project needs a permit and if it will require an EIS.

The Program Office will also monitor projects that have been approved to make sure that all requirements and conditions established by the permit are being followed. The Program Office will assist the State Agencies and Attorney General's Office in enforcing the KIRMP regulations.

2.2.2 Technical Advisory Committee (TAC).

Once a development application has been filled out and submitted to the Program Office, it will be forwarded to the TAC for technical review.

The TAC is a ten-member committee that serves two main functions: (1) provides multi-disciplinary technical guidance in the review of development proposals, and (2) improves coordination among government agencies.

TAC has members representing the following Kosrae State Agencies:

- Bureau of Planning and Statistics
- Construction and Engineering
- Department of Transportation and Utility
- Division of History and Culture
- Department of Agriculture and Lands
- Division of Marine Resources
- Division of Tourism
- Division of Forestry
- Division of Environmental Health
- Kosrae Utilities Authority

2.2.3 Development Review Commission (DRC)

The DRC is a five-member commission appointed by the Governor and confirmed by the State Legislature. It has assumed the responsibilities of the former Environmental Protection Board that was eliminated under KIRMP, as well as some new responsibilities.

One of the DRC's main functions is to evaluate project proposals based on recommendations from the TAC and the general public. After evaluating all technical and public input, they will formally approve or reject the proposal. If the application is approved, DRC will issue a permit for the project to proceed. In some cases, they may condition a permit to require changes in siting, design standards or construction methods for a project in order to minimise damage to the environment. Project proponents may appeal a DRC decision to deny a permit.

2.2.4 Department of Agriculture and Lands

Land-use jurisdiction constitutionally remains a state responsibility in the FSM. The land management organisations of Kosrae are vested in two government agencies, The Department of Agriculture and Land, and The Land Commission.

The Land Commission operates as an independent authority which has the authority to determine and register interests in land and to refer to the Court difficult issues of law arising from contested parcels of land. Land

Management provides survey and mapping services to the government and to the public. Boundary identification, adjudication, and deeding of public and private lands are only slowly being completed on Kosrae. About 68% of the private lands still need to be surveyed.

Another complication is that the interior lands are government owned, but most of the boundaries are poorly delineated, and some land owners have pushed private property boundaries up-slope into areas too steep even for forest cultivation. (Kosrae State Government, 1992a). The land deemed to be government owned was originally determined by the Japanese administration shortly before WWII. In 1932 the Japanese seized all uncultivated land. Additional land was purchased in 1935, by a Japanese agricultural company. All rights to lands acquired by the Japanese administration now belong to the government in trust for the people. However, because these lands were

originally taken from Kosraen landowners, disputes over land ownership continue. Section 9 of Article XI of the Constitution states that *the State Government shall transfer to the original owners, their heirs or assigns, all public land above the Japanese line. The procedures for this transfer shall be as prescribed by law.* This law has yet to be drafted.

3.0 Need for the Project

3.1 Tourism Development

Tourism development projects are viewed positively by the State Government, as such projects are seen to create both wealth and employment, and to therefore benefit Kosrae. Alternative options for wealth and employment appear limited, and tourism is considered to be one sector with growth potential.

Kosrae currently has four resort hotels (Kosrae Village Resort, Nautilus, Treelodge and Sandy Beach), and two budget hotels (Tradewinds and Coconut Palm), that combined provide a total of 57 rooms. Occupancy rates for the resort hotels (which have a combined total of 48 rooms) appear however to be on average significantly less than 50%. Accordingly there is already, in effect, at least a 20-room resort hotel over capacity which is not being utilized. Should occupancy rates increase as a result of increased tourism, all of the resort hotels have the capacity, and plans, for expansion.

Approximately 2,500 people visit Kosrae each year. Immigration data suggests that about 50% of the visitor arrivals in Kosrae are tourists. However, if tourists are defined as "visitors with the principal purpose of holiday", (i.e. not visiting friends and relatives) then only about 10% of total visitors, or 250 people, are tourists (Terra Firma, 1997). Most tourists are from USA and Japan, and come to Kosrae for diving and to experience the culture.

Accordingly, most tourists who currently visit Kosrae are eco-tourists (i.e.

have come to see the natural unspoiled environment of Kosrae and to assist in its conservation).

The existing resort hotels are all of a high standard and provide a range of accommodation style from traditional bungalow to block unit. Resort hotel room rates currently (May 1998) range from \$50 to \$84 for single and \$72 to \$104 for double. Budget hotel room rates range from \$35 (single) to \$50 (double). Accordingly, prospective tourists already have a fairly wide choice as to type of facility, and price structure.

Whilst more hotels will in theory provide more employment, unless significantly more tourists come to Kosrae the number of tourists will merely be spread more thinly over the existing hotels. This could make some of the existing hotels uneconomic thus leading to job losses. Already at least two hotels (Hotel Kosrae and the Horizon Hotel), have failed.

Given the generally low occupancy rates which reflects low tourist numbers, a coordinated marketing campaign to bring more tourists to Kosrae (to better utilize the existing tourist facilities) may bring greater returns than a new resort complex. From an environmental perspective it would almost certainly be preferable to expand the existing facilities than to create new facilities at green field sites.

The proposed resort facilities are stated to be aimed at a specific (wealthy eco-tourist) market, which the proponents consider is not currently available on Kosrae. However, most tourists are already coming to Kosrae for the nature-based attractions (reefs) of the island. The proponent appears to be suggesting that wealthy people are not coming to Kosrae because the existing accommodation facilities are not sufficiently up-market, or that the locations of the existing resorts are not sufficiently attractive. This assumption needs to be backed by professional market research. At present there is no information available to demonstrate that there is sufficient demand for the proposed project and as such the need for the project remains highly questionable.

There is also no evidence that the project proponent has successfully implemented a similar project, requiring high environmental standards, elsewhere. The project proponent is, however, understood to be in the process of constructing a land based tourist resort facility on an island in Yap.

Given the nature of the proposed project (i.e. a private commercial enterprise), the need for the project and the credibility of the proponent would normally only be of concern to funding agencies. In this instance, however, these matters are important because of the proposed location of the resort(s) within the UWCA and the potentially significant long term adverse environmental effects associated with the project.

3.2 Community Expectations

Rapid appraisal techniques were utilised to initially gather, and later validate, the views of Government and the local communities of Utwa, Tafunsak and Walung, on the proposed project(s).

The initial meetings with Government Departments and Agencies, including the Governor of Kosrae, indicated general support for the project because they believed it would benefit Kosrae through increased revenue and employment. There is considerable political pressure for new development projects to offset the anticipated cutting-off, or reduction, of US compact funds. However, all the people interviewed (refer Section 10D) in Government also supported the UWCA, and did not want to see the UWCA jeopardised by this, or any other, proposed development.

The Utwa Walung Marine Park Board were very supportive of the project, as they saw it as a source of revenue for the UWCA, and for other purposes (e.g. an education trust fund). Alternatively, some Government Departments and Agencies (Marine Resources, Administration) were not aware of the project, and expressed concern as to the impact of the project on the UWCA.

At a local level, one of the perceived benefits for the resort at Lutu Utwa was increasing land values in the area, and providing employment opportunities in Utwa village. Employment was also seen to be a benefit to the Walung community, although only to a few families.

When the preliminary EIA study findings were presented to the local communities and Government Departments and Agencies, the requirement for a management plan in advance of any tourist resort facility was supported (i.e. validated).

In summary, from discussions with government departments and agencies, and local communication, the benefits of the proposal appear to have been overstated. Certainly the expectations appear to be unrealistically high and, apart from those very few landowners whose land will be leased for particular facilities (including infrastructure), and whose families because of proximity are likely to be the likely employment beneficiaries, are unlikely to be realized.

If the benefits are not realized at all due to project failure, then the consequential effects could include loss of confidence in the viability and benefits of nature-based tourism and the withdrawal of community support for the UWCA. Should this occur, then not only would the proposed development fail to support the UWCA, but the proposed resort development(s) could actively conspire against it.

4.0 Project Description

4.1 Project Design

Detailed technical information on the proposed development is not currently available. However, two resort complexes appear to be currently proposed by the proponent:

- Over-water accommodation units located in the sheltered lagoon of Lulu Utwa (near Foko Salap). The units are essentially houseboats, which will be permanently anchored in the lagoon or tethered to the adjacent mangroves. A restaurant facility is to be located on elevated ground immediately adjacent to the road near Sipyen. Access to the restaurant from the accommodation units is to be via a boardwalk through the mangroves. Access to the boardwalk from the houseboats will be by boat. The distance from the restaurant to the boardwalk lagoon landing facility (presumably a pontoon jetty) does, however, appear to be quite considerable (several hundred feet).
- On land accommodation and restaurant facility, and supporting infrastructure, located in the village of Walung.

Both resorts are located in the UWCA, and the over water facility is also located in the marine park component of the conservation area, as shown on Figure 6.1.

4.2 Technical Feasibility

Information on the proposed project is set out in the project proponents business plan (included as Appendix A). The proposed locations of the accommodation complexes raise considerable technical challenges, which will need to be addressed by specialist investigation and design. That, to date, there do not appear to have been any studies to address these technical challenges raise doubts about the seriousness of the proposal(s), and the ability of the proponent to deliver sustainable nature tourism to the area.

The business plan forms the core of the project proposal, and is set out in sections titled Products and Services, Market Definition and Opportunity, Competition and other Influences and Marketing Strategy. All these sections show inconsistencies / weaknesses and cast doubt on the technical viability of the project, as outlined below.

4.2.1 General

The project proponents state that they "have been researching the developing Eco/Adventure travel market for the last year", and stress the short flight time span to Kosrae for the Asian traveller and the opportunity to combine with gambling in Tinian and shopping in Guam.

Neither Asian travellers, shopping nor gambling are associated in any way with the emerging eco-tourism market trend. They all reflect a type of tourism associated with mass-tourism, exactly the opposite of what the proponents purport to want to develop. The market for ecologically aware tourism, although growing, is still a small niche market, specifically associated with the USA, Germany, other northern European countries and Scandinavia, certainly not Asia. The reference to competing with the more distant (to Asia) locations of Hawaii, Fiji and Tahiti, ignores the very similar, closer, and significantly less expensive, tourist destinations in the islands of South-East Asia.

4.2.2 Products and Services

A major goal stated by the proponents is "to adhere as closely as possible to the principals of Eco-tourism". The proponent then lists a set of principles that could be applied to any resort development in the Pacific. Excluded from this list are a few fundamental principles from Eco-tourism Society (USA) such as:

- *Eco-tourism encourages the avoidance of the negative environmental and cultural impacts of tourism that can damage or destroy the integrity or character of the natural or cultural environment being visited. The location of the project in itself defies this principle and is discussed further in Sections 6 and 7.*
- *Eco-tourism promotes the conservation of natural and cultural resources through assistance in the conservation and enhancement of the*

environment e.g. funding or supporting conservation work, actively involving participants in conservation projects. This is not mentioned in the business plan, nor included in the financial analyses.

4.2.3 Market Definition

Eco-tourism may well be the fastest growing segment of the tourism industry, however, it is also one of the smallest. Simply to suggest that you need only a tiny share of the big Hawaiian, Fijian or Tahitian markets, is not sufficient to define the market for the proposed resort as this applies to every single hotel property in the Pacific, let alone Kosrae. TCSP, PATA and the WTO provide a detail market data that should have been sourced to enable better market definition.

4.2.4 Competition and other influences

Little of the information provided on the Asian market takes into consideration the current Asian financial crisis and is quite irrelevant in the context of this particular resort proposal. The business plan implies mass-type tourism rather than eco-tourism, and the proponent appears to be confused as to which market the purposed project is targeting. The only sector the proponent appears to understand is mass-tourism. No reference is made in the business plan to eco-tourism alternatives now being offered in the Hawaiian islands for example. A number of small eco-tour operators have also entered the market throughout the Pacific in building eco-lodges. There is also no reference to local existing competition in Kosrae itself.

4.2.5 Marketing Strategy

The Marketing Strategy includes nothing unusual. The tourism resorts on island are already engaged in all of the listed marketing activities with the exception of the toll-free (800) phone number. In order to take advantage of the 800 number, this resort would have to have an office elsewhere, as 800 numbers are not available in the FSM.

A marketing strategy without reference to travel wholesalers clearly indicates a poor understanding of the travel/tourism business. Travel agents seldom book directly. They use travel wholesalers who combine nett wholesale airfares and wholesale hotel rates, produce flyers and brochures, and promote the destination to a large base of travel agents. Travel wholesalers normally work with commission levels varying between 20% and 50% off the rack rates. The 15% commission assumed in the business plan is unlikely to be a tempting nor attractive proposition to travel wholesalers.

4.3 Economic Feasibility

The economic feasibility of the over water resort facility is set out in the project proponents business plan (Appendix A). The financial information contained in the business plan does not appear to have taken into account the special circumstances of location, and as such construction costs and maintenance costs are likely to be significantly underestimated

The business plan, submitted by the project proponent, has been evaluated by the Department of Commerce and Industry. The Departments findings are summarized as follows in Sections 4.3.1 to 4.3.10:

4.3.1 Loan

The plan assumes a loan on \$1,200,000 at 4% interest for 30 years with a grace period extending to two years after the beginning of the operation without accruing interest. The plan indicates that the only collateral for the loan will be the resort itself. No valuation is made on the lease of the land. The FSM Development Bank advises the loan would be 7% interest over 25 years. The longest grace period would be one year from the time of the first disbursement. In addition, interest accrues from the time of the first disbursement. The Bank would be willing to spread the accrued interest from the grace period over the term of the loan to make payments easier. The bank would also be willing to use the value of leased land as collateral. This would add an additional interest expense of approximately \$80,000 per year

for the first two years, and increases the projected interest expense in the following years by over \$30,000.

4.3.2 Depreciation Expense

An estimated \$1,320,000 is to be spent constructing the resort complex and purchasing furnishing and equipment for the facility. These can be expected to depreciate completely in approximately 10 years, at which time they would be replaced. The annual depreciation would therefore be \$132,000. No depreciation is included in the plan. Many people do not like to consider depreciation expense in their income and expense reports, as actual cash is not expended. Those people assume that they will get another loan to replace their assets when they are no longer useable. This project, however, plans for the loan to last longer than the assets are expected to last, and expects the assets to act as security for the loan. Depreciation expense must be considered with this plan so that money is set aside for the assets to be replaced as needed. As this resort is meant to be floating on the water, there is reason to assume complete depreciation in as few as five years, but this review analysis assumes a ten year life.

4.3.3 Gross Revenue Taxes

Gross Revenue taxes should be included in the Income and Expense projections. Gross revenue taxes are calculated as \$80 on the first \$10,000 and 3% on all revenues over \$10,000. The projected gross revenue taxes are:

Year 1:	Year 2:	Year 3:	Year 4:	Year 5:
\$12,920	\$26,060	\$39,200	\$45,770	\$49,055

4.3.4 Room Rates

The room rates are set at \$250 per night. This rate has been set, assuming the market to be very wealthy. The plan defines the major tourists of the world to be eco-tourists and cites particularly the "76 million environmentally sensitive baby boomers" from the US. There is no indication of the size of the wealthy market and no highlighted strategy to target the wealthy market.

The room rates on island now range from \$35 to \$100. If this resort is unable to charge their proposed higher rate, the income projection could decrease more than 50%.

4.3.5 Shipping Expenses

The plan shows shipping expenses ranging from \$500 to \$2,000 over the 5 year period. Presumably the restaurant will be shipping food and supplies, as is the practice of the other restaurants. Shipping expenses for food are generally about the same cost as the food. The projections for food expenses range from \$25,550 to \$95,813 over the five year period. Perhaps the shipping expense has been included as part of the food costs, but there are no explanations.

4.3.6 Lease Expenses

No lease expenses are included in the plan. However, even if the land is the investment of the Marine Park Board partners, some valuation of this asset should be included in the plan as part of the value of the project. If the partners agree to make annual payments on the lease of the land, the expense of that lease should be listed in the income and expense projections for the plan. There is no indication of the amount of land to be leased or contributed, nor is there any valuation of the land or the lease.

4.3.7 Marketing Strategy

Although the plan contains no unusual marketing strategies, they expect occupancy rates to increase from 20% to 40% by the second year of operation and increase to 75% occupancy rate by year five. Kosrae's current experience is 30% occupancy rate.

4.3.8 Total Additional Expenses

	Year 1	Year 3	Year 3	Year 4	Year 5
Absolutely must be included:					
Interest	\$83,096	\$81,214	\$31,028	\$28,684	\$26,172
Depreciation	\$132,000	\$132,000	\$132,000	\$132,000	\$132,000
GR Tax	\$12,920	\$26,060	\$39,200	\$45,770	\$49,055
	\$228,016	\$239,274	\$202,228	\$206,454	\$207,227
Total Add					
Might be included:					
Shipping	\$25,550	\$51,100	\$76,650	\$89,425	\$95,813
Lease Exp	\$??	\$??	\$??	\$??	\$??

The additional expenses are still based on the room rates and occupancy rates suggested in the plan. If room rates decreased, gross revenue taxes would also decrease. If occupancy rates decreased, gross revenue taxes, restaurant food and labour, and some of the site operating expenses would also decrease.

The cost of the over-water resort facility in Lulu Utwa appears to be optimistic. Over-the-water facilities are complex and are considerably more expensive than comparable on-land facilities because of servicing (water, power, sewage etc). In addition to design and construction costs, over-the-water facilities also attract higher maintenance costs. The project proponent does not demonstrate that the costs set out in the business plan have any basis.

4.3.9 Conservative Estimate

Conservative estimates based on the 30% occupancy rate with room rates at the highest rate in Kosrae of \$105 per night would offer quite a different financial picture with the resort reaching the 30% mark during year 2 and probably holding at that rate.

	Year 1	Year 2
Revenues	\$226,000	\$340,000
Cost of goods	\$36,000	\$54,000
Expenses	\$441,000	\$435,000
Profit/(Loss)	(\$251,000)	(\$149,000)

4.3.10 Modified Conservative Estimate

Assuming the proponent were able to market to those willing to pay \$250 per night, but were unable to exceed the current occupancy rate of 30%, the picture is not so dismal.

	Year 1	Year 2
Revenues	\$438,000	\$657,000
Cost of goods	\$36,000	\$54,000
Expenses	\$448,000	\$445,000
Profit/(Loss)	(\$46,000)	\$158,000

4.4 Summary

There is currently insufficient information which demonstrates the technical and economic feasibility of the of the proposed resort development project. What information is available raises serious doubts about the project's technical and economic viability.

5.0 Project Options

5.1 General

Many options are available to achieve the Government of Kosrae's objective to increase revenue and employment from tourism, and for the local communities to benefit from ecologically sustainable development, including eco-tourism, within the UWCA.

5.2 No project option

Given the low occupancy levels in the existing hotels, increased revenues and employment from tourism could be achieved by enticing more tourists to visit Kosrae without the need to build another resort. By achieving better utilization of the existing facilities, and possibly expanding the existing facilities to cater for increased tourist numbers, a no project option may actually achieve the tourism goals of Kosrae at considerably less capital cost, and environmental cost, than the proposed project.

Increased revenues and employment could also be achieved by encouraging existing tourists to spend more money on goods and services whilst in Kosrae. For example, there is currently very little in the way of crafts available for tourists.

5.3 Alternatives to the proposed project

No information is currently available on alternatives, to the proposed project, which have been considered by the project proponent. Apparently a time-share project and a land based lodge were considered, but it appears that the current proposal has been evolving according to the "realities on the island" (Terra Firma, 1997). However, as discussed in Sections 3.0 and 5.2, a campaign to bring tourists to Kosrae and better utilize the existing facilities would appear to be a viable alternative to achieve Kosrae's tourism goals, and those of the local communities.

Community based or individual home-stay tourist accommodation is not currently commercially available on Kosrae, nor is bed and breakfast accommodation. As recommended by Terra Firma (1997), such low risk, low impact alternative tourism development strategies need to be investigated.

Tourist statistics indicate that tourists spend on average \$95 each per day whilst on Kosrae. This suggests that there are currently insufficient locally made-goods or services available for tourists to buy. Accordingly, a strategy needs to be formulated to encourage the existing tourists to spend more money in Kosrae. If each tourist were to spend \$190 per day, then this would have the revenue effect of doubling current tourist numbers without the necessity to build more resorts.

5.4 Site options

Although it is relatively small, Kosrae has a correspondingly small (albeit rapidly growing) population. Outward migration is, at least from Utwa and Walung, tending to offset to some extent the high birth rate, as indicated by the population statistics set out in Section 6.1.3.

Alternative locations exist for new resort development projects. No information is available, however, which demonstrates that alternative sites have been considered, by the project proponent, or why they have been rejected.

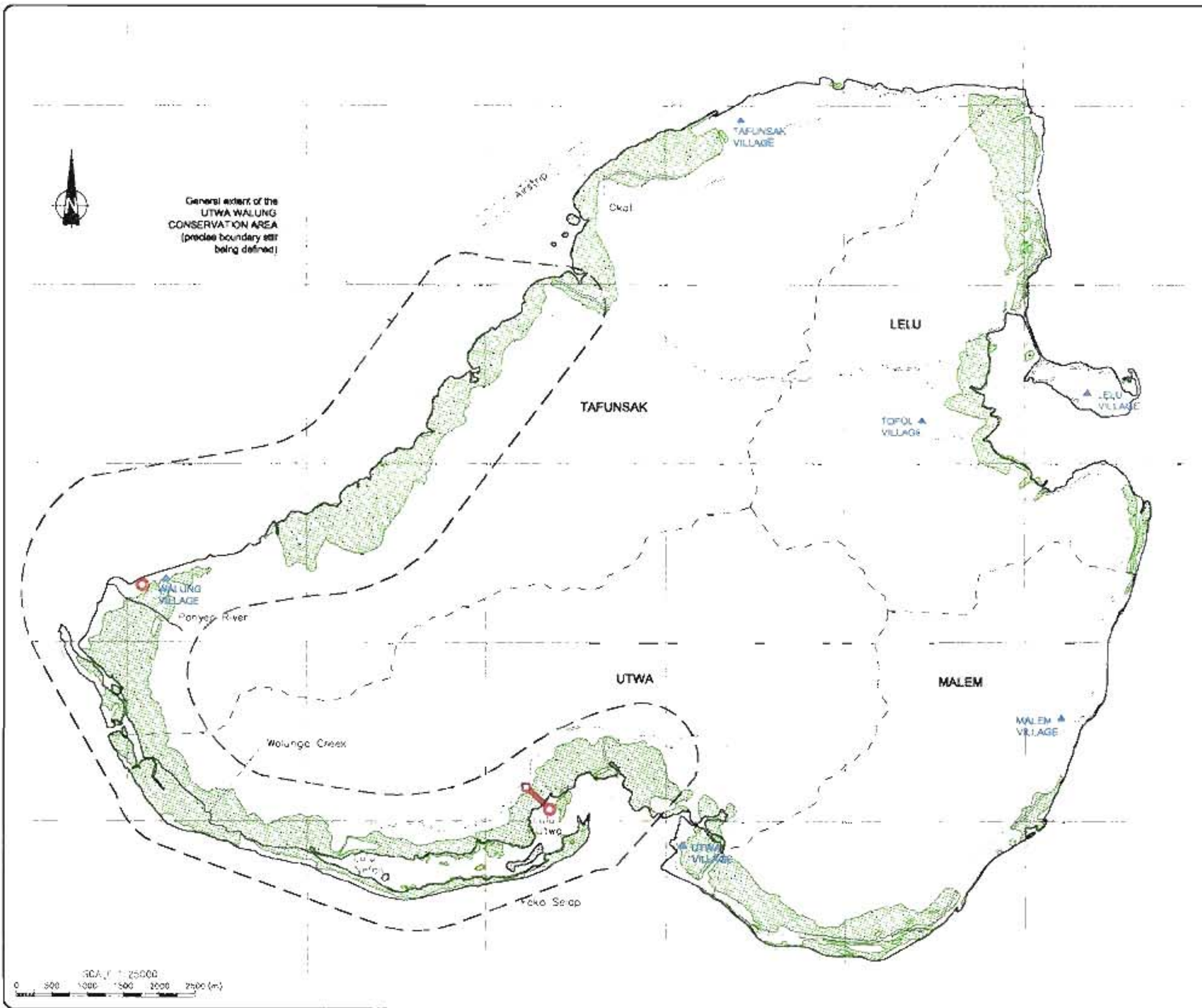
Site selection, insofar as private land is concerned, appears to have been based on what the U.S. developer wanted. That the private land, which is proposed to be leased for the tourism development projects also happens to be owned by Marine Park Board Directors or their immediate families, is stated by the Directors to be coincidental.

6.0 Existing Environment

Because of the ecological significance of the area into which the proposed development is to be situated, considerable information is available on the resources of the area and this has been summarized by SPREP (1996). Much of the material contained in that document is repeated here, as it is important that the overall, and not just the project specific, environmental setting is fully appreciated.

6.1 Utwa Walung Conservation Area

The UWCA is located on the south-western coastline of the island of Kosrae, as shown on Figure 6.1. While the total area has yet to be finalised with landowners and the local communities, it generally comprises reef, lagoon, estuary and associated wetlands, and surrounding terrestrial environment. It is centred on the most extensive area of mangrove and seagrass habitat in Kosrae, which extends some 5 miles from Utwa Harbor to the village of Walung behind the protection of low, barrier reef islands and includes significant areas of interlinked terrestrial, freshwater and marine ecosystems.



General extent of the
UTWA WALUNG
CONSERVATION AREA
(precise boundary still
being defined)

NOTES:
1 Drawing base (beach outline, mangrove
and reef) digitized from "Kosrae
Islands Resource Atlas", Map 1:10
produced for US Army Corps of
Engineers, October 1987.
2 Other features (boundaries, roads,
rivers) digitized from "Kosrae State
Land Use Plan" (Final Draft - Adopted
June 1994), various figures.

- Road
- Extent of Mangrove Forest
- Reef
- Municipal Boundary
- River
Note: not all rivers shown
- Proposed Resort Sites
- Proposed Board walk
- Proposed restaurant site

REVISION/DESCRIPTION	BY	DATE

APPROVED
NOT FOR CONSTRUCTION
NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

CAD FILE: C:\WORK\750214\FIGURE 6.DWG

TONKIN & TAYLOR LTD.
ENVIRONMENTAL & ENGINEERING CONSULTANTS
■ NUKUNAN, 16 WOODMAN ST. (NEWCASTLE)
■ CHRISTCHURCH - 132 RYDMORE ST
■ HAMILTON - 26 LINCOLN ST
■ WELLINGTON - 108 LATHAM ST
■ CHICAGO - 17 9th AVE.

**SOUTH PACIFIC
BIODIVERSITY
CONSERVATION
PROGRAMME**
UTWA-WALUNG
CONSERVATION AREA
KOSRAE
FEDERATED STATES
OF MICRONESIA
SITE PLAN

SCALE: (AS AT SHEET)
1:25000
FIG. NO. 750214-Figure 6.1
REV. C

The area is considered to contain the largest and most pristine examples of mangrove, marine, and wetland ecosystems in Kosrae. Unique features of the area include the marine lakes, the largest of which is Lulu Urwa with depths of up to 60 ft which form part of the enclosed waterway linking Urwa and Walung Harbors. Generally these enclosed waters are much shallower, and are only navigable at high tide.

Human use of the marine resources is also diverse, ranging from fishing to nature tourism, but there are signs that resources are being over exploited, evident in a decline in the numbers and size of harvested species, cleared areas of mangrove and *Nypa*, and invasive weeds.

Actual boundaries of the UWCA have not yet been established. Consultation with the two village communities exercising customary rights and authority (guardianship) over the area has been conducted on the understanding that precise boundaries can be established later in the process. While agreement has readily been reached on a central area of lagoon, reef and mangrove to be included, further discussion and consultation are required to determine the terrestrial boundary, as well as the extent to which the UWCA will extend, up the west coast, from Walung towards Okat. This area includes the oldest mangrove forests in Kosrae and the freshwater wetland *ka* forest

6.1.1 Physical Resources

Geology

Little has been done in the way of a comprehensive geological survey of Kosrae. The most detailed information can be found in archaeological studies, in particular *Landscape Archaeology. Prehistoric Settlement, Subsistence, and Environment of Kosrae*, (Athens, 1995).

Kosrae consists of a main volcanic island and also a much smaller volcanic island, Lelu. Kosrae is quite a young island, having formed some 1-2 million years ago. The main island is made up of two basaltic ranges rising to over 2,000 ft, whose slopes are scoured by deeply eroded valleys.

Coring information from an archaeological study provided information as to the composition of areas within the UWCA. The base of the mangrove and freshwater swamps are composed of coralline sand deposits. At approximately 20 ft depth the sediment is mostly silty peat

Few mineral resources besides sand and crushed rock have been exploited on Kosrae. There is no evidence of any precious metals.

Soils

A detailed survey of the soils of Kosrae has been undertaken, the results of which are summarised in a report entitled *Soil Survey of the Island of Kosrae* (Laird, 1983).

There are about 17 different kinds of soil on Kosrae, categorised by topographic areas in which they are located. Because of the high rainfall, Kosrae soils can generally be classified as highly leached, acidic, and with highly transitional humus layer. The UWCA includes four general areas.

Soils in coastal tidal marshes (Naniak-Insak) are very deep and very poorly drained and described as loamy and mucky in the mangrove forest areas and sandy and peaty in the tidal marsh areas (the main limitations of this unit for most uses are wetness and flooding).

The coastal strand soils are comprised of sandy, cobbly soil, suitable for coconut tree production. In both groups, the soils formed in alluvium derived dominantly from basic igneous rock, water and wind deposited sand derived dominantly from coral, and organic deposits.

The lowlands between the steep mountain regions and tidal areas are basically swamp forest and mixed forest. The soils in this group range are very deep and somewhat poorly drained to very poorly drained. They formed in alluvium derived dominantly from basic igneous rock and in organic deposits and are described as loamy. This area is used for agro-forestry and woodland and wildlife habitat, also wetland taro and banana.

The soils on the uplands are moderately steep to extremely steep. The soils in this group range from very shallow to very deep and are well drained. They form in residuum and colluvium derived dominantly from basic igneous rock. The soils are shallow and well drained and described as loamy and cobbly in some areas.

Climate

The climate in Kosrae is characterised by high humidity, heavy rainfall, and high temperatures. The average temperature is 81 degrees F which remains consistent throughout the year. Average monthly temperatures vary from the annual average by less than 2 degrees F, and the difference between the average minimum and the average maximum temperature is less than 14 degrees F throughout the year. Humidity levels are generally very high, ranging between 78% and 95%.

The steep mountain slopes, which rise to peaks as high as 2012 ft within a few miles of the shoreline, cause rapid cooling, resulting in the high rainfall. Rainfall, which averages 19 to 25 inches per year, is high year round without distinct wet and dry seasons.

Kosrae is situated at the edge of the trade wind belt to its east, which has only a slight effect on the island's climate. Kosrae rarely experiences typhoons which tend to have their origins to the west off the coasts of Pohnpei and Chuuk then move westward (ie away from Kosrae).

Water

All communities on Kosrae currently receive untreated water for potable use. Existing water supplies include local gravity flow pipe systems from springs, or from dams located on streams, together with individual household rainfall catchments (roof water).

Little data has been collected as to the watershed areas within the proposed UWCA. At least four watershed areas have been identified which flow into

the Utwa-Walung channel, meriting the need for protection of these watershed areas to maintain water quality.

6.1.2 Natural (Biological) Resources

The Utwa-Walung mangrove wetland complex has been recognised as a priority for conservation for some time by the Government of Kosrae, as well as those Non-Government Organizations (NGOs) and research agencies that have assisted it in its efforts to identify and conserve the environment. This particular mangrove forest is the largest on the island and is unique in that it exists behind sand and coral rubble barrier islands - a feature considered to be different from most other mangrove forests in the Pacific region (Merlin et al 1993). These mangroves are considered to be particularly well developed, due largely to the fact that other Micronesian mangrove forests were evidently decimated by a particularly large cyclone early this century, which these forests escaped. Some trees are over 200 years old, approximately 60% of the mangrove forest area has average trunk diameters at breast height in excess of 30cm and individual *fuhohfohl* (*Sonneratia alba*) trees exceed 40m in height with trunk diameters at breast height of as much as 1.5m.

Ecosystems adjoining the mangroves and ecologically inter-linked, also exhibit particular significance. Kosrae's most outstanding examples of freshwater swamp forest are found in the UWCA. The *ka* tree (*Terminalia carolinensis*) dominates the freshwater swamp forests immediately inland from the UWCA's mangrove habitat. It is endemic to Kosrae and Pohnpei and in other areas of Kosrae was extensively logged by the Japanese. Such logging often severely damaged the freshwater wetland habitat. *Ka* occurs in association with *nunu* (*Horsefieldia nunu*) in the UWCA. *Nunu* is endemic to Kosrae and traditionally its most important, and still widely used, timber tree.

The swamp forests occurring within the UWCA are considered to be "the most scientifically acclaimed in all Micronesia" (Merlin et al 1993). Nearby, but further north on the east coast are the only other two major occurrences

of this habitat, one of which has in particular been identified as being regionally significant and warranting urgent protection. The extension of the circumferential road, if undertaken, would probably cross these areas, and unless included within, and protected under, the UWCA is highly likely that they will be logged as they are located on private land. This places an even higher conservation status on the areas of this forest type within the UWCA.

The terrestrial ecosystems adjoining the UWCA have been less well surveyed, but are likely to include a number of endemic species, as well as being important reservoirs of species traditionally used as medicines and for other uses. In general it can be said that the lowland forests immediately adjoining the UWCA demonstrate an historical and recently increasing pattern of human use and modification, although locally some ridges and slopes are relatively undisturbed and are known to contain extensive wildlife.

The lowland forests are also likely to act as access corridors for wildlife between the mangroves and wetlands, and the upland forests. The lowland forests also play an important role in catchment protection - a matter of considerable significance for the health and biodiversity of the wetlands, lagoon and reef resources of the UWCA.

The lower slopes contain agro-forest gardens, a traditional form of land use still used today. These gardens are not considered to detract from catchment protection values, and of importance to the UWCA project, represent a successful traditional approach to sustainable agricultural practice in their current form. Typically, crops such as taro, yams, and tapioca are grown amongst tree species including breadfruit, coconut, banana, mango, guava, perfume tree and various citrus species as well as timber trees such as *ka* and *nunu*. Pesticides, herbicides and agricultural chemicals (such as fertiliser), are not generally used presumably due to the high cost of such imported materials.

The marine environment has been subject to some scientific assessment during the late 1980s and early 1990s. While it is considered to be relatively

unmodified and of high diversity relative to Kosrae's lagoons and reefs generally, the local people in particular note the decline in abundance of the species which they utilise, and the beginnings of the effects of siltation from the existing road in certain places. Despite this, however, the UWCA provides a large volume of marine resources for the local communities, especially mangrove crabs (*Scylla serrata*), fish, clams and forest products such as Nypa Palm fronds (*Nypa fruticans*) for roof thatching, and mangrove timber. Cutting of mangroves for timber, particularly the practice of clear cutting, is an increasingly severe threat to the UWCA.

A marine survey (Wilson and Hamilton, 1992), reported that the coral reefs of the UWCA are "healthy and flourishing" and representative of the diversity of corals found in Kosrae, with 145 of the 180 known coral species being present in Kosrae. The good representation of coral colonies of a full range of ages, and in particular the large size of many old colonies (some table-top corals being nearly 4m in diameter) is considered to be quite unusual and indicative of a long period without severe storm wave action. This is not common in Micronesian reefs and lagoons, and is relatively rare throughout the Pacific. In addition a number of species of corals, invertebrates and fish uncommon to rare elsewhere can be found in relative abundance. The survey report concludes that the UWCA *is a special part of Kosrae which contains resources that are among the most remote and pristine on the whole island.. Some sites at Foko Bac, Foko in Wiyu, Foko Saoksa, and the Yela-Mwot reef area are considered to be exceptional* (Wilson and Hamilton, 1992).

In addition Wilson and Hamilton, (1992) note that *the combination of rich and healthy coral reef, seagrass, mangrove and swamp forests (in the area)...is relatively undisturbed and may be among the best in Micronesia... The reef slope and flats between Molsron Yela and Molsron Mwot also warrant consideration of protection due to their high productivity and diversity of marine life.*

Accordingly, whilst the highest biodiversity in the area was recorded at Foko Saoksa, the coastline immediately north of this contains consistently high

values of biodiversity and abundance. In addition, this area of reef also includes the existing Trochus reserve, which the survey team recommends for some form of complete protection, rather than just for the protection of Trochus. Together, the biodiversity values of these reefs and those of the adjacent freshwater Terminalia wetland forests, are a particular focus for the communities as they consider the definition of UWCA boundaries generally, and in particular the northern extent.

Of relevance to the tourist potential, the area also contains significant historical resources. In particular the wreck of the *Leonora* is easily accessible for diving. This is the ship of the notorious "pirate" Bully Hayes and is rated as the third most famous ship to sail the Pacific after the *Bounty* and the *Endeavour* (Mitchener and Day, 1957).

In general, the UWCA comprises a core area of highly significant reef, lagoon, mangrove, seagrass, and freshwater wetlands, which support healthy and flourishing resources. It is an environment utilised by local communities both for subsistence purposes, and to derive cash income from the sale of resources harvested in the area (such as mangrove crabs and timber), and the promotion of nature based, or eco, tourism. In addition, the immediately surrounding terrestrial environment is used for agricultural purposes. This area is ecologically very important to the long-term health of the wetlands and the sustainability of marine resources.

Although activities in the area are mainly directed to meeting subsistence needs, there has been a noticeable deterioration in the state of the lagoon, associated fisheries and the mangroves. Community leaders report that there is a decline in fish, clam and crab populations. The mangroves are beginning to be adversely affected by over-harvesting. Sedimentation has increased in recent years. Though there are no quantitative data, evidence can easily be seen in the lagoon. Dredging and road building are major activities of concern.

6.1.3 Social (Cultural) Resources

Population and Growth

There are two main population centres in the UWCA. Utwa, with a population of approximately 1,300 people in the municipality, and Walung, considered a part of the Tafunsak municipality, with approximately 230 people. Settlement is concentrated in the two villages, with individual homesteads along the main road.

The population of Utwa and Walung has remained relatively static over the last few years as shown in Table 6.1:

Municipality	1989	1990	1991	1992	1993
Utwa	1149	1172	1195	1218	1242
Walung	210	214	218	222	227

Source: Bureau of Planning Statistics (1994).

However, it has been noted that overall Kosrae is experiencing rapid population growth. The annual growth rate is estimated to range between 3.0%-3.2% per year, which translates to a doubling in the population every 24 years (FSM 1989; Kosrae State Government, 1992a). Evidence for rapid growth can also be found in the age distribution of the population. In 1991, 50% of the population was under the age of 17 years (Kosrae State Government, 1992a). Even if birth rates are reduced in the future, the population will continue to grow, as the younger generation reaches child bearing age.

Socio-economics

There are no extremes of poverty in the UWCA but most families live at subsistence level, with few material possessions. Kosrae's economy is roughly two-thirds currency based, and one-third subsistence. The present monetary

economy is at least 90% dependent, directly or indirectly, on government expenditures and not on the production of marketed goods or services (Auyong et al). Most of the government revenue comes from U.S. Compact Funds.

Because of the distance from Tofol few individuals in Utwa and Walung have employment. Hence in relative material terms, villagers in Utwa and Walung are less well off than those living in close proximity to the capital, Tofol. Locally based and controlled eco-tourism is beginning to offer a way of deriving income for some villagers.

The traditional leadership system of chiefs no longer exists. Instead, community decisions are made by municipal leaders. Utwa has a mayor and its own elected council, and Walung is represented in Tafunsak by two councillors.

The church has a very strong influence in the community. The Protestant church became a forceful presence in the mid-1800s. Despite many changes in the last 100 years under Spanish, German, Japanese and American rule, respect for the church has remained strong and has become a major force in holding communities together through times of political change and a breakdown of traditional culture (Wilson & Hamilton (eds), 1992). It is the foundation for almost all social activities and interpersonal relationships. It takes a strong moral position on the consumption of alcohol and smoking. There is very little betel nut chewing in Kosrae or the use of sakau (Piper methysticum). Women are seldom found in leadership positions, but women do exert influence through institutions such as the church (e.g. Women's Christian Association).

Land Ownership

The land tenure system in Kosrae is based upon individual property rights (Wilson & Hamilton, 1992). Under Article X1 of the constitution, only FSM citizens who are of Kosraen descent may acquire title to land in the State.

Foreign investors can lease lands from Kosraens. Nearly all families own land

in Kosrae, but this is understood to be beginning to change. A few individual landowners have already sold their land in order to purchase automobiles and other material goods.

Landowners have the right to use the resources therein without restriction, except where discrete development activities are planned. The communities also utilise the lagoon and associated mangroves and sea for their livelihood. Under Article XI of the constitution, the water, land, and other natural resources within the marine space of the State are public property, the use of which the State Government shall regulate by law in the public interest. However, although the State has legal jurisdiction over resources below high water mark but there is widespread belief by local people that they own the mangrove areas adjacent to their land properties seaward to the Lelu-Utwa and Lelu-Nefali channels (Wilson and Hamilton, 1992).

Both terrestrial and marine resource use is controlled by the Kosrae State Land Use Plan. This plan came into effect in June 1994 to prevent negative impacts from development that affects commonly used resources, such as mangroves, reef areas and rivers. It sets out rules and regulations pertaining, for example, to the harvesting of crabs, turtle and fish, and also earthmoving, dredging, sand mining and building development. It does not cover incremental resource activities such as subsistence farming or the use of the mangroves.

There is very little cash cropping within the whole of Kosrae. Two farmers' markets export to neighbouring islands, the principal crop being citrus fruit. Utwa supplies these markets but not Walung. There are marinas in Utwa, Lelu and Okat (on the extreme western end of the UWCA near the airport) harbors. There is a freezer and fish market at all three locations. Local people supply these markets with fish. The mangroves are used as a source of firewood, some of which is sold on the open market. The craft industry also uses wood from the mangroves. Mangrove timber is also used for building.

Infrastructure

Utwa is linked to Tofol by boat and also by road, most of which is sealed (albeit in urgent need of maintenance). Walung is only accessible by boat at high tide. As a result of the existing and planned upgrading of the road, access to the mangroves and the lagoon in the UWCA is becoming easier. With increased access it can be expected that resource harvesting will also increase: clear cutting of mangroves is already evident and the watershed which drains to the mangroves shows signs of forest clearing.

Reticulated electricity is available in Utwa, and several miles along the north-western extent of the UWCA. This is viewed as a positive development as it potentially reduces the pressure on firewood resources. Electricity is not yet available in Walung.

There is an elementary school in each village, providing an opportunity to educate students in the environmental benefits of conserving the Utwa-Walung area. High school is only available in Tofol.

Social and Political Organisation

Kosrae is one of four states united as the Federated States of Micronesia. Essentially the federal and state governments are organised similar to the U.S. system with executive, administrative, and legislative branches. Kosrae has a governor and its own administration. The legislature is a unicameral legislature comprising a Senate with 14 senators elected from the municipalities based on population (Kosrae Code). Senators are then elected to the FSM National Congress.

Kosrae is divided into 4 Municipalities -Utwa, Lelu, Malem, and Tafunsak (which includes Walung). Hence 2 municipalities, Utwa and Tafunsak, are involved in the UWCA. Each municipality elects a mayor along with a municipal council. Since the arrival of the New England Congregationalist missionaries in the mid-1800s, the traditional leadership system has dissolved, being replaced by the current democratic system. Although the Protestant

church, the official church of Kosrae, does not have any official status in the government, it is very influential in Kosraen society.

6.1.4 Summary

The UWCA is of high ecological value and contains regionally significant biodiversity. The local communities are committed to the UWCA and are already organising themselves for participatory resource management. The UWCA, as shown on Figure 6.1 comprises a natural unit for management, large enough to be self-sustaining in ecological terms while being manageable in respect of community involvement and the range and scale of uses. The local communities have observed the early signs of resource depletion and modification and recognise that without integrated planning and management, current *ad hoc* resource use will lead to loss of essential natural resources, income, and erosion of their basis for sustainable development.

6.2 Lulu Utwa Over-Water Resort

The proposed floating bungalow site comprises salt-water lagoon and adjacent mangrove forest in Lulu Utwa (near Foko Salap), as shown on Figure 6.1.

This area is completely undeveloped, is currently uninhabited with no apparent degradation due to development to the north and east. The environment is therefore currently pristine wilderness. Villagers from Utwa and elsewhere do, however, visit the area for resource harvesting.

The proposed board walk site comprises mangrove forest which appears to be unmodified on the lagoon side, with slight modification on the landward side.

The proposed restaurant site comprises elevated ground, adjacent to the road, which has been substantially modified by forest clearance and planting of gardens. A garden shelter is present on site.

6.3 Walung Resort

The proposed Walung resort site, shown on Figure 6.1, comprises a stretch of coral sand beach, and the immediately adjacent coral rubble strand bounded by mangroves to the south and the Panyea River to the west. The area has

been substantially modified and is currently occupied by at least two families. Between the beach and Foko Saoksa to the north is an extensive coral shelf supporting sea grass vegetation. Severe erosion of the coastline is evident to the north of the proposed Walung resort site.

7.0 Environmental Effects Assessment

7.1 General

In undertaking this preliminary assessment of the likely environmental effects of the proposed development proposal(s), it needs to be appreciated that little technical information or design detail is currently available other than broad concepts and locations. However, given that location is a key issue associated with the proposed development(s), the lack of detail does not, in this instance, affect the EIA process.

7.2 Effect of the Proposed Development(s) on the UWCA Process

Not only is the UWCA important for its regionally significant biodiversity and potential for sustainable resource development (including nature based tourism), but the area is special because of its community, rather than State or Federal, guardianship.

Considerable effort, including technical and financial resources provided by SPREP, has gone into the establishment of the UWCA. Because the UWCA is based on a community agreement, and has not been imposed on the communities by the state, the ecologically sustainable development of the area will be managed (and policed) by the community.

This UWCA establishment process is still in the early stages, and as yet there is no management plan which addresses the numerous issues associated with the effective conservation and sustainable development of the area, and which

addresses community concerns. The development of policies to address these issues will take time, and will involve ongoing consultation.

Until a UWCA management plan has been prepared and agreed upon by the community, any proposals to locate tourist resorts within the UWCA are premature. Indeed, until an overall plan has been prepared which determines what activities can be undertaken, and where, without adversely affecting the resources and values of the area, it does not appear possible for a prospective developer to even evaluate the market potential of a specific proposal. For example, jet skis would appear to be inappropriate for use at both resort locations, as would wind surfing at Walung, as such activities are likely to be damaging to the resources the communities are endeavoring to conserve.

Accordingly, without an overall management plan for the UWCA, against which development proposals can be evaluated, the proposed tourist resorts in Lulu Utwa and Walung would be undertaken on an *ad hoc* basis with no logical framework. If the UWCA is to be successful and sustainable it must be conservation driven, not development driven. It may well be that overnight tourist accommodation facilities can be located within the UWCA. However, the basis (and framework) for such facilities has not yet been established.

The current eco tourism operations in the UWCA, consisting of water based viewing of the area by motorized and paddled dugout canoe, and snorkeling in the lagoon, are well controlled and non-destructive. (Marketing material for these well organised eco-tourism activities are included as Appendix B.) However, before tourists are taken to visit the *ka* forests and associated wetlands, or sea grass and other shallow marine areas in the UWCA, policies must be established and appropriate measures implemented so that activities are controlled. It may be that certain areas will become prohibited areas, and other areas may be restricted, for scientific or cultural purposes. The delineation of the UWCA itself, and the various areas within the UWCA, needs to be undertaken as an integral part of the management plan.

The effect of undertaking *ad hoc* development projects such as the proposed tourist resorts in the UWCA is likely to be to undermine the whole conservation process.

It is recommended that no resorts be established anywhere within the UWCA until such time as a management plan is operational. Indeed, the consensus of the community may be that such facilities are better placed outside the area, as they are at present.

Whilst there is currently no overall framework to evaluate development proposals within the UWCA against, the site-specific environmental assessments provide information on the likely effects of such facilities in these locations so that the communities can be better informed.

Environmental Effects

7.3 Environmental Effects - Lulu Utwa Resort

The key issue associated with the proposal to place houseboats in Lulu Utwa is location, and this appears to be a fatal flaw for this proposal. The current eco-tourism operation from the established UWCA landing near Utwa (and for which a contract is about to be let to construct a UWCA visitor information facility) would be put in serious jeopardy if houseboats were to be placed in this pristine wilderness area. The houseboats would so seriously detract from the high visual and wilderness values of the area that eco-tourists would be unlikely to want to tour that part of the UWCA. This is not just a scale effect (20 houseboats would cover a substantial area). Any facility, even one houseboat, is likely to have a major impact on aesthetics and water quality.

Aesthetic appeal is very important for tourism, as highlighted in the recent Pacific Economic Report by the Bank of Hawaii (1998).

As location is such a key issue, the only way the adverse effects can be avoided is to relocate the proposed resort outside the UWCA.

The restaurant site, owned by Marine Park Board Chairman Mr Nena Benjamin, and to be leased by the Marine Park Board, is sufficiently modified and removed from Lulu Utwa that the location of this facility is not a significant issue. However, because of its proximity to the lagoon, effluent waste water disposal will need to be addressed if adverse water quality effects are to be avoided.

Apart from seriously detracting from the aesthetics of the area, the houseboat proposal for Lulu Utwa has the potential for other significant adverse environmental effect.

7.3.1 Effects on the Physical Environment

A. Construction Activities

Presumably the houseboats units will be constructed off-site and towed into position in the lagoon. In transporting the units into the lagoon, care will need to be taken to avoid damaging the reef, or mangrove vegetation. If it is intended to fabricate any part of the units on-site, then it will be very difficult to avoid damage to the environment arising from the disposal of waste materials associated with the construction activities.

B. Operation and Maintenance Activities

▪ Water Quality.

The water quality within Lulu Utwa appears to be exceptionally high. This is probably because of the depth of the lagoon and the mangrove forest fringing the area, and the absence of habitation or other waste generating activities in the near vicinity.

To what extent this area is flushed by tidal action is not known. However, it would appear that should fine sediment (which would be expected to

occur at depth in this location) become stirred up through anchoring (or otherwise mooring) the houseboats in the area, such sediments may become entrained for some considerable time, thus reducing water clarity.

Contaminants arising from the presence and operation of the houseboats in the Lulu Urwa may also remain in, and on the surface of, the protected waters for some considerable time. The build up of contaminants may be gradual (for example leaching of anti-fouling substances on the hulls of the houseboats) or sudden (for example disposal of raw sewage into the lagoon arising from a rupture in the sewage or greywater pipeline or holding tank).

Sewage and greywater disposal will need to be addressed if adverse effects on water quality are to be avoided or mitigated. Anchoring and moving the houseboats will need to be addressed if damage to the lagoon bed is to be avoided.

The presence of the houseboats in the area will inevitably lead to a deterioration in the quality of the Lulu Urwa water, despite mitigation measures which can be incorporated into the design and operation of the houseboats and their associated infrastructure.

- Noise

One of the features of the UWCA, and the Lulu Urwa area in particular, is the peace and quiet. Operation of the facilities will inevitably produce noise, whether this is from sewage, or greywater, pumps, or standby generators for power supply. It is assumed that the units will not be air-conditioned because of adverse noise effects.

7.3.2 Effects on the Natural Environment

Any adverse effect on water quality will translate to an effect on the aquatic ecology of the area. That the area is unique is undoubted, and until determined otherwise it is reasonable to assume that the aquatic ecosystems in the area are fragile and sensitive to changes in water quality. There is as yet insufficient information on the aquatic environment of the Lulu Utwa to make informed predictions as to the likely effects of anchoring houseboats, and water quality changes due to routine operation and maintenance of the units (including removing marine growth).

Given the potential threat of serious or irreversible environmental harm, the "precautionary principle" should apply in this case to protect the environment.

The creation of a boardwalk through the mangrove forest has the potential to damage the immediate and associated aquatic environment. However, with careful design and construction such a facility may be able to be put in place with minimal damage to the environment.

7.3.3 Effects on the Social Environment

Construction and operation of the facilities will be expected to produce employment opportunities for the local community. The operation of the facility is likely to directly employ about 25 people.

Apart from direct employment, revenue will also be generated from the lease of the restaurant site, and from activities associated with the resort. At this stage, however, it is not known how these revenues will be distributed so that they benefit the wider community. It is understood that a trust fund is to be established into which revenues from UWCA activities will be placed.

From discussions with the Utwa community, and landowners in the area, it is evident that the majority of the community know either very little or nothing at all about the proposed tourist resort facility, or its proposed location. The Marine Park Board are actively involved in the promotion of the resort development(s), but this has not extended to widely consult with, or evidently even informing, the affected communities. Other landowners, and the resource users, appear to have been excluded from the process.

Individual landowners certainly have the right to develop their land for whatever purpose they desire, provided they obtain the necessary approvals and permits. In this instance, however, a supposedly community based organization which has conservation and sustainable development as its fundamental reason for existence, appears to be actively encouraging a development proposal which is almost certainly in conflict with conservation objectives, and which also appears to be in conflict with the objectives of the wider community.

Local villagers who currently utilize the site for resource harvesting may be reluctant to continue coming into the area if there are houseboats present. From discussions with local villagers there was a very poor understanding of the proposed resort development, and little appreciation of how they may be affected. The development proposal appears to have long term actual and potentially significant adverse environmental effects, which the wider community will need to be informed about.

Current eco-tourism operations in the area would probably be adversely affected by the presence of houseboats in Lulu Utwa. It is difficult to see why eco-tourists would want to see the area if it was degraded by facilities such as houseboats, and consequential adverse effects on water quality. Accordingly, the additional employment opportunities potentially created by the resort may well be negated by the collapse of the present, and potentially much more sustainable, eco-tourism guiding operations into the currently pristine wilderness area.

7.3.4 Summary

The proposed placement of houseboats in the Lulu Utwa part of the UWCA has the potential to significantly degrade the wilderness and high visual values of the area, and to produce long term damage to the physical, natural and social environment. Of even greater concern, however, is that by undertaking such a proposal in an *ad hoc* manner the entire UWCA process would be jeopardized.

Given that the basic tenets of the Marine Park Board are conservation first and development not to be rushed it would appear prudent to at least wait until a management plan has been prepared for the UWCA, before entertaining such a high risk venture as the proposed houseboat tourist resort development. As stated by Terra Firma (1997), "houseboats are untried in the Pacific and may not suit either the market or the climate. A project that is not economically viable may still result in negative impacts, but without the benefits being realized".

7.4 Environmental Effects - Walung Resort

7.4.1 Effects on the Physical Environment

As for the Lulu Utwa proposal, location is also an issue for the proposed resort complex. The section of coastline is obviously dynamic, as evidenced by the severe erosion of the shoreline to the north. Narrow coral strand areas are particularly susceptible to rapid erosion during storm events, and an assessment of the coastal dynamics of the specific site will be required. Once a facility is in place, hard coastal protection measures may be required to protect the site from coastal erosion. Such measures could result in erosion elsewhere, with consequential adverse effects on the adjacent areas. As recently as last year storm surges inundated the land to the immediate north of the proposed site.

As for Lulu Utwa, the environmental effects of the infrastructural support to the resort also needs to be addressed in the comprehensive EIS. For example, if surface water is being abstracted for resort supply, then sufficient residual flow (water) needs to be retained in the river for both in-stream uses and downstream users.

It needs to be appreciated that tourist demands for water are relatively very high, as is the correspondingly high sewage and greywater volumes requiring secure disposal.

7.4.2 Effects on the Natural Environment.

- Construction activities

Most of the construction materials for the resort facilities, and associated infrastructure, will need to be transported across the coral shelf from Molston Okat.

Given the shallow depth of water over this area even at high tide, the potential for damage to the coral shelf (and associated ecosystems) is high from the transportation and landing of construction materials.

- Operation and Maintenance

Waste water and solid waste disposal are key issues to address if pollution of the waters adjacent to the resort site is to be avoided. Unlike the resorts which are located on the windward side of Kosrae where the tradewinds bring consistent surf and mixing in the littoral zone, the waters surrounding Walung are relatively still and as such have a significantly reduced ability to disperse or assimilate contaminants.

Of particular concern for this location is the activities which tourists will be expecting to undertake. The surrounding ecosystems are particularly

sensitive, and until such time as policies are formulated and appropriate measures implemented, tourists will need to be restricted from walking over any of the adjacent shallow marine or wetland areas.

7.4.3 Effects on the Social Environment

Two families currently living on the site will need to be relocated. The stated reason for their decision to live there was said to be the peace and quiet. Walung is a small, devout community that is currently divided on whether it wants road access. The construction of a resort in the area will inevitably put pressure for road access to be constructed to the area. It is difficult to envisage that tourists will be happy to depart at 4:30 am for a 3.30 pm departure at Okar, due to the constraint of access at high tide. The siting of a resort in this location may have significant adverse social effects.

The provision of a water supply to the resort will need to be addressed to ensure that in times of drought there is enough water for both the villagers and the tourists.

As for Utwa, a resort facility at Walung can be expected to employ about 20 people, and additional revenue will be generated from leasing private land.

7.4.4 Summary

A tourist resort facility will be difficult to construct and operate without damage to the physical, natural and social environment. The benefits of such a facility may be able to be achieved by adopting alternative strategies which are consistent with a comprehensive management plan for the area.

8.0 Summary and Conclusions

The proposal to construct and operate a floating resort development in Lulu Utwa, and a land based resort in Walung, both within the UWCA, is supported by the Marine Park Board, some Government Departments and Agencies, and some landowners. However, some key Government Departments and Agencies, and most of the Utwa and Walung communities, know nothing or very little about the proposed developments.

The technical and economic feasibility to the proposed development(s) is questionable, as is the ability of the project proponent to successfully construct and operate such facilities. Accordingly, the purported benefits of the proposed development may not be realised.

The need for the particular project has not been demonstrated. Kosrae needs more tourists and/or tourist dollars. There are presently sufficient hotel rooms to cater for increased tourists. The desired benefits of revenue and employment of increased tourist numbers could be realised through better promotion of Kosrae, given the available spare capacity of the existing hotels. Tourists could also be encouraged to spend more on locally made goods and services which would also increase revenue and employment without the need for more resort hotels. All hotels have the capacity to increase room numbers should significantly increased tourism eventuate.

The key issue associated with the proposed development(s) is location, and this cannot be mitigated. The only way that this issue can be addressed at present is to locate the resort(s) outside the UWCA.

The proposed resort developments have a high potential to degrade the UWCA environment. The aesthetics of the Lulu Utwa area would be significantly degraded by houseboats, and the water quality of Lulu Utwa would probably be adversely affected due to the likelihood of contaminants entering the water from the development. Fragile ecosystems could also be

adversely affected, and hence development in this area should be prohibited as a reasonable precaution.

The Walung site does not appear to be particularly suitable for the proposed development because of erosion, and adverse water quality effects are likely to result from waste water discharges.

If more resorts are demonstrated to be essential for tourism, the need for which cannot be provided for by expansion of existing resorts, then alternative sites outside the UWCA should be investigated.

The UWCA does not yet have a management plan, which would set out policies to address the various issues confronting the local communities, including eco-tourism. Until the management plan has been prepared and implemented, major development proposals such as the proposed resorts are premature and would result in ad hoc development with potentially significant adverse affects.

As the precise boundary of the UWCA has not yet been established, any decision to locate resorts in close proximity to that area shown on Figure 6.1 should either be rejected or at least delayed until a management plan has been prepared and implemented.

Accordingly, it is considered essential that before any resort developments are proposed for the UWCA, a management plan is implemented which can provide a framework for such developments to work within, and be evaluated against.

The UWCA management plan should review, and then possibly build on, the Kosrae State Land Use Plan and the Kosrae Island Resource Management Plan. Under these existing plans, the UWCA is already included in the areas of particular concern (APC).

This process needs to be undertaken by the community to ensure that their aspirations, as well as their concerns, for the UWCA are addressed.

The objective of the UWCA management plan is to put in place policies which will ensure that any development is ecologically sustainable.

The communities need to formulate, and then agree on, policies to address the issues such as resource harvesting and eco-tourist activities. As part of this management planning process, the resources of the UWCA also need to be identified and delineated on a map to assist in the implementation of specific policies.

This management plan will thus form the basis for evaluating development proposals in future ~ i.e. development proposals will need to be consistent with the plan.

For example, one area of concern (i.e. an issue) regarding eco-tourism in the UWCA could be whether all, or only a few, of the villagers will benefit from a particular project or activity.

A policy could therefore be developed which establishes criteria which tourist activities have to meet, for example:

- equity of distribution of the benefits of tourist activities amongst the villagers of Utwa and Walung
- predominance of benefits to Kosraens, not outsiders
- demonstrated technical and economic feasibility of the project
- employment opportunities are available to all the UWCA communities

- if the developer is from outside, then only developers with a proven track record in ecologically sustainable developments can work within the UWCA.

In preparing a successful community based UWCA management plan which will form the basis for any subsequent development, the present institutional arrangements also need to be reviewed.

At present the Utwa-Walung Marine Park Board is comprised of Directors mostly appointed by the Utwa Municipality. There is a very real potential for the Marine Park Board, as it is currently structured, to be seen to be acting for particular interest groups, or those of only a few landowners and their families.

At present the Marine Park Board does not appear to be directly accountable to, nor truly representative of, the communities they were established to represent. It would appear to be more appropriate for a truly representative group to be elected by representatives of all of the families of the villagers having customary rights over, as well as those owning land within, the UWCA. The name should also be changed to reflect the wider conservation area, for example the UWCA Management Board.

9.0 Applicability

This report has been prepared solely for the benefit of South Pacific Regional Environment Programme as our client with respect to the particular brief given to us and data or opinions contained in it may not be used in other contexts or for any other purpose without our prior review and agreement.

TONKIN & TAYLOR LTD
Environmental and Engineering Consultants



Nick Rogers
TONKIN & TAYLOR PROJECT CO-ORDINATOR

Report prepared by: Nick Rogers

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8 June, 1998

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11.0 Consultation

11.1 Government Departments and Agencies

- 11.1.1 Elected Representatives
 - Mr Moses T Mackwelung, Governor of Kosrae
 - Mr Hitco Shrew, Speaker, Kosrae State Legislature
- 11.1.2 Department of Commerce and Industry
 - Mr Singkitchy George, Director
 - Mr Myrl Jackson
 - Ms Cheryl Burkendine
- 11.1.3 Development Review Commission
 - Mr Simpson Abrahani, Director (also Program Office Director)
 - Mr Robert Jackson
 - Mr Justin Rose
 - Ms Nobuko (Notwe) Kono
 - Ms Carolyn Longhurst
- 11.1.4 Department of Agriculture and Lands
 - Mr Nena S.Nena, Director (also Member of the UWMP Board, and Chairman of the Kosrae Utilities Authority)
- 11.1.5 Office of the Attorney General
 - Mr Richard Martin, Attorney General
- 11.1.6 Tourism Division
 - Mr Justus Alokoa
- 11.1.7 Forestry Division
 - Mr Erick Waguk
- 11.1.8 Department of Marine Resources
 - Mr Dais Alokoa, Director
- 11.1.9 Department of Administration, Division of Planning and Statistics.
 - Mr Likiak P Wesley (Administrator, also Chairman of TAC)

11.2 Communities

11.2.1 Tafunsak

Individual discussions

Reverend Asher Asher

Mr Alik Albert

Reverend Kun Sigrah

Mr Lyndon Jackson

11.2.2 Utwa

Individual discussions

Mr Aaron Waguk

Ms Shruc Tilfas

Ms Michael Joseph

Ms Sepe Windolyn

Mr Nena Edmond

Mr Swemer Wakuk

Mr Rentul Alex

Community Meeting

Mr Nena Benjamin

Mr Nena S Nena

Reverend Hirosi Ismael, Former FSM Vice President

Reverend Natchuo Andrew, Board Member

Mr Vinton Benjamin, Marine Park Board Member

Mr Marchana Waguk, Councilman

Mr Saimon Alik

11.2.3 Walung

Individual discussions

Mr Maxwell Salik

Ms Tosiko Nena

Ms Elizabeth Taulung

Mr Samuel George

- 11.2.4 Community meeting
Swinfred Salik
Glover
Stoner Sanney
Nikayen Sanney
Belda Sigrah
Nevil Sigrah
Sherlinda Nena
Broculla Panuelo
Asiah Eelab
Lynn Glover
Kun Sanneu
Haub Nena
Cuir Nena
Simiron Benjamin
Mereda
Albert

11.3 Resort Hotels

- 11.3.1 Sandy Beach
Ms Ruth Jonah
Ms Fibe Waren
- 11.3.2 Pacific Treelodge
Mr Leon Sigrah
- 11.3.3 Kosrae Nautilus Resort
Ms Smolina Waguk
- 11.3.4 Kosrae Village Resort
Ms Katrina Adams
Mr Bruce Brandt

11.4 Non Government Organisations

11.4.1 Kosrae Visitors Association (KVA)
Mr Grant Ismeal (Chairman)

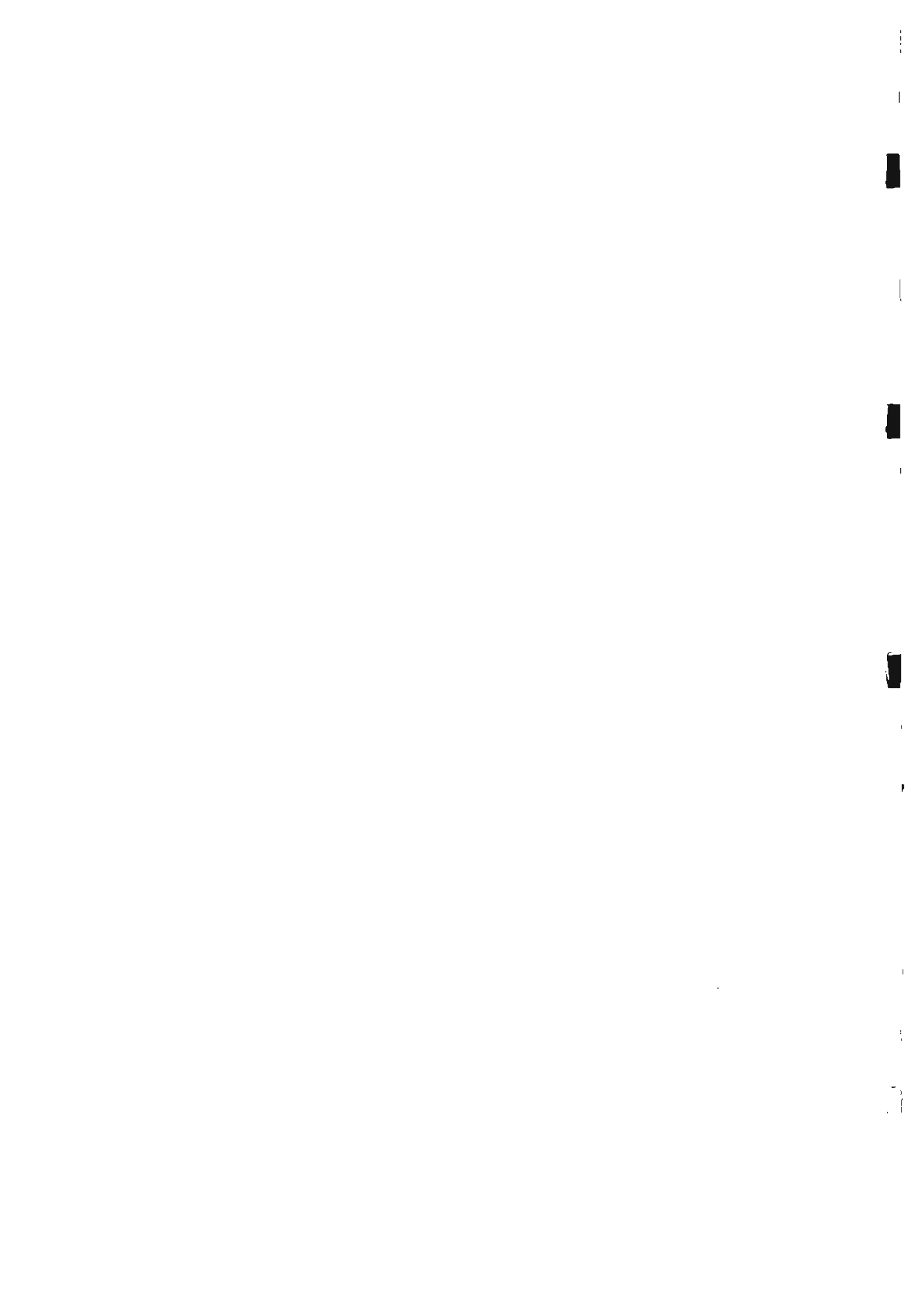
11.4.2 Kosrae Conservation and Safety Organization Inc
Ms Katrina Adams

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APPENDIX A

UTWA ADVENTURE RESORT
BUSINESS PLAN





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Utwa Adventure Resort Business Plan (Island of Kosrae, FSM)

Executive Summary

Utwa Adventure Resort is a start-up company that intends to design, build, and operate a tropical "Over the Water" floating bungalow resort in Utwa harbor, Kosrae, FSM. The Utwa Adventure Resort concept is: Over the Water bungalow resort units nestled gently into this pristine and dramatic location, providing sophisticated comforts and a full range of adventure activities based on Eco-Tourism principles.

The Utwa Adventure Resort market is the adventure tourist seeking comfort, elegant surroundings, pristine environments, health and relaxation, athletic activities, cultural experience and the opportunity for "off the beaten path" exploration.

Utwa Adventure Resorts research shows that there is an expanding adventure tourist market in North America, Asia, and Europe that is readily accessible through adventure tourism publications, travel agencies and associations.

Utwa harbor and the "National Marine Park" are ideally suited to serve the growing adventure tourism market. With our "Over-the-Water" floating units our guest will be able to immerse themselves into the whole romance of a tropical island dream. Add the adventure of kayaking to your room or to your favorite snorkeling spot and the experience will be hard to beat anywhere in the world.

The principal development team of Utwa Adventure Resort are: David Hassenmiller (Business Planning), Joseph Nelson (Designer/Builder), Peter Narburgh (Landscaping/Design/Management), and Mel Carvalho (Site Management/Food & Beverage, Red Cross First Aid Certified), provide an in-depth, balanced, experienced, and capable operations team.

In addition the management team has consultants that have agreed to participate actively in supporting roles: Guy Anthony (Financial Oversight & Business Planning), Duane Okumoto C.P.A. (Accounting), Seth Dudley (Site Leasing Negotiations & Documents), Scott Funk (Hotel Operations).

Other resources are Mark Wang (Marketing & Timeshare Conversion), Pacific Business Center at University of Hawaii (Marketing & Business Development), Len Newel (Regional Contacts & United States Forest Service Eco/Tourism Infrastructure), and A.I.G. (Insurance).

The overall Utwa Adventure Resorts group of principals and resources create a complimentary development team that is well versed in planning, implementation, completion and follow through to profit.

Utwa Adventure Resorts principals have long term professional associations and personal relationships with primary Pacific Island governments and business leaders. These contacts are ready and willing to provide guidance and support for the completion and operations of Utwa Adventure Resort. We believe this will be an enjoyable and profitable opportunity for all involved.

This business plan has been developed to present an opportunity for the FSM Development Bank to consider lending Utwa Adventure Resort Corporation a portion of the development funds needed for this project. As you will see outlined in the following Financial Summary and spread sheets, we have a total project cost of \$1,550,000.00. We are proposing that Utwa

Adventure Resort Corporation provides the 40 Year lease of the resort site for collateral and puts us in a cash position of \$350,000.00. This will leave \$1,200,000.00 for the required development loan, or an 80% loan to cost.

Introduction

Ecologically aware tourism is the trend in the travel industry. A growing number of people are now seeking more authentic and unique experiences in nature. With Utwa Adventure Resort the principals will take advantage of the opportunities that we are confident exist. In serving this market we will place great emphasis on the preservation of unique ecosystems, culture, and heritage.

The initial objective of Utwa Adventure Resort Corporation is to build, own, and operate this resort on the island of Kosrae, in Micronesia. This location was chosen for its unique over-the-water potential, its tropical island beauty, pristine environments, broad range of eco-tourist activities, and the local governments interest in - ecological preservation & balanced tourism.

Traditional destinations in the Pacific such as Hawaii, Tahiti, and Fiji will always be popular, but to varying degrees, over-development has taken its toll. Hotel chains and developers have, for the most part, been interested in providing rooms for the masses. They have also continued to use a model for development that many travelers no longer want. This old model has changed fragile environments & cultures forever. It also has deteriorated much of the beauty that originally attracted the tourist.

There is a major movement in the industry to shift towards smaller, community & environmentally sensitive hotel designs. Many travelers want to experience and blend into the local communities. They want to experience the nature of these environments and not be part of a resort that overwhelms a community and the local environment. Our guest will appreciate our efforts to plan a resort that can sustain not only the environment but also the culture.

For the last year we have been researching the developing Eco/Adventure travel market and seeking out the most opportune region for a start-up company to enter this expanding market. We believe the Utwa harbor barrier island has tremendous potential for our Over-the-Water units. Our location will afford the Asian traveler the experiences they travel 9 - 14 hours to get in Fiji & Tahiti, but they can arrive at our location in half the time. They can also include a stop in Guam for shopping or Tinian for gambling.

We are in a unique position to serve a growing market and have the government relationships that will enable us to maintain the environment for our mutual long term success. We can bring a welcomed balance to this small island community with our low impact resort. In turn we see a nurturing relationship between visitor and local villagers that will continue to draw the best from both. This in turn will maintain the continued economic viability of our resorts.

Utwa Harbor is the eastern most point in the the National Marine Park of Kosrae. The National Marine Park is a nature reserve set aside by the Federated States of Micronesia. The reserve has 6 miles of pristine coral reefs for snorkeling and diving; a sunken 18th century pirate ship; waterfalls; miles of mangrove channels for kayaking; rain forest and mountain trails for hiking.

The National Marine Park board of directors is working to allocate funds for the development of a visitor education center with kayak docking facilities, sandwiches & drinks, local craft shops and a mangrove boardwalk.

The opportunity for Utwa Adventure Resort is unique and exciting. The "National Marine Park of Kosrae" will be a great asset to the islanders and the commercial viability of Utwa Adventure Resort.

Utwa Adventure Resort's management is negotiating a lease (40 Years with renewal option) for resort development with the National Marine Park Board on the island of Kosrae, Federated States of Micronesia in the western Pacific.

General Company Description Products and Services

Utwa Adventure Resort will provide its customers with a unique tropical island experience. Our resort will include excellent design & layout. All buildings will be placed and blended within the local topography and bay while creating interesting and exciting view planes for all guest units and gathering areas. The resort will be understated, with the emphasis being placed on the surrounding pristine environment and a sense of place. The blending of beautiful beaches, turquoise reefs and ocean views will be complimented by tropical island design and materials.

Our service will be as warm, friendly, and as understated as the natural settings themselves. Meals will be a highlight of your stay at Utwa Adventure Resort. We will maintain fruit and vegetable production on site. The freshest local seafood will be a mainstay. Food service will be prepared under our supervision in our kitchens by local village chefs.

The activities available for our guests will be: Ocean & Channel Kayaking; Hiking through rain forests & local ruins; Some of the most beautiful diving & snorkeling in the world (150'-200' visibility); Fishing in waters where fish are plentiful; Wind surfing; Surfing; Sailing.

A major goal will be to adhere as closely as possible to the principals of Eco-Tourism. This will include: Local partnering of resort ownership; Use of local island employees and support services; Awareness and education about the role of conservation in generating socio-economic well-being; Assessing / Anticipating / and Planning for the problems that could arise with eco-tourism development; Provide for cultural exchange; Responsible waste management; and Partnerships with conservation organizations.

Our primary goal will be to provide a great vacation experience for our guests, with a secondary goal to help the Utwa community develop economically while still maintaining their own way of life and culture.

Our small scale, low volume, high income specialty resorts will attract a high quality visitor who will contribute to the local economic environment with minimal disruption of the native lifestyles and environment.

Marketing Plan Market Definition and Opportunity

Tourism is growing 23 percent faster than the overall world economy, according to the World Tourism Council. By the year 2010, the number of people traveling for tourism purposes is expected to rise from the present 500 million to 937 million. And, as the fastest growing segment of the tourist industry, eco-tourism is expected to grow at an annual rate of 10 to 25 percent, compared to general tourism's projected 4 percent growth. In the United States alone there are 78 million environmentally sensitive baby boomers looking for cultural exchange and active adventure activities offering personal growth and education. Utwa Adventure Resort plans to target and cater to this identifiable market segment.

The Pacific has long been associated with tourism - its beaches, sunny skies, and warm water an irresistible allure for visitors from all over the world. Hawaii alone had well over 6 million visitor last year. Fifty-five percent of these were repeat visitors averaging over 3 trips apiece. Given the large size of this market, Utwa Adventure Resort will require only a tiny market share to be successful.

Competition and other Influences

Expansion is taking place in the Pacific outside Hawaii with Fiji, the Cook Islands, and Tahiti all having fairly large, well established tourist plants. Outrigger Hotels, which has 29 hotels and resorts located mostly in Hawaii, has recently made moves to become a dominant player in the South & Western Pacific resort areas. Outrigger recently opened the 150-room Outrigger Marshall Islands Resort earlier this year at Majuro, announced a contract to manage a 600-room hotel being built in Guam, and the 166-room Outrigger Palau at Koror expected to open next year. They have also been looking at Tahiti and the Cook Islands with their eye on as many as 20 new Outrigger hotels in the Pacific.

Increasingly, fast growing Asian economies are making their presence felt west of Hawaii. The Japanese have large holdings in Hawaiian hotels as well as Guam, Saipan, and Fiji. In peak months 400,000 mostly Japanese tourists travel to Okinawa alone, and within the next five to ten years officials want the total yearly figure to reach 7 million or more. Similarly, a boom in Guam tourism brought 1.3 million visitors last year with forecasts estimating a doubling in the next five to seven years. Korea, Taiwan, China, and Vietnam will have a powerful impact in coming years. Korea has shown a 200 percent increase in outbound travel within the last ten years.

These trends affect Utwa Adventure Resort's plans in number of ways. Being located "off the beaten path", in a scenic location, and amid rich culture and history - Utwa Adventure Resort will be able to narrowly target those looking for an alternative experience.

Marketing Strategy

Utwa Adventure Resort's primary goal will be to heighten its name recognition along with the quality vacation experience available at "Utwa Harbor".

In addition to providing striking and creative brochures, travel posters, maintenance of a web site, Utwa Adventure Resort will direct its initial efforts in marketing to gathering "free publicity" acquired through travel articles in magazines and newspapers along with television programming that not only highlights the individual resorts, but that will help build regional awareness with the consumer. Conferences that have the ability to attract widespread media coverage will be actively pursued. The International "Year of the Reef 1997" is an opportunity. We will increase involvement of local tourism departments in overseas trade shows.

The various activities undertaken on the property will furnish ample opportunity for target marketing. Scuba diving, snorkeling, kayaking, nature hiking, fishing, and surfing.

The company will also work closely with various eco-travel and adventure-travel organizations to not only keep up to date with the latest trends and take advantage of networking opportunities, but to achieve recognition within the industry.

We plan to reach a large number of potential customers, effectively, and economically, by the maintenance of a web site. Internet users worldwide are currently estimated at 175 million with an increasing number searching for information about eco/adventure travel opportunities.

We will establish a toll-free 800 number.

Personal contacts with corporate travel agents, and our complete list of every travel agent in the United States will provide direct and immediate clientele for our resorts.

Our 15% commission to travel agents will be attractive considering our higher room rates and longer than average length of stay.

During the initial "Soft Opening" phase, a percentage of otherwise empty beds will be marketed at a discount to select travel agents. This can continue at a discretionary level depending upon occupancy and seasons.

Within our overall concept is our commitment to strive for a high level of customer satisfaction. This will build loyalty, bring repeat visitors, and generate an ever increasing sales force of satisfied guests.

Investment Objectives & Financial Summary

In the details outlined in the attached Capital Expenditures spread sheets we are proposing that the total capital needed to complete Utwa Adventure Resort is \$1,550,000.00

Of this total our investor partner (Dave Hassenmiller) will supply us with \$350,000.00 in the form of a cash investment (Some of which has already been invested for Plans, and Pre-Development costs).

The balance of \$1,200,000.00 is the amount needed in the form of a development loan from the FSM Development Bank. We are proposing a 30 yr mortgage with no recourse or additional security beyond the collateral property lease and corporate assets.

All management and operational costs, including the interest on the \$1,200,000.00 development loan, are carried by the resorts income when occupancy reaches 20 percent. This is easily achievable in the first full year of operation.

By the end of the second full year of operations or year 3 on our income spread sheets we can project at least a 60% occupancy or a total of \$702,763.00 net profit before tax.

By the end of year 4 we will have achieved a 70% occupancy or a total of \$853,575.00 year pre-tax profit.

The resort's value at the end of year 4 would be calculated at 5 times net profit or (5 x \$853,575.00 = \$4,267,874.00). After consideration of the \$1,200,000.00 mortgage and the initial \$350,000.00 investment, the partnership would be in an equity position of \$2,717,874.00.

The proposed partnership split is: National Marine Park Board (includes lease) 20%, Dave Hassenmiller 60%, Peter Narburgh 20%.

We are assuming the following loan criteria for the cost projections and cash flow:

- Development loan points = 2%
- Interest rate = 4%
- Grace period on principal/interest payments = 2 years
- Loan payoff = 30 years

Sincerely,

Dave Hassenmiller
P.O. Box 232
Eastsound, WA. 98245
(360) 376-5962

Peter Narburgh
P.O. Box 221
Anahola, HI. 96703
(808) 828-0990

UTWA ADVENTURE RESORT CONSTRUCTION COSTS

Utwa Adventure Resort - 20 Over the Water floating Units Only					
(See Separate Construction Costs for Main Facilities)					
GENERAL CONTRACTOR					
#					
100	GEN. CONDITIONS				
	Building Permits			\$400.00	\$400.00
	Plans & Engineering			\$25,000.00	\$25,000.00
200	SITE WORK				
	Survey			\$1,800.00	\$1,800.00
	Moorings	\$18,000.00	\$8,500.00	\$1,500.00	\$28,000.00
300	FLOATING PLATFORMS	\$40,000.00	\$12,000.00		\$52,000.00
400	PLUMBING				
	Rough-In	\$7,500.00	\$5,500.00		\$13,000.00
	Finish	\$20,000.00	\$6,000.00		\$26,000.00
	Solar Hot Water Systems	\$35,000.00	\$6,000.00		\$41,000.00
500	ELECTRICAL				
	Rough-In	\$14,000.00	\$8,500.00		\$22,500.00
	Finish	\$10,000.00	\$5,000.00		\$15,000.00
	Photo Voltaic System & Generator in Capital Expenses				\$0.00
600	WOOD FRAME POST & BEAM CONSTRUCTION				
	Floor/Walls/Roof System/Railings	\$120,000.00	\$38,000.00		\$158,000.00
1000	ROUGH HARDWARE	\$10,000.00	\$2,500.00		\$12,500.00
1300	ROOFING	\$24,000.00	\$10,000.00		\$34,000.00
1400	WINDOWS	\$22,000.00	\$4,000.00		\$26,000.00
1500	TILE - BATHS	\$18,000.00	\$7,000.00		\$23,000.00
1600	DOORS & TRIM				
	Wood Doors/Jambos/Cas	\$32,000.00	\$8,000.00		\$40,000.00
	Trim & Misc. Interior Woodwork	\$3,000.00	\$2,000.00		\$5,000.00
1700	FINISH HARDWARE				
	Door Knobs & Hardware	\$4,000.00	\$2,000.00		\$6,000.00
	Bath Hardware/MC'S	\$2,500.00	\$1,000.00		\$3,500.00
1900	GLAZING				
	Bath Mirrors	\$2,000.00	\$600.00		\$2,600.00
	Shower Doors	\$8,000.00	\$2,000.00		\$10,000.00
2100	CABINETS	\$2,500.00	\$1,500.00		\$4,000.00
2100	PARTING	\$10,000.00	\$8,000.00		\$18,000.00
2200	FLOORING				
	Sand & Finish Hardwood Floors	\$8,000.00	\$5,000.00		\$13,000.00
2300	APPLIANCES				
	Refrigerators	\$8,000.00	\$1,000.00		\$9,000.00
	Air Conditioners	\$10,000.00	\$2,000.00		\$12,000.00
2400	FINISH GRADING		\$2,000.00		\$2,000.00
2500	LANDSCAPING				
	Landscaping Budget is in Capital Expenses				\$0.00
2600	FINISH CLEAN-UP		\$2,000.00		\$2,000.00
2700	FREIGHT		\$2,500.00	\$28,000.00	\$30,500.00
2900	PROJECT MANGR/TRADNER			\$35,000.00	\$35,000.00
3000	TEMP UTILITY CONST.	\$500.00	\$500.00		\$1,000.00
3100	TEMP. UTILITY USAGE			\$2,000.00	\$2,000.00

UTWA ADVENTURE RESORT CONSTRUCTION COSTS

ESTIMATE		REVISION		DATE		BY	
NO.	DESCRIPTION	AMOUNT	DATE	BY	DATE	BY	DATE
2							
3200	TOOLS			\$12,000.00			\$12,000.00
3300	STORAGE BUILDING	\$2,000.00	\$1,000.00				\$3,000.00
SUBTOTAL				\$15,000.00			\$15,000.00
SUBTOTAL HARD COSTS							\$880,800.00
4000	LIABILITY INS.	1.00%	SUBTOTAL				\$8,808.00
4100	FIRE/WIND INSURANCE	1.50%	SUBTOTAL				\$13,212.00
4200	CONTINGENCY	3.00%	SUBTOTAL				\$26,424.00
SUBTOTAL HARD + SOFT COSTS							\$928,244.00
TOTAL PROJECT COSTS (ALLOWANCE)							\$928,244.00
		20 Units - 420 Sq. Ft. Each					Cost Per S.F.
8000	COST Per Square Foot	\$400					185.48

UTWA ADVENTURE RESORT CONSTRUCTION COSTS

Utwa Adventure Resort - Main Facilities Buildings/Restaurant					
(See Separate Construction Costs for 20 floating Bungalow Units)					
#					
100	GEN. CONDITIONS				
	Building Permits			\$400.00	\$400.00
	Plans & Engineering			\$10,000.00	\$10,000.00
200	SITE WORK				
	Survey			\$1,000.00	\$1,000.00
	Site Grading		\$2,000.00	\$1,000.00	\$3,000.00
300	FOUNDATION	\$22,500.00	\$9,500.00		\$32,000.00
400	PLUMBING				
	Rough-In	\$2,500.00	\$1,500.00		\$4,000.00
	Finish	\$3,000.00	\$1,500.00		\$4,500.00
	Solar Hot Water Systems	\$8,000.00	\$2,000.00		\$10,000.00
500	ELECTRICAL				
	Rough-In	\$3,000.00	\$2,500.00		\$5,500.00
	Finish	\$3,500.00	\$1,500.00		\$8,000.00
	Photo Voltaic System & Generator in Capital Expenses				\$0.00
600	WOOD FRAME POST & BEAM CONSTRUCTION				
	Floor/Walls/Roof System/Deck	\$4,000.00	\$26,000.00		\$79,000.00
1200	ROUGH HARDWARE	\$2,500.00	\$800.00		\$3,300.00
1300	ROOFING	\$6,500.00	\$3,000.00		\$9,500.00
1400	WINDOWS	\$3,500.00	\$1,500.00		\$5,000.00
1500	TILE - BATHS	\$2,000.00	\$1,200.00		\$3,200.00
1600	DOORS & TRIM				
	Wood Doors/Jambs/Case	\$5,000.00	\$2,800.00		\$7,800.00
	Trim & MISC. Interior Woodwork	\$2,500.00	\$2,000.00		\$4,500.00
1700	FINISH HARDWARE				
	Door Knobs & Hardware	\$800.00	\$250.00		\$1,050.00
	Bath Hardware/MC'B	\$500.00	\$150.00		\$650.00
1800	CABINETS	\$2,000.00	\$1,000.00		\$3,000.00
2000	COUNTERS	\$2,800.00	\$1,800.00		\$4,300.00
2100	PAINTING	\$5,000.00	\$3,000.00		\$8,000.00
2200	FLOORING				
	Sand & Finish Hardwood Floors	\$1,000.00	\$800.00		\$1,800.00
	Color/Seal & Wax Concrete Floors	\$2,500.00	\$1,000.00		\$3,500.00
2300	APPLIANCES				
	Refrigerator/Freezer	\$2,000.00	\$300.00		\$2,300.00
	Range/Grill/Hood/Dishwasher	\$2,500.00	\$800.00		\$3,100.00
	Air Conditioners	\$1,500.00	\$450.00		\$1,950.00
2400	FINISH GRADING		\$900.00		\$900.00
2500	LANDSCAPING				
	Landscaping Budget is in Capital Expenses				\$0.00
2800	FINISH CLEAN-UP		\$600.00		\$600.00
2700	FREIGHT		\$1,000.00	\$7,000.00	\$8,000.00
2900	PROJECT MANGER/TRAINER			\$10,000.00	\$10,000.00
3000	TEMP UTILITY CONST.	\$200.00	\$200.00		\$400.00
3100	TEMP. UTILITY USAGE				\$0.00

UTWA ADVENTURE RESORT CONSTRUCTION COSTS

		SQUARE FEET		TOTAL COST	
201	TOOLS			\$2,000.00	\$2,000.00
					\$238,850.75
5000	LIABILITY INS.	1.00%	SUBTOTAL		\$2,388.50
5100	FIRE/WIND INSURANCE	1.50%	SUBTOTAL		\$3,582.75
5200	CONTINGENCY	3.00%	SUBTOTAL		\$7,165.50
8000	SUBTOTAL HARD + SOFT COSTS				\$251,886.75
		SQUARE FEET		COST PER SF	
9000	COST-Per Square Foot	3000			\$84.00

Mel Carvalho

Experience Qualifications

Mel has had about 20 years experience in restaurant, food & beverage, and hotel management. He is also a very good chef.

After hurricane Iniki struck the island of Kauai in 1992, Mel was called in to manage the Kauai branch of the American Red Cross.

Presently he is managing Island Adventures - kayak river tours on the island of Kauai.

Mel has also had about 6 years experience as Construction Superintendent.

Brief work history:

- 1994 - Present Island Adventures - ...
- 1993 - 1994 American Red Cross - Manager of Kauai branch, First Aid certified, Disaster Preparedness trainer; Mass care officer for the Pacific region
- 1992 - 1993 Pacific Pride Homes - Sales & Construction Management
- 1991 - 1992 Hyatt Regency, Kauai - Bartender
- 1988 - 1991 Kauai Pacific Group - Construction Superintendent
- 1986 - 1987 Hyatt Regency, Waikiki - Food & Beverage Manager
- 1984 - 1985 Loew's Anatole Hotel, Dallas Texas - Bars Manager
- 1979 - 1984 Princeville Restaurants Corp., Kauai - General Manager
- 1978 - 1979 Hyatt Regency, Kuilima - Food & Beverage Manager

Some references attached.

UTWA ADVENTURE RESORT Misc. Capital Expenses

Reception Office	
Chair	\$200.00
Filing Cabinets	\$100.00
Cash Register	\$300.00
Adding Machine	\$50.00
Fax	\$500.00
Telephone	\$100.00
VHF Base Station	\$800.00
Fire Extinguisher	\$50.00
Uniform	\$200.00
Management Office	
Chair x 3	\$600.00
Desk x 2	\$500.00
Filing Cabinets	\$100.00
Telephone & Answering Machine	\$150.00
Computer & Printer	\$3,000.00
Copy Machine	\$1,000.00
Television/VCR	\$1,000.00
Printed Materials	
Brochures	\$10,000.00
Pricing Inserts	\$200.00
Post Cards	\$1,000.00
Letterhead	\$100.00
Business Cards	\$50.00
Paper	\$100.00
Envelopes	\$100.00
Accommodation Forms	\$100.00
Liability Waivers	\$100.00
Invoices	\$20.00
Petty Cash Vouchers	\$20.00
Diaries	\$20.00
Ledger Books	\$40.00
Laundry Lists	\$20.00
Information Sheets	\$50.00
Guest Service Cards	\$100.00
First Aid Supplies	
Oxygen Bottle & Mask	\$600.00
Blood Pressure Cuff	\$100.00
Earscan Thermometer	\$100.00
Epinephrin, Benadryl	\$40.00
General First Aid	\$180.00
Restaurant Supplies	
Tableware	\$1,200.00
Serving Dishes/Buffer	\$500.00
Uniform	\$600.00

UTWA ADVENTURE RESORT Misc. Capital Expenses

Bar Supplies	
Bar Equipment	\$2,500.00
Glasses, Etc.	\$800.00
Initial Inventory Stock	\$3,500.00
Uniform	\$400.00
Kitchen Supplies	
Cooking Supplies & Equipment	\$7,500.00
Fire Extinguisher	\$50.00
Initial Food Inventory	\$5,000.00
Uniform	\$200.00
Restaurant Furnishings	
Tables x 20	\$4,000.00
Chairs x 40	\$4,000.00
Tablecloths & Napkins	\$800.00
Bar Furnishings	
Stools x 10	\$1,500.00
Sound System w/ Content	\$1,000.00
Room Furnishings	
Fans x 25	\$2,500.00
Beds x 20	\$20,000.00
Sheets	\$2,400.00
Bedcover	\$5,000.00
Pillows	\$1,200.00
Pillowcases	\$500.00
Mosquito Nets	\$1,000.00
Lg. & Sm. Towels	\$1,200.00
Chairs x 40	\$2,000.00
Tables x 20	\$2,000.00
Couches	\$10,000.00
Cloths Hangers	\$600.00
Housekeeping	
Brooms	\$100.00
Mops & Buckets	\$150.00
Cleaning Chemicals	\$500.00
Rags	\$50.00
Toilet Paper	\$600.00
Soap	\$200.00
Kleenex	\$200.00
Candles	\$200.00
Fire Extinguishers	\$200.00
Uniform	\$400.00
Laundry	
Washing Machines x 3	\$1,500.00
Dryers x 3	\$1,500.00
Wringers	\$300.00
Irons	\$100.00
Folding Table	\$100.00
Chairs	\$100.00
Clothesline & Pins	\$100.00

UTWA ADVENTURE RESORT Misc. Capital Expenses

Laundry (Cont.)	
Fire Extinguisher	\$50.00
Uniform	\$100.00
Tools & Equipment	
Standard & Metric Wrenches/Sockets	\$500.00
Assorted Hand Tools	\$500.00
Assorted Power Tools	\$3,000.00
Painting Supplies	\$200.00
Ladders	\$200.00
Compressor	\$350.00
Workbench & Vise	\$200.00
Soldering & Brazing Supplies	\$150.00
ComeAlong	\$100.00
Wheelbarrows	\$200.00
Ax, Cane Knives, O'o Bar	\$150.00
Chain Saw	\$400.00
Shovels	\$150.00
Weedwacker	\$350.00
Lawnmower	\$700.00
Rags, Handcleaners	\$100.00
Oils, Fuels, Thinners	\$200.00
Spare Electrical	\$500.00
Spare Plumbing	\$500.00
Fire Extinguisher	\$50.00
Recreational	
Snorkel Equipment	\$1,000.00
Bicycles	\$3,500.00
Kayaks	\$6,000.00
Fishing Equipment & Supplies	\$2,000.00
Rain Jackets	\$600.00
Shipping Costs	\$3,000.00
Totals	\$134,570.00
10% Contingency	\$13,457.00

UTWA ADVENTURE RESORT- INCOME/EXPENSE

	\$ Per Night	\$250	Total 1 night	\$5,000	
Based on \$250.00 per night for 201	# of Rooms	20	# Days Yr	365	
200,000.00	Total # Night	55,000	100% Occ	\$1,825,000	
Projected Occupancy	20%	40%	60%	70%	75%
	Year 1	Year 2	Year 3	Year 4	Year 5
(Sold - Out 6 Months)	Build out				
(7 Months of Sales)	Start-Up				
Marketing & Sales Costs					
Travel Agent Percentage	15%	15%	15%	15%	15%
Travel Agent Fees	\$54,750	\$109,500	\$164,250	\$191,625	\$205,313
Marketing & Advertising	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Office Supplies	\$1,000	\$1,000	\$1,200	\$1,200	\$1,200
Phones	\$4,000	\$6,000	\$6,500	\$6,500	\$7,000
Salary (Bookng & Mkt'g Assist)	\$25,000	\$25,000	\$35,000	\$40,000	\$40,000
Site Operating Expenses					
Accounting & Bookkeeping	\$5,000	\$6,000	\$6,000	\$9,500	\$8,500
Bank Charges	\$700	\$400	\$500	\$800	\$800
Boat Expenses	\$1,500	\$2,500	\$2,500	\$3,000	\$3,000
Cleaning & Chemicals	\$1,000	\$1,500	\$1,500	\$2,000	\$2,000
Commission on Credit Cards	\$1,000	\$2,000	\$3,000	\$3,500	\$4,000
Complimentary Sales	\$1,000	\$1,000	\$2,000	\$2,500	\$3,000
Electricity	\$2,500	\$5,000	\$6,500	\$7,000	\$7,000
Entertainment	\$1,500	\$2,000	\$2,500	\$2,500	\$3,000
Fuel & Oil	\$1,200	\$2,400	\$2,400	\$2,400	\$2,600
General Expenses	\$2,400	\$3,600	\$6,000	\$7,000	\$7,600
Insurance - Ua./Casualty/Bus.	\$4,500	\$6,500	\$6,500	\$6,500	\$7,000
Interest - (\$1,200,000 Mtg. @4%)	\$0	\$0	\$48,000	\$48,000	\$48,000
Laundry Expenses	\$800	\$1,500	\$2,000	\$2,500	\$3,000
Lease (Provided as investment by our partners - the National Marine Park Board)					
Licenses	\$200	\$300	\$400	\$500	\$600
Motor Vehicles & Transportation	\$8,000	\$12,000	\$18,000	\$20,000	\$22,000
Operations Wages					
(Housekeeping 2 F.T. @ \$1.85)	\$4,800	\$9,500	\$12,000	\$12,000	\$12,500
(Ground Maint. 2 F.T. @ \$1.85)	\$4,800	\$9,500	\$12,000	\$12,000	\$12,500
(Service 2 Full Time @ \$1.85)	\$4,800	\$9,500	\$12,000	\$12,000	\$12,500
Printing & Stationary	\$250	\$500	\$500	\$600	\$500
Repairs & Equipment Maint.	\$500	\$4,000	\$8,000	\$10,000	\$12,000
Replacement	\$500	\$2,000	\$4,000	\$5,000	\$8,000
Salary - General Management	\$30,000	\$60,000	\$60,000	\$80,000	\$70,000
Salary - Site Management	\$20,000	\$30,000	\$30,000	\$35,000	\$40,000
Shipping	\$500	\$1,000	\$1,200	\$1,500	\$2,000
Telephones	\$4,800	\$6,000	\$6,000	\$7,000	\$7,500
Travel (General Management)	\$12,000	\$18,000	\$20,000	\$20,000	\$22,000
Water System Maintenance	\$900	\$1,200	\$1,500	\$2,000	\$2,000
Uniforms	\$800	\$800	\$800	\$1,000	\$1,000
Total Room Operat'g Expenses	\$219,700	\$376,500	\$502,750	\$562,825	\$696,813
Total Room Net Profit (Loss)	\$180,300	\$453,500	\$322,250	\$262,175	\$128,187

UTWA ADVENTURE RESORT - INCOME/EXPENSE

Based on \$25.00 per day/per person					
	\$ Per Day	\$25 Total \$ Day	\$1,000		
	# of People	40 # Days Yr	365		
	Total \$ Day	\$1,000	100% Occ	\$365,000	
Projected Occupancy	20%	40%	60%	70%	75%
	Year 1	Year 2	Year 3	Year 4	Year 5
Build - Out 6 Months)	Build out				
7 Months of Sales)	Start-Up				
Restaurant/Bar Operating Costs					
Based on following cost @ 100% Occupancy:					
Job	Per Hr.	Hours/Day	Total/Day	Days/Yr	Cost/Yr
Head Chef	\$3.00	10	\$30.00		
Assistant Cook	\$1.65	10	\$16.50		
4 Waiters	\$1.65	40	\$66.00		
1 Busboy	\$1.65	10	\$16.50		
1 Dish Washer	\$1.65	10	\$16.50		
			\$145.50	365	\$53,108
	20%	40%	60%	70%	75%
Total Labor Cost per Occupancy	\$10,622	\$21,243	\$31,865	\$37,176	\$39,831
Food & Beverage Costs					
Based on 35% of Gross Sales					
	\$25,550	\$51,100	\$76,650	\$89,425	\$96,813
Total Restaurant/Bar Sales	\$73,000	\$146,000	\$219,000	\$285,800	\$273,750
Less Labor	\$10,622	\$21,243	\$31,865	\$37,176	\$39,831
Less Food & Beverage Costs	\$25,550	\$51,100	\$76,650	\$89,425	\$96,813
Restaurant/Bar Net Profit (Loss)	\$36,828	\$73,656	\$110,485	\$127,200	\$137,106
Retained Earnings					
Retained Earnings		\$100,000			
Profit Available for Distribution	\$182,128	\$333,187	\$702,736	\$853,875	\$911,044
No Income from Boat is Calculated					
Operations Profit @ 4 yrs					
			60%	70%	75%
Year 1 @	20%	\$182,128	\$109,277	\$138,426	\$136,426
Year 2 @	40%	\$333,187	\$199,894	\$258,631	\$268,831
Year 3 @	60%	\$702,736	\$421,641	\$518,547	\$514,547
Year 4 @	70%	\$853,875	\$512,146	\$670,715	\$570,715
Total Operations Profit @ 4 yrs		\$2,071,596	\$1,242,867	\$1,616,219	\$1,519,319

UTWA ADVENTURE RESORT- INCOME/EXPENSE

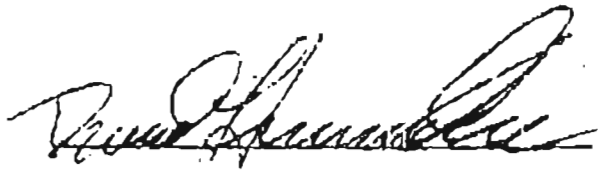
		94,287,874				
		Total	Dave	Park Board	Peter	
		100%	80%	20%	20%	
Times Net Profit of Year 4)	6853,575					
Less 1st Mortgage		\$1,300,000				
Less Investor Capital		\$350,000				
Partnership Equity		\$2,717,874	\$1,630,724	\$643,575	\$543,575	
Total Operating Profit & Equity Value (After 4 Years)		\$4,789,470	\$2,873,682	\$857,894	\$657,894	
Percentage of Return on Investment for Investor (Dave)		Total	Divided by 4yrs	Per Year	Investment	Percent Gain Per Year
Total 4 yr Profit & Equity	\$2,873,682	4	\$718,421	\$300,000	239.47%	
Operations Profit Only	\$1,242,857	4	\$310,739	\$300,000	104%	
Return Per Yr @ 80% Occupancy:			\$421,641	\$300,000	141%	

DAVID AND NANCY HASSENMILLER
PERSONAL FINANCIAL STATEMENT
APRIL 1997

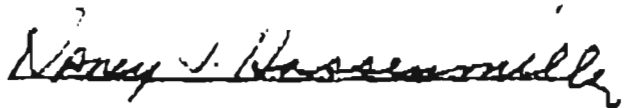
PAINE WEBBER ACCOUNT, CASH AND BONDS	\$ 369,669.
INVESTMENTS IN CLOSELY HELD COMPANIES AND REAL ESTATE	1,860,500.
PERSONAL ASSETS (SEE SCHEDULE)	2,141,936.
RETIREMENT FUNDS- IRA AND 401K	149,500.
TOTAL ASSETS	\$ 4,541,650.
TOTAL LIABILITIES	\$ 355,100.
NET WORTH	\$ 4,186,550.

NOTES:

ESTIMATED ANNUAL GROSS INCOME FOR 1997 \$ 200,000.



DAVID HASSENMILLER



NANCY J. HASSENMILLER

DAVID AND NANCY HASSENMILLER
SUPPORTING SCHEDULES
APRIL, 1997

INVESTMENTS IN CLOSELY HELD
COMPANIES AND REAL ESTATE

100 SH. C.S.T. CO. - LOUISVILLE, KY.	\$ 1,350,000.
124 SH. C.S.T. CO. - DALLAS, TX.	165,500.
2,430 SH. D.C. ENTERPRISES, DALLAS, TX.	65,000.
NOTE & FST. MTG. LOT 57 BUCK MT., WA. (10%)	50,000.
NOTE & FST. MTG. LOT 59 BUCK MT., WA. (10%)	50,000.
NOTE & FST. MTG. LOT 58 BUCK MT., WA. (10%)	38,000.
NOTE & FST. MTG. LOT 60 LEWISVILLE, TX. (10%)	55,000.
NOTE & FST. MTG. 10 AC. LOT D, WAILAPA, KAUAI, HI. (10%)	100,000.
TOTAL	<u>\$ 1,880,500.</u>

PERSONAL ASSETS

MONEY MARKET ACCOUNT (ISLANDER BANK, ORCAS IS.)	229,463.
CHECKING ACCOUNT (ISLANDER BANK, ORCAS IS.)	72,500.
17% INTEREST IN 96 ac. (30 LOTS) KAUAI, HI.	600,000.
4.5 AC. ALIOMAU LOT 3D, KAUAI, HI.	240,000.
1.6 AC. TRAVIS LAKESIDE, AUSTIN, TX.	200,000.
3.5 AC. WATERFRONT AND HOME, PALISADES PL. ORCAS, IS., WA.	700,000.
HOUSEHOLD FURNITURE, APPLIANCES, ART WORK	50,000.
1990 LEXUS	20,000.
1995 AUDI STATION WAGON	30,000.
TOTAL	<u>\$ 2,141,963.</u>

PERSONAL DEBTS

MISC. BILLS	\$ 4,000.
1996 TAX LIABILITY	43,500.

BUSINESS DEBTS

MORTGAGE, G.E. CAPITAL MORTG. ORCAS IS. HOME @ 6.137%	174,600.
MORTGAGE NATIONS BANK @ 8.0% LOT 12 TRAVIS LAKESIDE, AUSTIN TX.	133,000.
TOTAL LIABILITIES	<u>\$ 355,100.</u>

1995 RATE INFORMATION
KONA VILLAGE RESORT



Full American Plan

Daily Rate / Two Adults

Effective
12/1/95

ROYAL:	Ocean front	\$680
DELUXE:	Ocean view	\$595
SUPERIOR:	Garden, Lagoon or Partial Ocean view	\$540
MODERATE:	Garden or Lagoon view	\$480
STANDARD:	Fijian (Garden Setting)	\$425
GARDEN:	Hawaiian (Garden Setting)	\$395

Double Occupancy Rate. All Categories. Depart 195.
Child under 2: \$55. Child 2-5: \$55. Child 6-12: \$110. Additional
Adult: \$120 per day. All rates subject to change without notice.
*The Dining Surcharge is Made Separate.

KONA CELEBRATION

Kona Village Resort offers a Celebration Package for your anniversary, birthday, or any "special day."

Two Adults

Category	4-Nights	7-Nights
ROYAL	\$2,720.00	\$4,760.00
DELUXE	\$2,380.00	\$4,165.00
SUPERIOR	\$2,160.00	\$3,780.00

HONEYMOON HIDEAWAY

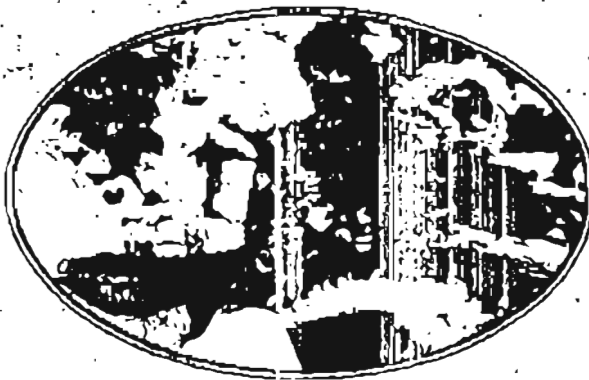
Romance in Paradise. Just the two of you surrounded by sand, swimming beaches, or lush tropical lagoon-like ponds.

5-Day / 4-Night Packages:	\$2,315.00
8-Day / 7-Night Packages:	\$3,925.00

All Honeymoon Packages are based on the Superior category. Additional number can be added on a rate of \$120 per night. All an additional \$22 per night for transportation to the hotel.

See Daily Information Booklet for Details.

1995 KAMAAINA RATE INFORMATION
KONA VILLAGE RESORT



Kona Village Resort's daily kamaaina rate (Hawaii residents only) includes:

- Arrival / departure transfer to Kona Airport
- Fresh rum punch and flower lei greeting
- Accommodations in a thatched-roof hale
- Breakfast, lunch and dinner daily
- Fresh Kona coffee in room
- Swimming and sunning along our sandy beach, two freshwater pools and whirlpools
- Complimentary—tennis, ocean activities including snorkeling, kayaking and sunfish sailboats, nature walks and historical tours to petroglyphs
- Keiki (Children) Program (except September—Labor Day to end of the month)
- Local arts and crafts
- Tuesday night Manager's Cocktail Hour
- Wednesday night Paniolo Steak & Seafood Cookout
- Friday night Luau and Polynesian Revue

KAMAAINA RATE

Effective
12/1/95

Double Occupancy	\$295
Single Occupancy	\$200
Third Person	\$145
Children 6-12	\$100
Children 2-5	\$52
Infants	\$20

ABOUT KONA VILLAGE RESORT

Relax in one of our secluded hale (cottages) nestled along lagoons, sandy beaches and lava landscapes. They form a tropical village with hale styled like those of old Hawaii, Fiji, Tahiti and other Polynesian Islands. Conveniences include coffeemakers, ceiling fans and refrigerators stocked with soft drinks. No phones, radios or TV's; just sun-filled days and peaceful evenings.

KAMAAINA CLUB

Join our Kamaaina Club and receive an additional discount on your room rate. Special events include a Kamaaina Club weekend with cocktail reception and special activities. Membership is \$125 and valid for 365 days. Call the Kona Village Resort Sales department for more information.

RATE INFORMATION

Rates do not include 4.17% sales tax on FAP, 6% Hawaii hotel tax (on room portion only), gratuities or beverages. No refunds on unused portions of the Full American Plan daily rates. Rates subject to change without notice.

Standard and Garden hale categories accommodate up to 3 persons; all others up to 4 or 5 persons, depending on hale type. Check-in time: 3:00 p.m. — check-out time: 12:00 noon.

DEPOSIT REQUIREMENTS

A two night deposit covering the first and last nights, is required within 14 days of receipt of confirmation. Cancellation and revision notice must be received by Kona Village Resort 14 days prior to confirmed arrival date in order to insure refund of deposit. Deposit covering last night not refundable when departing earlier than contracted stay. Personal checks / major credit cards accepted.

Kona Village Resort will be closed 12/1/95 to 12/8/95.

For Reservations & Information,
see your Travel Agent or contact:

Kona Village 

Hawaii as it was meant to be.

PO Box 1299, Kailua-Kona, Hawaii 96743
Phone: (808) 325-5555 / Fax: (808) 325-5124
Toll Free (toll-free): (800) 432-5450

ABOUT KONA VILLAGE RESORT

Relax in one of our secluded hale (cottages) nestled along lagoons, sandy beaches and lava landscapes. They form a tropical village with hale styled like those of old Hawaii, Fiji, Tahiti and other Polynesian Islands. Conveniences include coffeemakers, ceiling fans and refrigerators stocked with soft drinks. No phones, radios or TV's; just sun-filled days and peaceful evenings.

Kona Village Resort's daily rate includes:

Arrival / departure transfer to Kona Airport • Fresh rum punch and flower lei greeting • Accommodations in a thatched-roof hale (cottage) • Breakfast, lunch and dinner in Hale Mouna • Fresh Kona coffee in room • Swimming and sunbathing along our sandy beach, two freshwater pools and whirlpools • Complimentary ocean activities including snorkeling, kayaking and surfboard sailing excursions nature walks and historical tours in petroglyphs • Keiki's (Children) Program (except September—Labor Day to end of the month) • Local arts and crafts • Tuesday night Manager's Cocktail Hour • Wednesday night Paniolo Steak & Seafood Cookout • Friday night Luau and Polynesian Revue

RATE INFORMATION

Rates do not include 4.17% sales tax on FAP, 6% Hawaii hotel tax (on room portion only), gratuities or beverages. No refunds on unused portions of the Full American Plan daily rates. Rates subject to change without notice.

Standard and Garden hale categories accommodate up to 3 persons; all others up to 4 or 5 persons, depending on hale type. Requests for specific hale accepted when reserving for 7 nights or more. Check-in time: 3:00 p.m. — check-out time: 12:00 noon.

DEPOSIT REQUIREMENTS

A two night deposit covering the first and last nights, is required within 14 days of receipt of confirmation. Cancellation and revision notice must be received by Kona Village Resort 14 days prior to confirmed arrival date in order to insure refund of deposit. Deposit covering last night not refundable when departing earlier than contracted stay. Personal checks / major credit cards accepted. Reservations for 3 or more hales require a 30 day cancellation notice.

HOLIDAY POLICIES

EASTER (April 9—April 23)

Sixty day cancellation notice must be received for full refund of deposit. Deposit covering last night not refundable when departing earlier than contracted stay.

HOLIDAY / YEAR-END (Dec. 19 through Jan. 2)

A minimum stay of seven (7) nights is required for any stay that includes December 19 through January 2 dates. Deposit is refundable if cancellation is received at least 90 days prior to scheduled arrival date. Deposit covering last night not refundable when departing earlier than contracted stay. Shorter stays may be requested after October 1, 1995 on a space available basis.

Kona Village Resort will be closed 12/1/95 to 12/8/95.

For Reservations & Information, contact:

Kona Village 

Hawaii as it was meant to be.

PO Box 1299, Kailua-Kona, Hawaii 96743
Phone: (808) 325-5555 / Fax: (808) 325-5124
Toll Free from USA/Canada: (800) 367-5290

Joseph Nelson

Experience Qualifications

I have 28 years of experience in the construction and contracting business. I am qualified in all levels of the design & building business. I have developed subdivisions, designed communities, designed many custom home & remodeling projects and managed over 150 employees on multiple projects at one time. I have completed many restaurant building & remodeling projects throughout the years and I am very qualified in the special design requirements for restaurants.

I have good computer skills with experience in various software programs. I currently use Microsoft "Word" for word processing, "Excel" for spread sheets, "Project" for scheduling, and "Quick Books" for bookkeeping. With my 10 years of contracting experience in Hawaii, I am very knowledgeable of ordering, shipping, scheduling and handling materials overseas.

Brief work history below:

- | | |
|-------------|---|
| Current | Ulithi Adventure Resort Corporation - Secretary/Treasurer |
| 1992 - 1997 | Nelson Pacific Homes, Kauai, Hawaii - Owner
Architecture, Site Planning, General Contracting custom homes and remodeling projects. |
| 1987 - 1992 | Kauai Pacific Group, Kauai, Hawaii - Vice President
Architecture, Real Estate Development, General Contracting for our own development projects. |
| 1976 - 1986 | Joseph Nelson Construction Co., San Diego, California - Owner
General Contracting custom homes, remodeling and some small development projects. |
| 1971 - 1976 | Apprentice carpenter advancing to Journeyman carpenter and on to Foreman with A.G. Meakce Construction Company, California & Nevada. |
| 1969 - 1971 | Apprentice carpenter on various projects with various employer's. |

Brief Reference List:

- | | | |
|---------------------------|---|--|
| Gene Lopez - | All Phase Construction
P.O. Box 80
Hanalei, Kauai, Hawaii 96722 | (808) 639-4829 |
| John & Mona Van Diepen- | Straight Line Construction
4464 Industrial St.
Sunny Valley, California 93063 | (805) 583-2327 |
| Jack Young - | P.O. Box 128
Ridgway, Colorado 81432
Phone (970) 626-5995 | P.O. Box 125
Anahola, HI. 96703
(808) 822-4711 |
| Dave & Nancy Hasenmiller- | P.O. Box 232
Portland, Washington 98245 | |

P.O. Box 221 Anahola
Kauai, Hawaii 96703

Phone (808)828-0990
Fax (808)828-0990

Peter J. Narburgh

Current Position

Ulithi Adventure Resorts Corporation, Managing Partner
P.O. Box 221 Anahola, Hawaii 96703 (808)828-0990

Summary of qualifications

Peter Narburgh is qualified to design and install sustainable systems for community agriculture and resort development.

Work experience

- 1997: Community development consultant to Kosrae State FSM.
- 1996: Property development and agricultural consultant to the Kingdom of Tonga. Including the leasing of 2000 acres of prime agricultural land in Hawaii from the Bishop Estate.
- 1995-1997: Owner operator of Paradise Farms Hawaii. Specialty produce, agricultural production facility.
- 1993-1994: Taro tissue culture project with Hawaiian Sugar Cane Planters Association and the Ministry of Agriculture Tonga.
- 1990-1996: Agricultural property development consultant Kauai, Hawaii.
- 1992: Inter-island Solar Sales Representative; solar powered demonstration tour through Micronesia.
- 1991: United States Forest Service grant for agro-forestry development in the Republic of Palau.
- 1990-1992: Agricultural and community development consultant for Ngoschar, Angaur and Mellonkiok States, Republic of Palau.
- 1987-1989: Extensive research travels trough out the Pacific and Asia on tourism, agriculture and sustainable development systems.
- 1986: Built and sold 2500sq. Ft. private residence in Kilauea Kauai.
- 1980-1985: Agricultural development and farm management apprentice at Puu Lani Farms, Kilauea, Hawaii.

Education

1977-1979: Attended University of Washington in Seattle Washington
1977: Graduate of Eisenhower High School Lawton Oklahoma
Eight (8) years primary education in Europe

References

Albert Narburgh- American Isuzu Motors Inc. Port Manager, 2510 Alexander Ave.
Tacoma, Washington 98421/ (206) 922-0130

Gary Victorino- Fire Captain Island of Kauai (ret.), 1706 Bettencourt Lane,
Kapaa, Hawaii. 96746 / (306)893-6222

Peter Narburgh, Resume, page two (2)

Len Newell- US Forest Service, Pacific Islands Forestry Inst. , Pacific Islands Forester, U.S. Federal Building, Bishop Street Honolulu HI/ (808)522-8231

Hanitede Faamua- Director of Agriculture, Kingdom of Tonga, Ministry of Agriculture, Nuku'alofa, Tonga 011-676-23402

Guy Anthony- Intel Corporation, Senior Treasury Manager, Strategic Investments & Acquisitions, SC4-210 2200 Mission College Blvd. Santa Clara, CA 95052-8119 / (408)765-4433 / guy-anthony@ccm.sc.intel.com

Herman Texeria- Liquors Commissioner (ret.) Kauai, Hawaii. (808)822-5959

Mimsy Bouret- Hanalei NorthShore Properties, Vice President, P.O. Box 344 Hanalei, Kauai, Hawaii. 96714/ (808)826-9622/ (808)826-6129

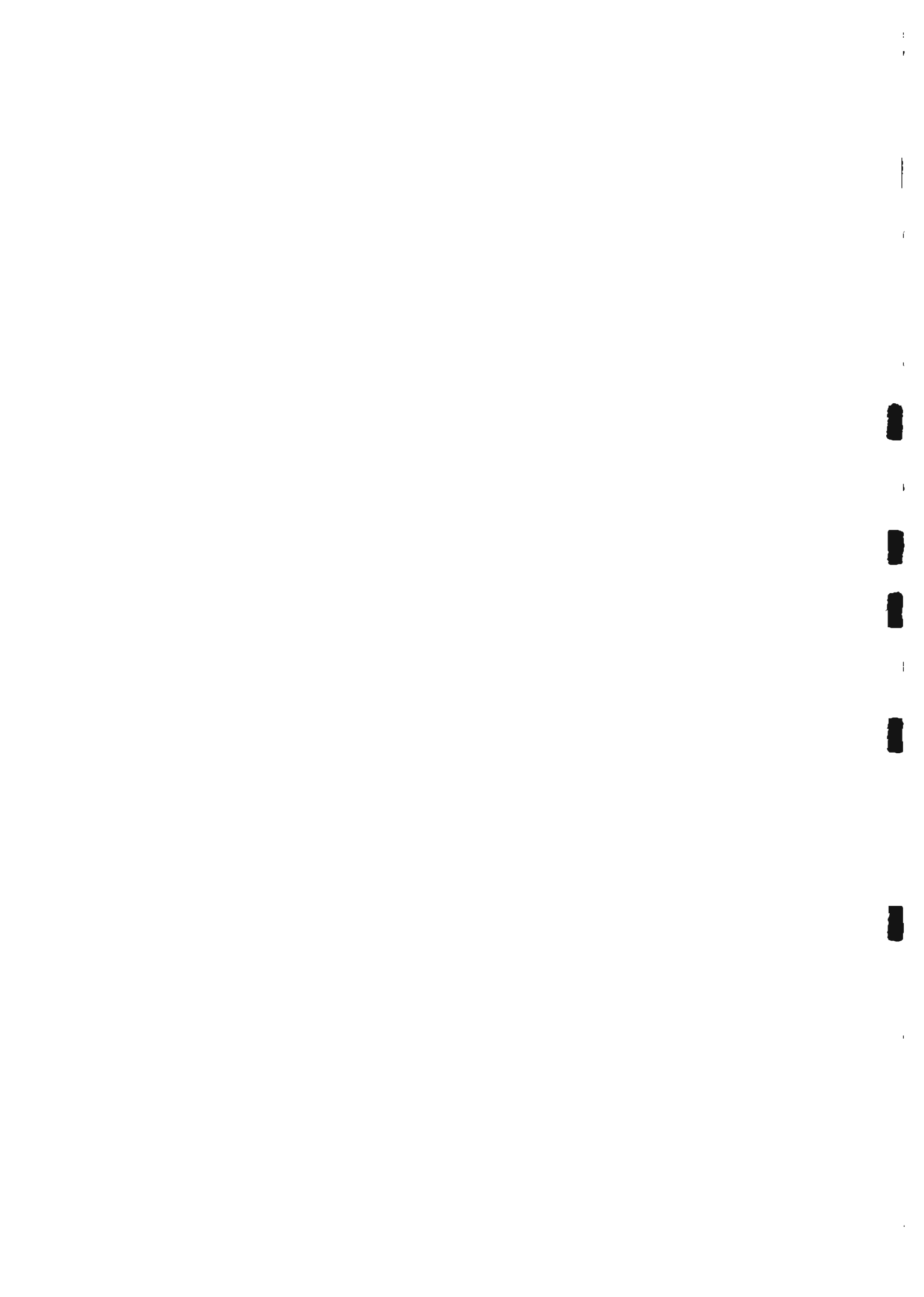
Languages.

English, German

APPENDIX B

UTWA MARINE CONSERVATION AREA PROMOTIONAL MATERIAL





ABOUT THE UTWA WALUNG CONSERVATION AREA

To many visitors the scattered islands of the Pacific conjure up images of paradise. Yet the Pacific is at a crossroads between old and new, and environmental degradation and cultural decay are some of the modern issues we also face.

Kosrae sits proudly in the heart of the Pacific, a crossroads for traditional voyagers and modern travelers journeying across the endless expanses of ocean. And here, in the Utwa Walung Conservation Area, is one of the true paradises of the Pacific.

PAIN KOM – WELCOME !!!

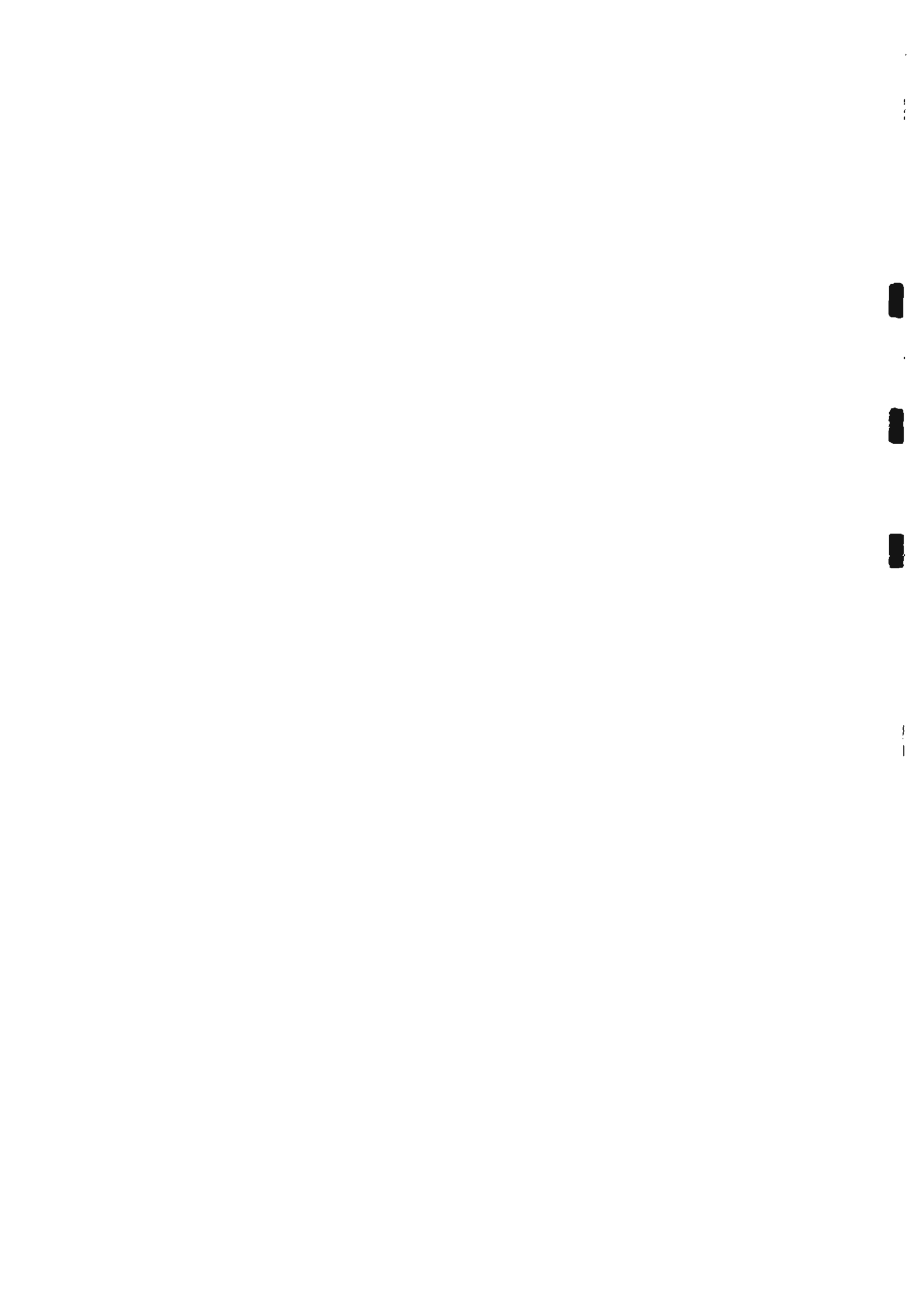
The Conservation Area includes much biodiversity from rare fish to rare trees, historical ruins and unspoiled beauty. We are pleased for you, our guests, to enjoy these things.

But these are things we in Kosrae also value. In the Conservation Area are things we want to keep. Our land and our seas are our home, our "supermarket", our culture and our history. The Utwa Walung Conservation Area is our own attempt to keep our island the way we want it to be, for our children and for the generations to follow them. We are proud of it.

It is not a national park in the western sense. It is not government land. The government does not make the rules. This conservation area is based in our communities. Individual landowners that want to keep their environment in its current healthy state, have placed their land within the Conservation Area. We can still come and collect resources- crabs for food, mangrove trees for building- but we are doing it sustainably.

It is a new concept in conservation, and we are doing it the Kosraean way, with some help from the South Pacific Regional Environment Program. Its boundaries are still growing as more lands are placed under its care. It is growing organically, just as the trees and plants around you.

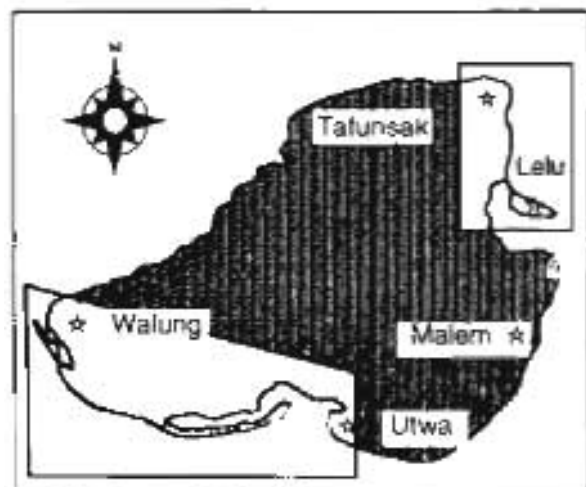
**Please enjoy our area and our heritage. Please support
our efforts. Please respect our area. *Kulo Malulap!!***



How to Get There

The canoe trip on Inya Walunga begins at the village of Utwe on Kosrae's southern coast. Take the coast road south from Lelu. It is a pleasant trip in itself, at times hugging the coast or cutting through mangrove swamp. If you don't have a car, hitching is easy, almost anyone will pick you up. Keep in mind that traffic returning from Utwe to Lelu becomes pretty scarce by late afternoon. You may want to try arranging to stay in Walung for the night and return by way of Okat the next day.

A trip up Inya Mutunnenea begins right at Lelu island. The new fisheries complex is a handy starting point.



Planning a Trip Through Mangroves

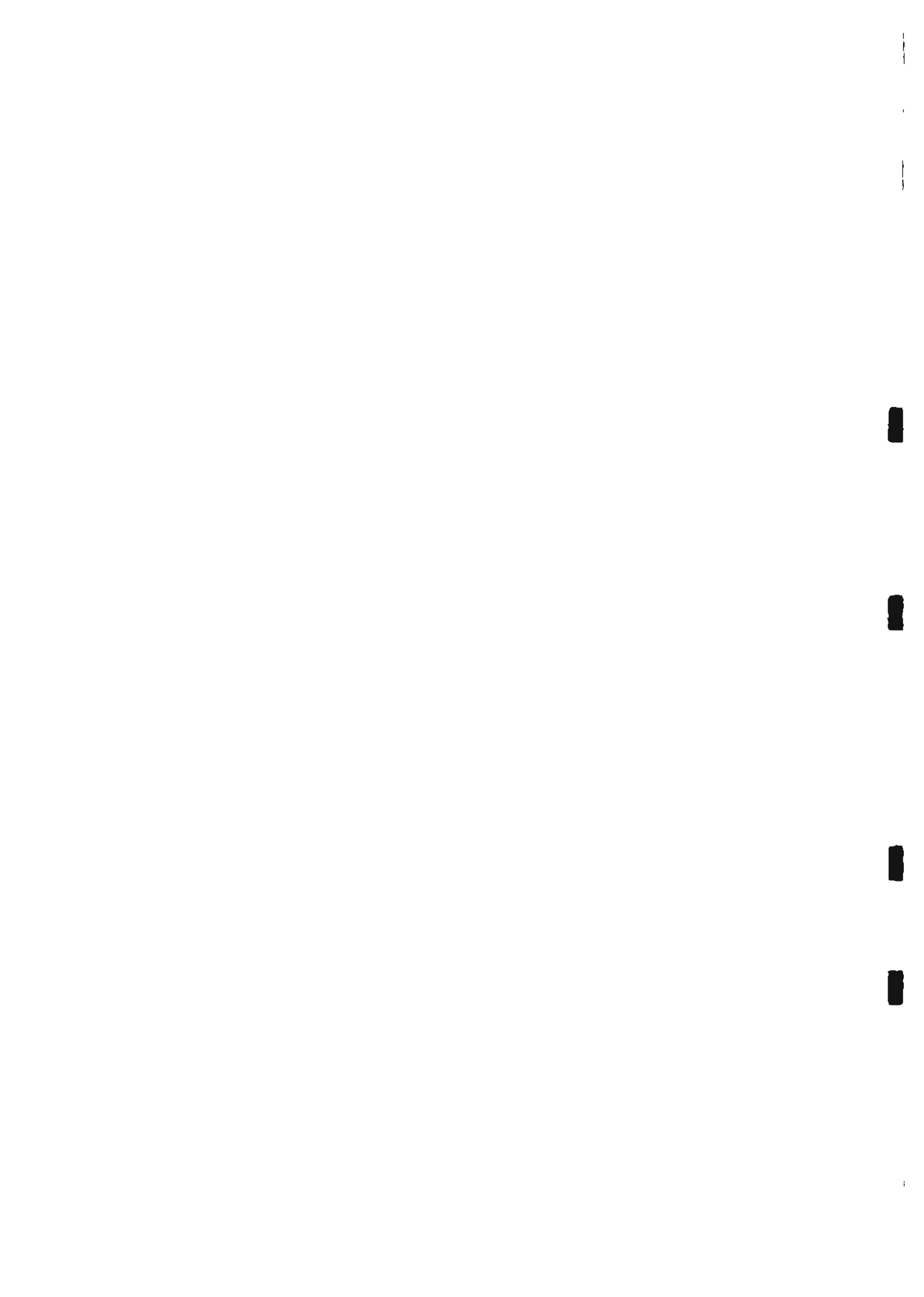
To arrange a canoe trip through the mangroves contact the Division of Tourism. The telephone number is 370-2228. Because a fairly high tide is required for a trip through Inya Walunga, it may be difficult to arrange if you are visiting Kosrae for less than a week and it is during a period of moderate tides. Inya Mutunnenea, on the other hand, is navigable even during low tides, although you will have to walk where the bottom shoals out at its northern end. Canvas shoes are recommended.

There are a number of options for planning a trip to Walung via Inya Walunga. Much depends on the tide, as the channel is impassable at low tide. One possibility is to wait out the falling tide in Walung and return to Utwe on the next high tide. Alternatively one could continue circumnavigating the island by hiring a boat to take you to the marina at Okat, Tafunsak. From here you can hitch a ride back to the hotel.

It is also possible to arrange through the Tourism Office to stay in Walung over night. If you do, it will be necessary to bring your own food as there are no stores in the village.

For the adventurous a final option would be to hike back along the shoreline towards Urwe. A distinct trail begins at Soaksa, eventually petering out a little ways past Tukunsru. From here walk along the reef to the eastern end of the long barrier island that separates the sea from the mangrove forest. Arrange to have your boat driver meet you on the shore just opposite Urwe village. Plan to make the boat trip in the mangroves at high tide, spend an hour or two in Walung and hike back on a falling tide so that you have plenty of beach to walk on. The walk takes about three hours.

Inya Mutunnenea is both a shorter trip and easily accessible. A canoe or motor boat should be arranged from Lelu. If you are staying at a hotel in Tafunsak such as the Sandy Beach or the Horizon, it is a relatively short walk back from the northern end of the channel. Alternatively, spend some time at the nice beach at the northern channel outlet and then return to Lelu. A one way trip only takes a couple of hours.



Inya Walunga



A trip up the Inya Walunga begins in the village of Utwa, on the south side of Kooze. You cross the four artificial harbors, final resting place to the Leonora, favorite ship of the fabled pirate Billy Hayes. The wayway begins on its far side.

Upon crossing a narrow lip of reef you enter Laka Utwa, a bay surrounded by mangroves. Just Lulu Utwa and the elongated Lulu Nefoli beyond it have the feel of lakes because they are enclosed by the forest. Since this is a favorite fishing spot for the women of Utwa you are likely to see a group of ladies net fishing in the waste deep water. Laka Nefoli narrows at its farther end. Soon you are surrounded by the forest, sinking through stands of *Thalassia grossularis* up a channel no wider than the boat. Their stilted, buttressed roots look like something out of an enchanted forest. The channels also winds through large groves of Nipa palm (*Nypa fruticosa*). It is the right time of year you might be able to see their very exotic looking orange flowers.

The forest closes in even closer until you presume yourself that you'd quickly be straggling way up a height of a mile. It is at this point that the channel finally begins to widen, appearing and merging at Tukunso, the boundary between the marine gardens of Utwa and Talunsoak. Keep an eye out to the left for the channel leading to Kooze. For a thing like the reef outside the entrance to Kooze effect of snorkeling spot.

Signs of human settlement appear as you approach the idyllic village of Walung. The channel ends at Soaksa, the western tip of Kooze. The shore is fringed by low white sand beaches, trees washed by tall palms.

Walung is a strong link along the shore from the point of Soaksa to the center of the mangrove, its coral reef and channel. The walk along the beach to Inial is short. This village, perhaps because of its isolation, is the most traditional in the area.



-  MANGROVES
-  CORAL REEF
-  BEACH
-  WATER
-  BOAT ROUTE
-  HIKING ROUTE
-  ROAD

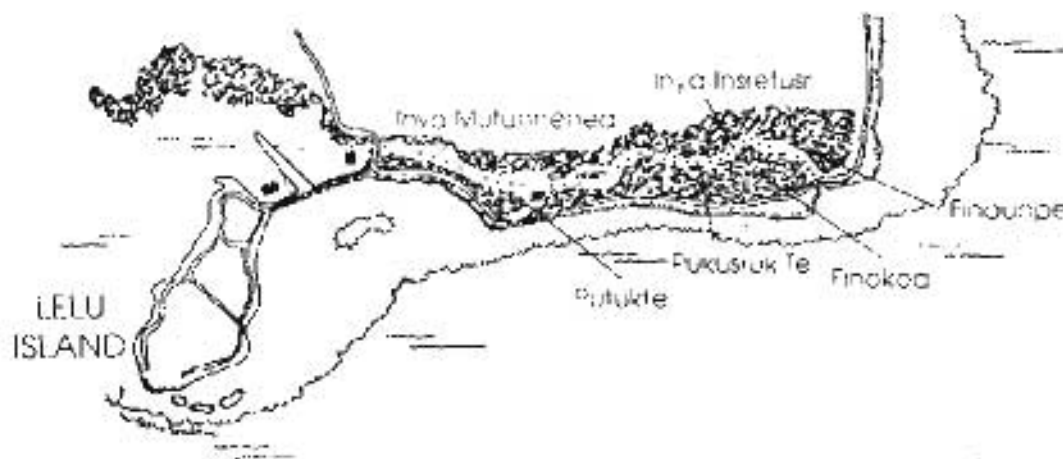
Inya Mutunnenea

The trip through Inya Mutunnenea and Inya Inal begins at Lelu Harbor. The Marine Resources complex on the causeway between Lelu Island and the mainland is the new starting point. Originally a landing strip before the present airport was built, it now houses a boat basin, fisheries complex, the FSM National Aquaculture Center and public market. If you're interested in boats or fish this is a great place to poke around.

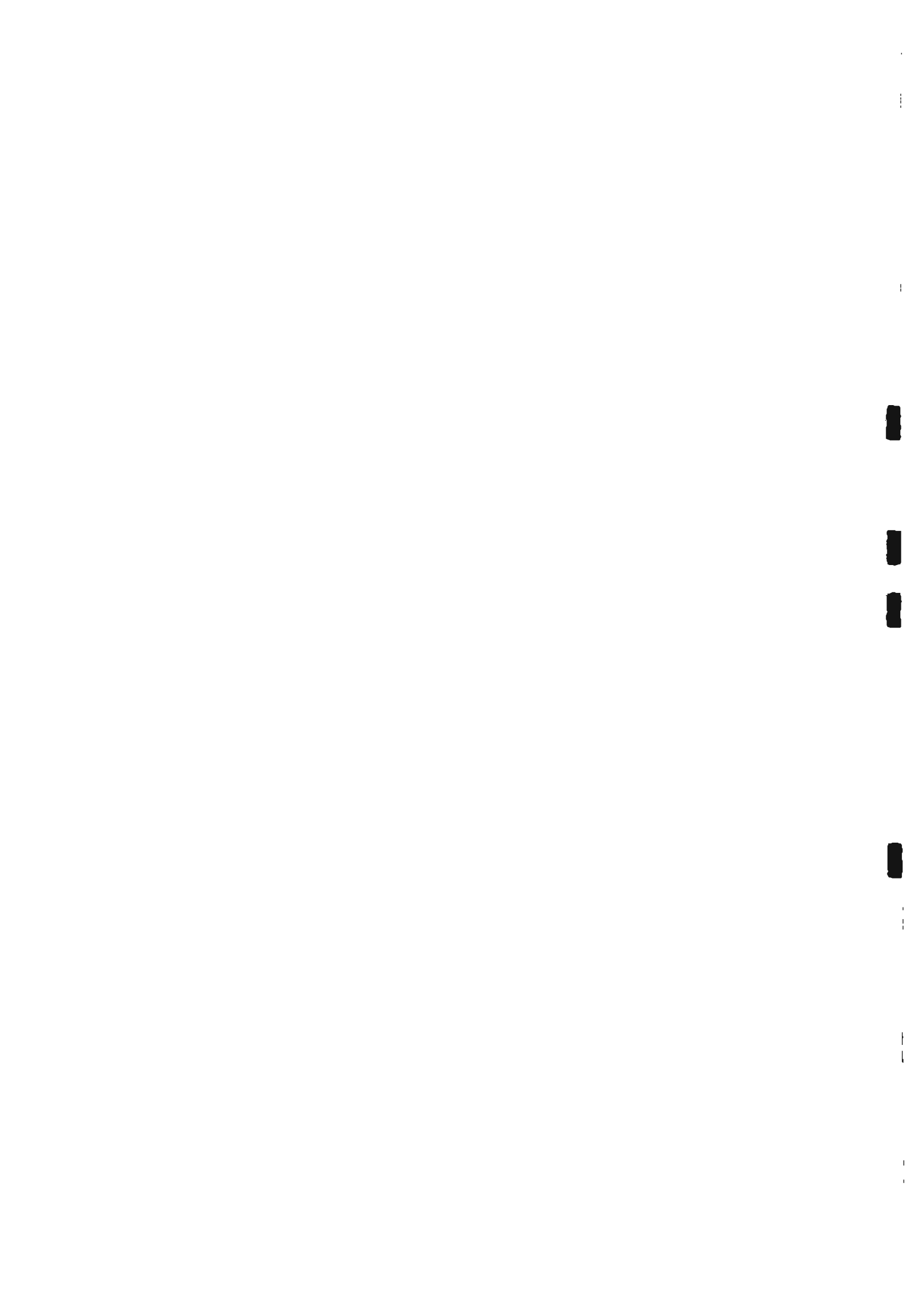
From here you head east, under the bridge to Tolo. A series of wide bays eventually narrow to a tree arched channel. The open water at the beginning of the voyage provides some fine views of steep sided Mutunnenea hill to your left. The narrower channel opens up to glimpses of the unusual island strip, particularly at Putukie. Finally the

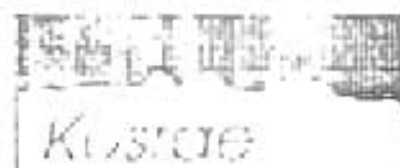
channel narrows to the width of a boat and shrinks to the point where it is only passable at high tide. However, this is not far from the outlet of Inya Inalrefus. You can walk the last few hundred yards to where the circumferential road fords the channel on a low bridge.

There is a lovely beach to the left of the channel mouth, just past the bridge. This is a great place to begin exploring Rosser's sandy shoreline. Both the Sandy Beach and Harbor hotels are within walking distance; much of the walk can be made on the beach. For those wanting to Tolo, it isn't hard to hitch a ride south in a passing truck.



MAPS and drawings by Mervyn W. Wilson





The Mangrove Channels of Kosrae

A trip through the mangrove forest is like a visit to another world. Follow meandering channels overarched by a majestic canopy. Wildlife abounds. Fish swim lazily through the tea colored water and birds chatter in trees above. This brochure describes trips through two of the many channels on Kosrae: **Inya Walunga** and **Inya Mutunnenea**. Plan to spend a full day exploring the first. If time is short the second trip is an easy half day trip.

About the Mangrove Forests of Kosrae

Mangrove forest surrounds the island of Kosrae. For most visitors mangrove swamp conjures up unpleasant visions of a mosquito infested, foul smelling wasteland. Nothing could be further from the truth. The mangrove forests of Kosrae are place of beauty and solitude. The mangroves are not quite sea and not yet land.

In this place of transition, life abounds. Herons, egrets, brown and black noddy terns, and fairy terns flit amongst the trees. Trees, festooned with ferns, grow to majestic heights. At water level their prop roots form a dense thicket on which a variety of crabs and fish live. Fish swim in the channels and amongst the roots, making the forest fringes a favorite fishing spot for Kosraeans. Look for schools of mullet and snappers. Even the odoriferous muck on the bottom supports a rich array of fauna. The popol clam, found deep in the mud, is a favorite food. If you come upon a party of women in search of clams and crabs, please be discrete so as not to disturb their efforts.

In addition to their beauty, mangroves play a vital role in the island ecosystem. They are a buffer between the clear waters of the fringing reef and the silt laden runoff from Kosrae's mist shrouded peaks. Their roots form a giant sieve, trapping silt that might otherwise smother the delicate corals. More subtly, they play an important role in regulating the flow of nutrients, metering out sustenance to the sea grass beds at their edge.

Because the mangrove forest is rich with life, it is an important resource for the people of Kosrae. The trees provide timber, the channels are a protected transportation network and their waters are a favored place to fish. In particular, the sweet flavored mangrove crab is a universal favorite.

Before passable roads and cars came to Kosrae about 20 years ago, the channels were the routes of commerce and communication. The two channels described here are part of a larger network stretching from Walung on the western tip of Kosrae to Tafunsak in the north. Only the relatively protected north shore of the island does not have a channel. With the arrival of cars many of the channels have fallen into disuse. The channels are slowly silting in, probably part of a long term natural process, and trees have begun to grow across them in places. Perhaps they will disappear someday, but today they can provide a very special experience for the visitor.



Plants of the Mangrove Forest



Flo-fol are often the tallest trees in the mangrove forest. Some of the largest specimens in Micronesia can be found on Kosrae in the Okat area. Flo-fol are commonly festooned with epiphytic ferns, especially *Nephrolepis acuta*, whose fronds often cascade twenty or more feet to the water. This tree can be most easily distinguished by its sharply pointed, spike-like pneumatophores, or air breathing roots. Look for them protruding from the mud around the base of the tree. The leaves are more rounded than those of other mangrove species. The flower is white with numerous feathery stamens. While flo-fol are found throughout the mangrove forest, the largest examples are typically found toward the middle or landward edge.

Flo-fol (*Sonneratia alba*)



Sakaarik are found in almost every part of the mangrove forest and are perhaps the most common component of mangrove forests throughout Micronesia. They are easily distinguished by their arching prop roots which can form a dense thicket. Its flowers are small. Its hypocotyl, a reproductive structure that can be likened to a seed that has sprouted on the plant before it falls off, is long and thin. Sakaarik, like many mangrove forest plants, has a variety of uses. While Srak is preferred, this tree is also popular firewood. Kosraicans, who traditionally do not cook on Sundays, typically construct an um, or earth oven, on Saturdays to prepare food for the Sabbath.

Sakaarik (*Rhizophora apiculata*)



Shrael are more commonly found in the inner and landward parts of the mangrove forest. They may be distinguished by their knee-like pneumatophores, not to be confused with the sharply pointed pneumatophores of Flo-fol. The flowers are usually reddish and the hypocotyl is thicker and shorter than that of sakaarik. An important traditional use of mangrove wood is for house construction. Both sakaarik and shrael are used for this purpose. Straight poles can be cut. With the bark removed they make an excellent, and durable, framing material.

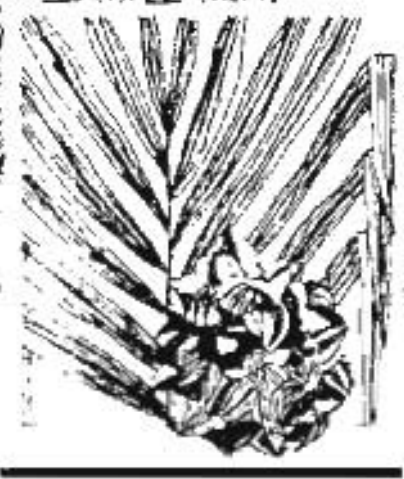
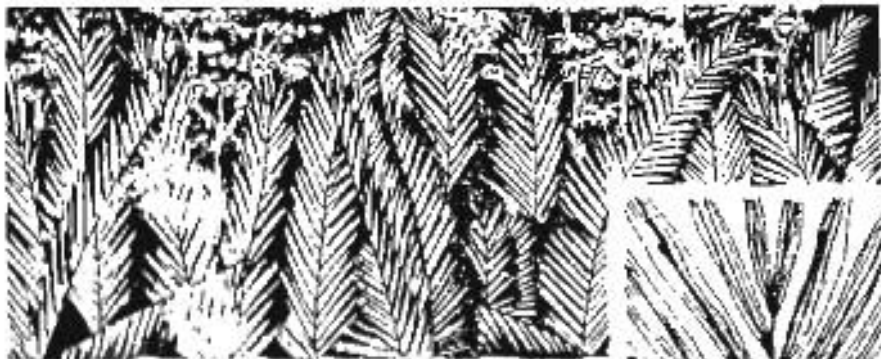
Shrael (*Bruquieria gymnorhiza*)

Plants of the Mangrove Forest



Tui is most easily distinguished by its sinuous buttress roots and smooth white bark. The fruit is a green or tan orb, about the size of a grapefruit. Tui are found along the inner edge of the mangrove forest, often in dense stands. The wood is wine red colored and preferred for making wood carvings and furniture.

Tui
(*Xylocarpus granatum*)



Nipa grow along the inner edge of the mangrove forest, preferring brackish water. At river mouths and other places where fresh water flows into the swamp, they often grow in dense groves. Nipa is, of course, a type of palm but without a visible trunk. Look for their strange flowers which grow at the base of the fronds. They are large, and if male dull orange with pollen. The fruit is a globose knotted mass of seeds. Nipa is traditionally used as roofing thatch. It lasts longer than thatch made from coconut palm fronds.

Nipa
(*Nypa fruticans*)



Melukluk is showy epiphytic fern. Most often you will see them growing ten or more feet up in the crotch of a tree. Its common English name, the bird's nest fern, is indicative of its shape. Kosranans use the young leaves to treat stomach upset. They may be eaten directly or pounded to release the juices, which is drunk. If fern leaves are unavailable, the mature leaves can be used to wrap food that is to be placed in an ulam.

Melukluk

While you are visiting the Marine Park, we ask that you please DO:

- Enjoy the natural beauty of the Conservation Area
- Ask questions about the ecology, local customs, & traditional / current resource uses
- Offer comments and suggestions for continued management plans
- Be careful & watch your step on rocky and slippery terrain!



Because of the fragility of the mangrove & coral reef ecosystems, we ask that you please DO NOT:

- Touch, stand, or walk on the coral reefs or reef flats
- Feed the fishes
- Litter



THANK YOU FOR HELPING PROTECT AND RESPECT KOSRAE'S BEAUTIFUL NATURAL RESOURCES!

THANK YOU FOR HELPING SUPPORT LOCAL COMMUNITIES!

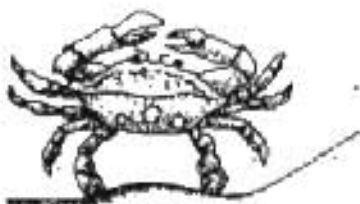


WHAT IS THE UTWA-WALUNG MARINE PARK?

The Utwa-Walung Marine Park is a collaborative and community based conservation area. It is located between the villages of Utwa on the southern end of Kosrae and Walung on the western side of the island.

The conservation area is recognized by the people and state of Kosrae for its outstanding biodiversity. It is this abundance and diversity of natural resources which has allowed for sustainable levels of local resource use in the past and will provide for sustainable levels of resource use into the future for local peoples.

The objectives of the Marine Park are to promote conservation and environmental education.



For more information, please contact us:

Utwa-Walung Marine Park
P.O. Box 539
Kosrae State, FSM 96944
Telephone (691) 370-2321 or 370-3483
Fax (691) 370-2322

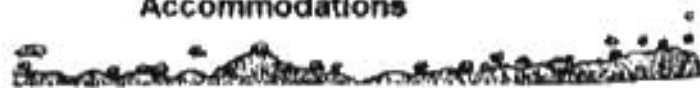
Welcome to the

Utwa-Walung Marine Park



ECO-TOUR ACTIVITIES

- ◆ Guided Utwa-Walung Mangrove Channel Canoe Tours
- ◆ Guided Mangrove Channel / Snorkeling Tours
- ◆ Cultural Tours
- ◆ Guided Rainforest Hikes
- ◆ Local Family-Hosted Accommodations



Guided Utwa-Walung Mangrove Channel Canoe Tour

Experience the solitude and beauty of gliding through age-old Mangrove channels. Learn about the unique role that Mangrove forests play in coastal environments. Traditional style canoes are paddled or motor-operated by local guides, experienced in local ecology.

Estimated time: 4-6 hour.

Rate: \$35 per person with lunch and local fruits, drinks and land transportation from your hotel.

Guided Mangrove Channel / Snorkeling Tour

Local guides will take you on a short Mangrove channel tour as described above, and then out to the reef edge to snorkel one of Kosrae's most biologically diverse reef ecosystems in 83° F waters.

Estimated time: Approximately 3-5 hours.

Rate: \$25 per person with local fruits, drinks and land transportation from your hotel.

Guided Hiking to Meinke Ruins

Hike with a local guide to the sacred place of Siniaku, Goddess of nature, heavens and breadfruit. Meinka Ruins is a prehistoric site consisted of over hundred enclosures scattered in the rainforest area.

Estimated time: Approximately 3-5 hours

Rate: \$20 per person with local fruit, drinks and land transportation from your hotel

Cultural Tour

This unique tour includes guided canoeing through the Mangrove channel as described above. Along the channel tour, you will stop and visit local families and experience Kosraean culture, locally prepared dishes, and traditional songs and dances. You will gain first-hand insight into Kosrae's rich history, present, and future.

Estimated time: Approximately 5-6 hours

Rate: \$54.00 per person with local lunch, drinks and land transportation from your hotel.

Guided Hiking to Rainforests or Waterfalls

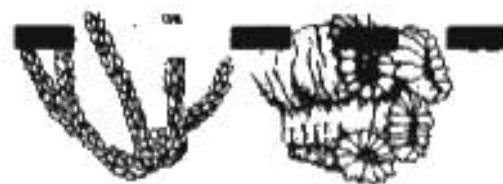
Experience hiking through tropical rainforest, alive with birds, lush with vegetation, and learn about the ecology and traditional local sustainable uses of the rainforest. You will also visit the waterfalls at the end of your tour.

Estimated time: Approximately 3-5 hours.

Rate: \$20 per person with local fruit, drinks and land transportation from your hotel.

Local Family-Hosted Accommodations

For those travelers looking for a true cultural learning experience, stay with a local family and even learn some Kosraean language! Meals can be included and require prior arrangement. For more information, contact Madison Nena at the Marine Park office.



HOW TO MAKE TOUR ARRANGEMENTS

Advanced notice is required for all Marine Park activities.

Times will be adjusted according to your schedule and the tide table.

Please call Madison Nena at the Marine Park office to make reservations.

Any visitor who uses a private canoe, boat, or kayak in the Marine Park area for non-guided activities is required to pay a user fee of \$5 per visit.

For your safety, non-guided activities are strongly discouraged.

TRANSPORTATION & TIMES

All tours include pickup at the point of request and return. All times are estimated from the pickup point, tour and back to your hotel. If land transportation to the Marine Park can be arranged, you will deduct \$8.00 from any of the tours. Transportation time varies, depending upon where you are coming from. Please use the following as approximated travel times to the site.

- From Tafunsak, allow 1 ½ hours
- From Lelu, allow 1 ¼ hours
- From Tofol or Malem, allow 1 hour
- From Utwa, allow 10 minutes