Cities, Seas, and Storms
Managing Change in Pacific Island Economies

Volume II
Managing Pacific Towns

November 30, 2000

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PAPUA NEW GUINEA AND PACIFIC ISLAND COUNTRY UNIT
THE WORLD BANK

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Acknowledgments

Acronyms and Abbreviations

ADB	Asian Development Bank
AUSAID	Australian Agency for International Development
CROP	Council of Regional Organizations in the Pacific
GDP	Gross domestic product
HA	Housing Authority
PROUD	Pacific Region Observatory on Urban Development
UNDP	United Nations Development Programme
UNELCO	Power and Water Utility for Port Vila and Luganville, Vanuatu
US	United States of America
US$	United States Dollar
VT	Vatu

Executive Summary

This volume is the second of a four-volume report entitled *"Cities, Seas and Storms: Managing Change in the Pacific Island Economies"* produced by the World Bank as the Year 2000 Regional Economic Report for the Pacific Islands. In addition to this specialized volume, Volume I summarizes the main findings of the report, and provides a cross-thematic perspective of the importance of management and adaptation in the Pacific. Volume III examines how Pacific Island countries could best address the challenge of managing the use of the ocean in face of current trends. Volume IV discusses adaptation to climate change.

This volume reviews the forces behind urbanization and examines the challenges urbanization presents; discusses urban governance and planning, land management, and disaster management and mitigation; and presents an agenda for adaptation and change.

Effects of Population Growth and Urbanization in the Pacific Islands

The Pacific Islands have experienced major demographic shifts for several decades. High population growth has led to migration from smaller outer islands to larger islands and from rural areas to towns. As a result, more than 35 percent of the people of the Pacific now live and seek their livelihood in towns and, within 20 years, more than half of Pacific countries will be predominantly urban. Key forces shaping the future of Pacific towns include population growth and migration, the role of the urban economy, and provision of urban services and housing.

Issues and Opportunities

Contrary to popular belief, urbanization has significantly improved the economic prospects and quality of life for a large and increasing proportion of the people of the Pacific. As in other parts of the developing world, urbanization has been an inevitable response to deteriorating or stagnating conditions in rural areas and outer islands, few if any of which can offer the employment opportunities and access to the cash economy provided by the urban environment.

In reality, urbanization has facilitated national social and economic development. Most new jobs are found in towns, and the urban economy generates upwards of 60 percent of the Gross Domestic Product (GDP) in many, if not most, Pacific Island countries. The urban economy is now the major contributor to economic growth, diversification, and competitiveness in the region. This is largely based on the significantly higher productivity in urban private sector industry and services, as compared to the rural economy. Provision of basic services such as health and education would also have been considerably more difficult and costly if they had to be provided to a population scattered in remote islands. Without the growth of towns, the economic performance of many Pacific Island countries would have been far more modest than it has been to date.

However, these positive impacts remain unrecognized by many policy makers, who continue to view towns with concern, if not alarm. Difficulties in providing and maintaining public infrastructure and services, proliferation of informal settlements, worsening environmental conditions and increasing social problems associated with unemployment, underemployment, and the breakdown of traditional social structures are often cited as major concerns. Consequently, policies have often been reduced to trying to develop strategies to encourage those living in urban areas to return to the rural areas from which many came.

These concerns are not unfounded. Income inequalities are growing, and poverty and vulnerability are evident in an increasing underclass of landless urban poor. Without attention, these emerging problems will grow, affecting the quality of life, discouraging much

needed private investment, and placing key economic sectors (such as tourism) at risk. Urbanization trends are also having a profound effect on customary traditions, relationships, and decision-making processes as subsistence lifestyles in rural areas have become less appealing to young town dwellers, and traditional leadership structures become less able to respond to demands by the urban population for higher standards of living.

In general, the potential economic benefits of towns are being jeopardized by a lack of vision of the social and physical environment desired by town dwellers in the Pacific, an absence of appropriate policies, and poor urban management and service delivery.

An Agenda for Change and Adaptation

Dealing with the worsening problems caused by urbanization and realizing its potential to increase standards of living calls for a policy and institutional response that goes beyond uncertain resettlement schemes. Indeed, in light of the importance of the urban economy and the growing population of urban dwellers, the time has come for urban management strategies to feature prominently in national economic and social development strategies and outcomes, and for accountabilities to be defined.

These strategies should address the current structural problems in urban planning, with a view to build a broad-based vision of how to achieve a more equitable distribution of opportunities for all Pacific Islanders, while safeguarding the environment. Shaping this vision requires a participatory process in which local level traditional institutions, civil society and the churches, the private sector and government are involved at all levels. This can serve as a vehicle to improve governance as these stakeholders seek to achieve a consensus on policies and practical measures that enhance the urban-rural linkages, and harness the potential of towns to absorb population growth more productively.

National urban summits would be an ideal vehicle towards achieving this sort of consensus on urban policies, and strategies by widening the debate to include a broader cross-section of stakeholders including marginalized groups such as the landless, the urban poor, women, and others. A regional center – which could be known as the Pacific Regional Observatory on Urban Development (PROUD)–could serve both as a regional knowledge bank and a forum for dialogue on urban and regional development. The seeds for such an initiative already exist in the region, through the recently formed expert group on urbanization of the Council of Regional Organizations in the Pacific (CROP).

Improving governance in urban areas should proceed on one key assumption: Higher level institutions should embody, to the extent possible, the basic norms and values of the people they are intended to serve, rather than imposing on them a new set of norms and values. This implies a shift in the role of higher level institutions from actually making decisions and devising plans to providing assistance to the representatives of the people so they can more effectively meet the needs expressed by urban communities. The result of such a process will be decisions that have a higher level of ownership among the participants and a stronger likelihood to be implemented.

The challenge in urban areas will be to find means to include all affected residents in the decision-making process. Explicit attention needs to be paid to the needs and priorities of poor and marginal stakeholders or they could act as disintegrative social forces in the urban environment. This is a daunting task, but it is not beyond the capacity of Pacific Island societies. The tradition of negotiation and consensus building is strong throughout the region and in most cases sufficiently flexible to incorporate different interests.

Adaptability has long been a characteristic strength of Pacific people. It therefore lies largely within the power of Pacific Island societies, acting alone and through regional cooperation, to harness and enhance the positive impact of urbanization and the contribution it can make to improving the competitiveness of Pacific Island economies and the quality of life of their people.

Chapter 1
Effects of Population Growth and Urbanization in the Pacific Islands

More than 35 percent of the people of the Pacific islands live and work in towns, and the rate of urban population growth throughout most of the region is high (figure 1). Overall, eight of the twenty-two Pacific countries are now predominantly urban; by 2020 more than half the population in a majority of these countries will live in towns.

Urbanization has significantly improved the economic prospects and quality of life for a large and increasing proportion of the people of the Pacific. However, as this section shows, it has also caused many problems.

A. Population Growth and Migration

Declines in fertility and population growth rates in the Pacific have lagged behind trends in other developing countries. In Pacific countries, most of which lack policy and public support for effective family planning and emigration outlets, rates of population growth remain among the highest in the world. The effect that high population growth rates have had in slowing economic growth appears to be not well understood by policymakers.

Throughout the Pacific, high population growth has led to migration from smaller outer islands to larger islands and from rural areas to towns, especially national capitals (box 1). Key drivers of these trends include push factors, such as declining agricultural commodity prices and livelihood opportunities and insufficient rural land to confer social standing, as well as pull factors, such as the prospect of cash employment, perhaps with the government, the availability of public services in town and the intrinsic excitement of urban areas

Figure 1. Urban and Rural Population Growth
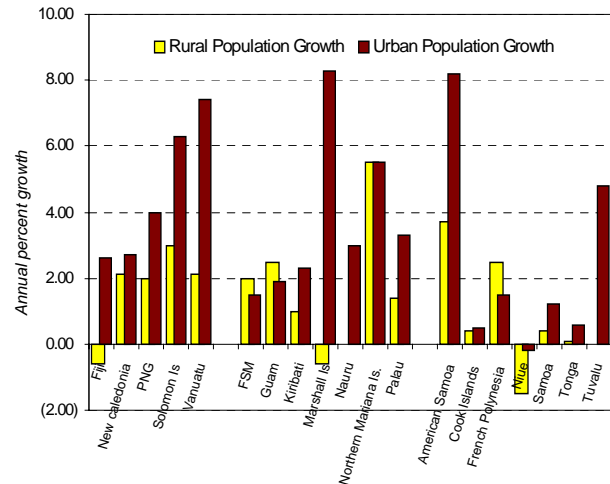
Even in rural areas many people aspire to urban, non-manual labor employment. Strong kinship traditions have enabled rural migrants to fulfill these aspirations by moving to towns.

Plantation agriculture, which has weakened traditional leadership structures in rural areas, has also increased migration. In Port Vila, for example, migration has been greatest from smaller islands heavily involved in the plantation economy (Ivarature 2000).

Figure 2. Migration in Vanuatu

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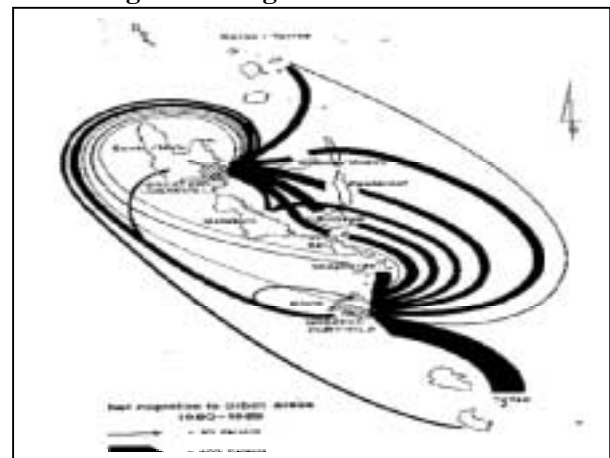
Box 1.   Vanuatu

Neither Port Vila nor Luganville, the second-largest city, had more than 2,000 people in 1955. However, Vanuatu's Constitution provides for free population movement throughout the country and the urban population grew at over 7 percent per year during the 1960s and early 1970s when legislation was enacted establishing Vanuatu as a tax haven. Port Vila became a boomtown and tourism took off. Urban growth slowed somewhat in the 1980s and again in the 1999 to 4.7% such that the total population classified as urban (in Port Vila and Luganville) now stands at about 41,500 - 21 percent of the total national population.

However, for Port Vila, this excludes a number of densely populated, informal settlements not classified as urban even though they are adjacent to the town boundary and fall within the direct area of influence of its economy. If these areas, which have grown more rapidly than the town proper are included, Greater Port Vila alone now has about 40,600 people compared to about 26,270 (also including "semi-urban" areas) in 1989 - a significantly higher growth rate of 5.9% during this period. Similarly, the population of Luganville also grew quickly to around 15,000 (if suburban areas are included) - about 5.0% annually since 1989, Thus, over 55,000 people - almost 30 percent of the total population - already live and seek their livelihood in or around the two major towns. Indeed, the economic influence of these urban areas may be substantially larger. Shefa Province where Port Vila is located and Sanma Province (including Luganville) now account for 48 percent of the total population.

Migration from smaller islands has been a key driver of this rapid urban growth, particularly from the Shepherds and Paama Islands as well as the Banks/Torres Islands that lack sufficient land to confer social standing and/or to provide a sustainable livelihood. It now appears that migration from them has generally become permanent. Migration from other areas, including Tanna, has traditionally been circular with seasonal employment on plantations, for example. However, there are indications from the 1999 census that migrants from these areas are returning to home villages less frequently and for shorter periods. Thus, migration from these areas is also becoming more permanent.

Not surprisingly, the high overall population growth in Vanuatu has resulted in a very youthful age structure with 44 percent under age 15, and 17 percent under age 5 in 1999. The youthful age structure is likely to be even more pronounced in the urban population, of which a high proportion were born in town and have virtually lost their links with home villages in outer islands.

Even with success in achieving more balanced regional economic growth, such as through the Regional Economic Development Initiative proposed by Taefa Province, population growth in the towns will continue. Greater Port Vila (including suburban areas) will grow to possibly 75,000 and Luganville to as many as 25,000 inhabitants within 10 years. At that time, fully 38% of the total national population could be living and seeking livelihood in or near Port Vila or Luganville. Even the population of the "core" urban areas of Port Vila and Luganville could double in 15 years to around 80,000.

Urban migration is <u>not</u> a new phenomenon in the Pacific: the most dramatic migration from outer islands to towns took place in the 1950s, 1960s, and 1970s. Today, migration is a less significant factor than natural population growth in many Pacific towns. However, the young age structure and high fertility rates of many Pacific towns virtually ensure that towns will continue to grow rapidly, even where urban conditions and the quality of life are deteriorating.

In Fiji—which has perhaps the most developed towns in the Pacific islands—almost 39 percent of the population lives and works in towns and two-thirds of the population lives within 8 kilometers of a town or service center (World Bank 1995). Most rural populations thus have access to markets and services. Both the proportion and growth rate of the urban population are increasing. By 2006, the urban population is expected to grow to 400,000, two-thirds of which will be in the Greater Suva region. Within 20 years, Fiji is likely to be transformed from a predominantly rural to a predominantly urban society.

Outward emigration has been dramatic in the last decade in the Marshall Islands, where population growth exceeded the capacity of the natural resource base and has led to increasing unemployment in urban areas. Most emigrants are relatively young—economically active families seeking better employment and educational opportunities. Their vital

contribution to economic and social development at home may be lost.[1]

B. Benefits of Urbanization

Urbanization in the Pacific has been an inevitable response to deteriorating, or at best stagnating, conditions in rural areas and outer islands, few if any of which can offer the employment opportunities provided by the urban economy. Most new jobs have been generated in towns, and the urban economy is the major contributor to economic diversification, competitiveness, and growth in the region. Urban centers' substantial contribution to GDP largely reflects the significantly higher productivity of urban private sector industry and services relative to rural activities. Without the growth of towns, economic performance in many Pacific countries would have been even more modest than it has been.

In the Solomon Islands, Fiji, and Vanuatu, the urban economy is estimated to have contributed at least 60 percent of GDP in recent years. For example, because of Honiara's preeminent position as the center of services, paid employment and industry, economic performance in the capital has a significant effect on national economic growth in the Solomon Islands. Currently, the capital accounts for more than 50 percent of formal employment and a significantly higher proportion of all wages paid. Honiara is both the gateway and an important destination for tourism to dive sites, which also makes a small contribution to the economy.

Urbanization has also facilitated social development in the region: provision of basic services, including health and education, to a widely dispersed population in remote islands would have been considerably more difficult and costly than to the populations concentrated in towns.

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[1] The effect of migration need not be negative. The growing Samoan diaspora in New Zealand, Australia, and the United States has not turned Samoa into a depressed backwater. Quite the reverse: Samoa has become more open to global trends while maintaining its unique cultural traditions.

In the transition from colonial government centers to modern towns, capitals in many Pacific countries have become diversified, playing an important role in many activities, including tourism. Indeed, the 500 tourist hotel beds in Port Vila represent most of Vanuatu's tourist accommodation. In Samoa most secondary and tertiary sector activities (including manufacturing, distribution, restaurants and hotels, and government services) are located in Apia, the center of the small tourist industry. These activities make a substantial contribution to foreign exchange earnings.

C. Issues Relating to the Growth of Towns

Despite the many benefits of urbanization, many policymakers in the region continue to view towns with concern, if not alarm. They cite the profound effect on customary traditions and relationships as well as the difficulty of providing and maintaining public infrastructure and services, the proliferation of informal settlements, worsening environmental conditions, and increasing social problems associated with unemployment and underemployment.

Poverty in the Pacific is rarely as visible or as extreme as in some of the harshest parts of the world, though countries such as the Solomon Islands and Vanuatu rank on a par with Guinea, Burundi, Senegal and Bangladesh. Moreover, Pacific societies are not as egalitarian as sometimes portrayed and gaps in income, access to services, well being and opportunities are widening (World Bank 2000). Thus, a broader concept of poverty which emphasizes poverty of opportunity that reflects lack of education, health, lack of economic assets, social exclusion and political marginalization is a better description of poverty for many people in the Pacific. Poverty of opportunity is evident in many ways including rapid emigration from some countries, high but disguised unemployment, and emergence of a culture of youth crime and high youth suicide rates.

The UNDP 1997 Fiji Poverty Report found that poverty was an undercurrent in both of urban and rural areas and in all ethnic communities. One in four households cannot afford a basic standard of living and these households often include people who have little formal education or skills and have difficulty getting paid employment. The 1998 Samoa household income expenditure survey found that one in three households could not properly meet their basic needs. The 1996 survey of Tarawa found many aspects of poverty that are common in the Pacific. Many households live in badly overcrowded conditions with poor basic services, are increasingly dependent on cash incomes, most of which is spent on food, but include few adults with paid jobs.

Unemployment and social problems are increasing in many towns, environmental conditions and health are deteriorating, inequality in access to income is growing, and evidence of poverty, vulnerability, and hopelessness is increasingly visible among the underclass of landless urban poor (box 2). Crime in many towns is increasing and, in some countries, militant groups are finding ready recruits. Moreover, a number of Pacific societies continue to struggle with very high suicide rates, especially amongst young urban dwellers. Unless attention is paid, these emerging problems will grow, reducing the quality of life and placing key economic sectors, such as tourism, at risk.

Urban Unemployment

Pacific island countries have not enjoyed the dramatic private sector–led economic growth of Pacific Rim countries. Indeed, economic indicators in many countries have been stagnant—or even negative—for some time. Fiji, Kiribati, the Solomon Islands, and Vanuatu all experienced negative per capita income growth in the 1980s and early 1990s, despite high levels of foreign resource inflows, including aid.

Formal sector job growth in the urban economy has fallen well short of the level needed to productively absorb the rapidly increasing population in towns—it accounts for only about

20 percent of the labor force in most Pacific countries. The growth of the economically active population has for some time exceeded the

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Box 2. Hopelessness among the Urban Underclass: "Killing Time" as a Way of Life in Port Vila, Vanuatu

The results of a 1998 survey highlight the low expectations of young people living in the poor settlement of Blacksands, in Greater Port Vila, Vanuatu—attitudes that may be typical of poor young people throughout the city.

The settlement located on customary land, lacks water and sanitation services. Overcrowding is common, with small rented rooms often accommodating families of 5–11 people. The rent for a single room shared with one or more other families can amount to as much as 50 percent of family incomes, leaving insufficient to meet the costs of food, clothing, education and health care.

Perhaps the most striking result of the survey is the lack of aspirations expressed by young people. Many commented that political instability over the past few years had affected the economic performance of the country and their prospects of finding work and that the formal education system had failed to equip them for the job market. Their lack of links to their village communities and lack of understanding of traditional customs compound the disillusionment of many. Many were resigned to a future of mostly "killing time." As one young person said, "My future is my problem."

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growth of those in formal wage employment— by a ratio of nearly 8:1 in the Solomon Islands and 6:1 in Fiji. Vanuatu's urban economy currently generates fewer than 500 new formal sector jobs for the 3,000 or so additional town dwellers each year (Ministry of Finance and Economic Management 1998/99).[2] Many towns in the Pacific are already experiencing rising levels of unemployment, particularly among urban youth—in excess of 10 percent in most countries and 20 percent in the Federated States of Micronesia and the Marshall Islands. In Samoa, unemployment amongst young people is reportedly three times higher than for older workers (the Government of Samoa 1996). In the Marshall Islands, young people are two to three times as likely to be unemployed as older

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[2] This outcome is not unexpected. Estimates in the early 1990s indicated that between1991 and 2011, the economically active populations were likely to increase 43 percent in Fiji, 95 percent in Vanuatu, and 102 percent in the Solomon Islands (Cole 1993).

persons, with unemployment for urban youth being as high 50 percent (UNDP and Marshall Islands government 1997). Many children, particularly those who drop out of school are employed in the informal sector that is also a main source of employment for women, who often lack the education skills to join the formal sector.

Prospects for private sector job growth in many Pacific countries has been hurt by the traditional dominance of the government in formal sector employment. Government spending has been the largest contributor to cash employment and GDP in many countries in the region. In Kiribati, for example, the government sector accounted for 67 percent of cash employment and 89 percent of GDP in 1995. Clearly, incomes in Kiribati have been influenced more by the level of public sector employment than by productivity and the workings of a competitive labor market, and they have reached levels that have inhibited any significant expansion of the employment base. Kiribati is not unique in this regard.

However, conventional economic and labor statistics in the Pacific mask the significant scale and critical importance of the informal sector as a source of livelihood, both in urban and rural areas. Households depend on multiple sources of income, including some cash employment on a regular or occasional basis, some subsistence production, some traditional exchange, and some small-scale trading or other business.

For example, in Vanuatu in 1989, 61 percent of the labor force was in the informal sector compared to 21 percent in the formal sector. Similarly in the Solomon Islands in 1986, 73 percent of the labor force was in the informal sector compared to 17 percent informal sector. Even in Fiji, 34 percent of the workforce was in informal employment compared to 20 percent in the formal sector in 1986 (Chung, Sustaining Livelihoods, Promoting Informal Sector growth in Pacific Island Countries (UNDP 1997).

Urban informal enterprise is diverse, largely home-based and mostly involves women, many of whom do not have the education or skills to join the formal sector and face job discrimination because of their gender, as well as children who drop out of school. Surveys of stall holders in Fiji, Kiribati, Tonga, Solomon Islands and Vanuatu found that most informal businesses are also run by women, mostly aged over 30 (Ward and Arias 1993; Brown and Connell 1993; Fiji association of women graduates 1994; Ahlberg 1997). In the Solomon Islands, almost one half of all women in cash employment are self-employed and one-third of these self-employed women are the sole income earners in their households (Solomon Islands Ministry of Health and ILO 1991). This despite the fact that most have had very little formal education, almost one quarter could not write in any language and almost one-third could not do any calculations.

The manufacturing sector remains small throughout the Pacific and with civil service cutbacks featured in many reform agendas, formal wage employment will be substantially reduced. The time has thus come for policy-makers in Pacific countries, particularly those that have resisted urbanization, to put in place policy environments that will harness the employment-generating potential of the private sector, including the informal sector, which has absorbed much of the surplus rural labor in many other countries (including some in the Pacific Rim). In Fiji, vegetable gardens are increasingly providing cash income and livelihood and potential exists for higher value activities such as floriculture.

Recent experience in the trade that has grown in secondhand clothes in Tonga and Samoa indicates that the urban informal sector can be a dynamic source of new employment. This trade operates through the diaspora of family networks that span several countries, and has diversified and stimulated new business activity in a range of other goods.

Despite the problem of finding work in towns, however, even those with only a tenuous footing as urban residents are unlikely to return to rural life and almost certain unemployment. Town life will continue to be attractive as long as people have some chance of finding a job. With incomes of indigenous urban households

reportedly as much as 8.5 times those in the rural areas (UNICEF and Vanuatu Government 1991), the risk of even a prolonged period of unemployment is considered acceptable.

Social Problems

The village community has traditionally been the coalescing social unit in Pacific countries, providing a social safety net, a forum for resolving family and kinship issues and sustaining social cohesion in towns as well just as in rural areas. Many migrant families continue to reinforce rural ties rather than establish new social ties in the wider urban community. Migrants from the same islands prefer to live and work together; the social and economic bonds they forge are the basis for much social support in towns. New migrants to the city are generally housed and fed by kinfolk, at least initially, reinforcing the dependency relationship of new migrants (Connell and Lea 1993).

Demands for higher standards of living in urban areas have made it difficult for traditional leadership structures to respond in ways perceived as adequate by town dwellers. A large and increasing proportion of the urban young have never visited their traditional village communities and do have not strong links with them. Thus traditional safety nets developed by Pacific island societies over hundreds of years are becoming increasingly strained as expectations are modified by development and many communities grapple with the transition from subsistence to cash-based livelihoods in growth-oriented economies. As a result, the number of people living below the poverty line in urban areas is increasing.[3] Where natural resources in towns are subjected to excessive exploitation and environmental pollution (as in South Tarawa), the level of subsistence livelihood is reduced, increasing dependency on the cash economy and affecting the nutrition, health, and quality of life of these communities.

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[3] A quarter of all households in Fiji was estimated to be below the poverty line in the mid-1990s, with a majority living in urban areas (Government of Fiji/UNDP 1996).

The proliferation of overcrowded squatter and informal settlements and increasing unemployment in many towns are resulting in a number of social problems, including poverty and the breakdown of the extended family, increased crime and vandalism. In Samoa, the number of reported crimes rose 23 percent between 1996 and 1998. Most of these are likely to have been committed by urban youth, who have difficulty finding jobs.

Social disruption caused by the division of families between urban and rural areas and the loss of traditional safety nets have also contributed to a rise in domestic violence, divorce, and single-parent households. Lack of security; inadequate provision of basic urban infrastructure, utilities, and social services as well as unemployment and underemployment have caused tensions among migrant groups, landowners, and urban authorities.

Studies in Vanuatu indicate that growing numbers of children born to unmarried parents are in danger of becoming landless (Ivarature 2000). Not surprisingly, the problem has fuelled calls by politicians for resettlement schemes, many of which are poorly conceived.

Health Problems

The most prominent public health problems in Pacific countries, especially among the poor, remain those of (largely preventable) infectious diseases, in particular respiratory diseases related to overcrowding, and gastroenteric diseases related to water pollution, poor sanitation, and inappropriate health and hygiene practices. Poor-quality water and sanitation services continue to contribute to public health risks. Dengue fever and infant diarrhea are common throughout the region. Sewage contamination of coastal waters provided ideal conditions for the cholera outbreak in Tarawa in 1987 and more recently in Pohnpei. Higher sea temperature may increase the risks of cholera outbreaks [Taeuea et al, eds. 2000]. Ciguatera poisoning—the most frequently occurring human illness caused by ingestion of marine toxins, which affects as many as 50,000 people a year in tropical and subtropical countries—is

also prevalent in the Pacific and may become more prevalent as a result of global warming (Baden and others 1995).[4] Infant mortality rates remain high in many Pacific countries.

The deterioration of urban living environments is exacerbating health problems. Most low-income families have gravitated to squatter and informal settlements that proliferate in and around towns. The incidence of waterborne disease in these communities is high, especially among infants. However, these health risks also affect the wider urban population and can jeopardize key economic sectors, such as tourism.

At the same time, even the poorer countries in the region, such as Kiribati, are experiencing increasing incidences of so-called "lifestyle diseases" such as stroke, hypertension, heart disease, and the like, due to more sedentary lifestyles. Less nutritional diets of imported processed food are increasingly common, partly because opportunities for subsistence agriculture in urban areas have become more limited and partly because consumption patterns are changing. Few, if any, fresh vegetables or tropical fruits are grown in atoll countries because of the shallow depth and poor nutrient qualities of the soil. In the Marshall Islands, for example, the incidence of vitamin A deficiency among children is high (Department of Health, Marshall Islands 1999). Unfortunately, garden waste, which could be used as mulch to enrich poor soils is, instead, normally disposed at landfills.

Lack of Adequate Education

Notwithstanding a policy orientation in many Pacific countries that seeks to minimize or even reverse urbanization, education systems are orienting young people to non-manual employment in towns, primarily in government. It has not equipped them with the technical and business skills demanded by the emerging urban

economy, however, and expatriate workers with these skills are imported at very substantially higher cost.

Many secondary school graduates are not prepared for further education. School administrators at the Marshall Islands Community College recently reported that almost 80 percent of students require remedial work in English and mathematics.

There is growing recognition in Pacific countries of the need for education strategies that maximize economic competitiveness and productivity. The Marshall Islands is now strongly promoting vocational training in secondary schools. Remodeling the education system to improve the links with the labor market is also a major objective of Vanuatu's recently published Education Master Plan.

A number of Pacific countries are also starting to appreciate that their relatively high school attendance and literacy rates represent a competitive advantage. In addition, recent technological developments are transforming the economics of telecommunications and location. This gives them an opportunity to improve the profitability of key existing sectors, such as tourism, and attract new service exports in information industries. Many other small island countries have captured niche markets in these high value–added economic activities. However, worldwide experience indicates that being competitive in this area requires a favorable regulatory environment as well as a good level of education and reliable, competitively priced telecommunications. These prerequisites are not yet in place in many Pacific countries, which will, as a result, continue to miss these opportunities.

Improved access to information and knowledge have the potential for enhancing the value-added of traditional activities, such as agriculture, small-scale manufacturing, and tourism as well as public policy functions and services, such as environmental management, preventive health, and education. In the global economy, where markets are linked electronically, new employment opportunities are also emerging in

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[4] A study of eight Pacific Island countries found a positive correlation between the annual incidence of ciguatera poisoning and local warming of the sea surface warming during El Niño conditions (Hales and others 1999b).

service exports in activities such as data entry and e-commerce. Firms and residents in towns are likely to be most competitive in these information-based niche markets.

Pressure on Infrastructure and Services

While economic prospects in urban areas remain significantly better than in rural areas, the productivity of the urban economy and quality of life in many Pacific towns is deteriorating, particularly for the poor, because of deficiencies in essential infrastructure, utility services, and housing. In many Pacific towns these services were established before independence, and increasing demand from the rapidly growing urban population has overwhelmed them.

Even in Fiji, where urban services are perhaps most developed, many new town dwellers have gravitated to squatter and informal settlements, especially in peri-urban areas. As a result, by the mid-1990s, about 40 percent of Fiji's urban population lacked adequate access to water, proper sanitation facilities, and waste collection services. In Honiara, Solomon Islands, coverage by the government water supply system was reported to be diminishing, as informal settlements expanded in peri-urban areas in the 1980s and 1990s (World Bank 1995).

The practice in many Pacific countries of delaying essential maintenance, in expectation of aid-funded capital replacement, threatens to reduce the effectiveness of existing infrastructure and undercut the justification for new investment. Lack of funding for equipment and even basic tools hampers repair and maintenance of the deteriorating sewerage system in South Tarawa (Jones 1995b). Even in Suva maintenance for water and sewerage systems was estimated to be about seven years behind schedule in the mid-1990s (World Bank 1995). In Honiara, breakdowns and back flowing of water mains remains common.

Inadequate maintenance results in more rapid deterioration of infrastructure and requires rehabilitation or reconstruction sooner and at higher cost than would otherwise be required. However, donor financing primarily supports new investment, reinforcing the incentive to defer maintenance on an increasing stock of infrastructure assets. As a first-order priority, agencies should formulate sound asset management strategies and demonstrate reasonable performance in maintenance operations on existing assets as a basis for investment in new assets, most of which will be donor-financed.

However, examples of good practice in "asset management" are emerging. For example, in Tuvalu, government infrastructure and facilities are being inventoried and appropriate maintenance regimes established (with AusAID assistance). In Samoa, asset management in the roads sector is an integral part of institutional reform of Works Department operations and the recently introduced output budgetary management system.

Water Supply

The problems associated with delivering satisfactory water supply in Pacific island towns are primarily political and institutional rather than technical (box 3). They reflect inappropriate policies, undue government interference, and the lack of appropriate incentives for consumers to reduce demand to sustainable levels, all of which undermine the ability to operate and maintain water supply systems properly. Budgetary support for water and sanitation operations—a major contributor to government budgetary deficits in a number of Pacific countries—is unsustainable. Some countries have turned this around, but it remains a problem in many others. A key role for governments is to establish an appropriate policy framework and operating incentives oriented to improving customer service whilst minimizing costs.

The need to increase awareness of the importance of protecting freshwater resources cannot be overemphasized. Management of water sources is poor throughout the Pacific islands, even in atoll countries, where permeable ground conditions make freshwater lenses

particularly vulnerable to contamination from fertilizers, pesticides, and other pollutants. Traditional landowners are often unwilling to accept any restrictions on their use of land, regardless of the risk of pollution. Through broad-based consultations, mechanisms need to be found to reduce the pollution risk to these essential water sources.

Despite the poor quality of the water supply in many countries, most low-income families do not heed government warnings to boil water, partly because of the high fuel costs involved, putting themselves at risk of disease. Gastroenteritis, conjunctivitis, and infant diarrhea, which are attributed to drinking or washing with contaminated water, are among the most commonly reported communicable diseases requiring hospitalization. In some areas, fast growing timber is being planted in peri-urban or rural areas to supply a growing urban market for wood fuel as a more economical

alternative to kerosene. This initiative is also strengthening urban-rural economic links and livelihood.

Notwithstanding these problems and despite projections indicating continued growth in population and water demand, few public water enterprises have a strategic plan to guide water supply operations. Satisfactory water supply and environmental sanitation represent key elements in an effective preventive health care strategy and can have a positive effect on attempts to encourage investment and promote economic growth in the urban economy.

An appropriate improvement strategy for the water sector includes the following elements:

- Establishing an institutional vision and accountability, with meaningful participation by consumers, appropriate institutional incentives, and sound operating practices.
- Reducing distribution losses (to say 30 percent) as the most cost-effective way of increasing supply.
- Banning inappropriate land uses and economic activities to protect water catchment areas.
- Enforcing existing regulations requiring rainwater catchment on new buildings.
- Restoring water tariffs.
- Coordinating water and sanitation strategies.
- Introducing simple community management of local distribution networks, including collection of tariffs.

The high unit costs of small systems clearly suggests the need for renewed emphasis on cost recovery and improved operational efficiency in water and sewerage, especially in the context of wider public sector management reform. Where there is resistance to such reform, community-managed projects could be piloted. In all cases, improved operations and maintenance and customer orientation should be a prerequisite for new investment.

The strategy for improving both operating and financial performance should also focus on

improving the productivity of the cost base rather than only on increasing tariffs and on implementing an improved maintenance regime, which should also be audited.

Figure 3. Rainwater Catchment in Low-income House in Majuro

Examples of good practice, if not yet good value, are emerging in some small systems in the Pacific. These systems offer prospects of sustained improvements in water service to consumers, in part by creating appropriate incentives. Pricing can improve demand management by increasingly proactive consumers.

One example is the long-overdue increase in tariffs in Majuro. The change in pricing policies has encouraged more responsible water use by consumers. As a result of the new policy, use of rainwater catchments is becoming widespread (figure 3). Low-income families in particular now view catchments as the preferred water source—an appropriate response in an area with 300 days of rain a year. Less appropriate is the installation of desalination plants. While such facilities can reduce the impact of droughts, they are a much more expensive way of increasing supply than reducing existing network losses (A$3.0 per cubic meter versus A$1.44 per cubic meter from the existing lenses in Kiribati -

Taeuea et al, eds. 2000). The desalinization plant recently installed in Tuvalu is also a substantially higher cost alternative to rainwater catchment, particularly where rainfall is reasonable.

Experience with corporatization of water utilities has been mixed in the Marshall Islands, Samoa, and Tonga**.** Institutional improvements alone are unlikely to be sufficient to improve water service. Rather, clear goals, policies, and actions need to be agreed on that serve the interests of the community at large. Effective oversight arrangements should be established with meaningful representation by consumers and other stakeholders, such as landowners. Even so, corporatization may be an appropriate first step to establishing the independence of operations required for consumer-oriented water service. At the same time, it is clear that private management in Port Vila is proving to be a practical way of improving water service operations in the kind of small town system that is typical in the Pacific (box 4).

Sewerage and Sanitation. Proper sanitation is essential for urban areas. There is a limit to the effectiveness of septic tanks in urban centers such as Honiara, Suva, and towns in atoll countries. However, other low-cost sanitation technologies, such as composting toilets, have proven successful in some countries including various parts of Kiribati.

Wastewater management in Port Vila is typical of many Pacific towns. It reveals the importance of taking an integrated and coordinated approach to planning for water supply and wastewater management, since improvements in water infrastructure without investments in wastewater management will invariably result in increases in public health risks (box 5).

A number of towns in atoll countries, where potable water supplies are extremely limited, have constructed sewerage systems using pumped seawater for toilet flushing. Seawater pumping costs are high, however, and few, if any, of these systems are adequately maintained or protect nearshore waters adequately from pollution.

Many households continue to rely on more traditional ways to dispose of human waste (such as defecation in beach areas). In many cases, sea outfalls need to be extended beyond the reef to prevent continuing erosion.

Solid Waste Management

The institutional framework for disposal of solid and industrial (including hazardous) waste in Pacific towns is outdated and ineffective. In most towns solid waste collection is a local government responsibility and accounts for a significant proportion of local budgets. Without exception, these systems lack sufficient financial resources and technical expertise. As a result, even where the percentage of waste collected is high, the maintenance of equipment and facilities is poor and long-term sustainability is in doubt. Affordability and willingness to pay are questionable, particularly for low-income households, and cost recovery is low.

Even more serious problems relate to disposal. Municipal garbage dumps are usually located on or near coastal areas for land reclamation. They are inadequately sealed from flooding or seawater infiltration, creating a potent environmental hazard throughout their lifespan. Most agencies responsible for waste disposal are unclear as to the nature and quantities of the waste they handle.

Conditions are particularly difficult in atoll countries, where disposal sites are located along the foreshore, provide little containment of wastes, and are often poorly maintained (figure 4). Cover material is scarce, and during rough

Figure 4. Disposal Site on Foreshore

weather garbage is washed onto adjacent beaches, polluting the beaches and nearshore waters and creating a health hazard. Disposal of waste on private land on the foreshore to create additional usable land for the benefit of the owners, but without any environmental safeguards, is becoming become common. The difficulty of securing suitable sites, particularly on customary land, makes this one of the most intractable service delivery problems in the region. In Fiji the difficulty of finding a replacement for the dump site at Lami has been described as a "national dilemma".

Some examples of good practice are occurring. Port Vila has recently developed a well-located and designed sanitary landfill with facilities to receive toxic waste and septic tank effluent. The coverage and reliability of the collection service are good. The municipality has also introduced innovative programs to involve unemployed youth in city cleanliness programs.

However, the municipality lacks the financial and technical resources to maintain and replace collection vehicles, equipment, and facilities, much less promote waste minimization and recycling or formulate and enforce policies relating to disposal of toxic wastes. Sustainability of the service is therefore uncertain, particularly since the municipality receives no government funding. In addition, there is a need to extend waste collection service into peri-urban areas, responsibility for which lies with the adjacent provincial government. That government has requested donor funding for its own collection equipment, even though it has no capability to operate such a service. More cost-effective approaches could involve contracting out solid waste service to the Port Vila municipality or establishing joint institutional arrangements to provide waste management service throughout Greater Port Vila.

With increasing incomes and changing consumption patterns, solid waste volumes will increase in many countries (figure 5). The waste stream will also include a greater proportion of non-biodegradable materials. Improvements in waste disposal alone will not suffice, particularly given the limited land area. Waste volumes will have to be reduced, through community awareness and education campaigns aimed at minimizing waste and increasing recycling— programs similar to those Fiji has adopted. These programs should be combined with other measures, such as a tax on imports that contain non-biodegradable packaging materials that the Environmental Protection Agency of the Marshall Islands has recommended. Based on experience in other countries, a 30 percent reduction in waste volumes should be achievable (World Bank 1995).

Figure 5. Solid Waste Trends in the Pacific
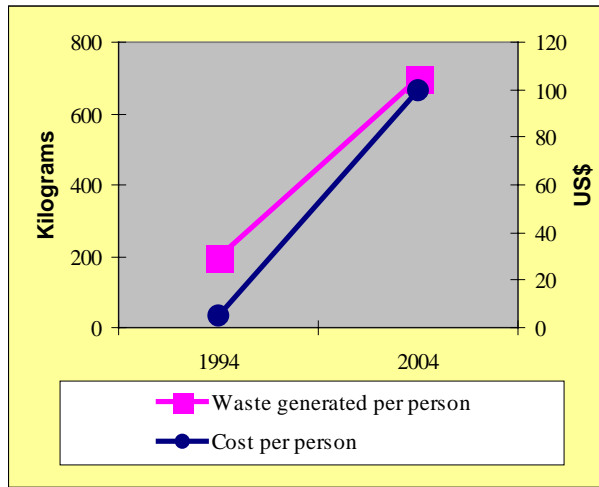
Drainage

Poor drainage disrupts economic activity; compounds the problems of poor housing, particularly for low-income families; and increases health risks throughout Pacific towns (figure 5). In many Pacific towns, flooding is frequent, severe, and costly. Planning schemes, where they exist at all, have traditionally paid little attention to known flood risks. Few effective flood prevention or amelioration strategies are in place. Accurate records and mapping of flood events are not maintained, and estimates of the economic damage attributable to flooding have rarely been made. Moreover, many urban areas are experiencing increased flood risks as the upper parts of river catchments are developed (resulting in increased run-off).

Other key issues include the lack of health awareness about stagnant water, which provides a breeding ground for disease vectors (causing malaria and dengue fever); poor maintenance of infrastructure; and weak and inappropriate land use and building control. New commercial construction in the Port Vila town center, for example, has blocked drainage outfalls, causing serious seasonal flooding. In Majuro, accessibility to residential areas remains difficult for long periods following frequent rains because of the lack of coordinated planning, management and maintenance between the Ministry of Regional Development and Public Works, which is responsible for drainage on primary roads, and the Majuro local government, which is responsible for drainage on secondary roads.

Power Supply and Telecommunications

The growing interest in commercializing utility operations in Pacific countries is perhaps most evident in the power and telecommunications sectors. In those sectors, reliable and competitively priced power and

Figure 6. Poor Drainage in Majuro

telecommunications services are essential to attracting the investment necessary for growth in urban economic activity and employment, particularly in new higher value–added activities in information industries. The ability of the Marshall's Energy Company to update its generating capacity and distribution networks in Majuro using commercial loans from the U.S. is testimony to its operational efficiency and financial management. Interestingly, unlike other public service agencies, the company has not experienced any problems obtaining easements from customary landowners. However, an effective regulatory environment needs to be created to ensure reasonable connection charges and tariffs for the power sector. UNELCO, in Port Vila has a special fund for extending electricity service to low-income communities.

Housing

Housing development in many Pacific countries has been constrained by overly prescriptive planning and construction standards that fail to reflect consumer demand. As a result, private formal sector housing construction has generally been affordable only by higher-income families. The explosive population growth in many Pacific towns has far exceeded the willingness or ability of governments throughout the region to mobilize and service appropriate land to meet resulting housing needs (box 6).

> **Box 6.   Growing Urban Populations Put Stress on Housing throughout the Region**
>
> In **Honiara**, in the Solomon Islands, the number of residents in informal settlements grew 19 percent a year in the 1980s. By 1989 there were more than 30 such areas, accommodating 15 percent of Honiara's population. By the mid-1990s about 23 percent of the town's population lived in informal settlements, where health conditions were poor and sanitation and water supply inadequate (World Bank 1995). In Betio, the most crowded islet in South Tarawa, about 25 percent of the more than 9,500 residents on the 1.5 square kilometer island are squatters (Jones 1995).
>
> In **Port Vila**, traditional landowners have been unable or unwilling to mobilize the resources required to subdivide and develop the land to meet growing housing demand generally, often preferring instead to enter into informal arrangements. In Port Vila, these informal arrangements have led to the emergence of a class of informal landlord able to exploit the lack of affordable shelter generally in urban areas and to an underclass of urban poor dependant on irregular, informal employment.
>
> Even in Fiji, where formal shelter sector efforts have been perhaps the most extensive in the Pacific, housing problems have worsened. A 1996 UNDP-funded survey of all urban areas of Fiji found about 70,000 people living in various forms of urban squatter and informal housing (Walsh 1996). In and around Suva alone, there are 30–50 squatter areas, most on marginal lands (mangroves, flood-prone areas, unstable hillsides, stream banks, and areas adjacent to dumps or industrial plants).

Most government housing programs have been highly politicized. These projects have been designed to unnecessarily high planning standards and are largely unaffordable by the income groups for which they were intended without unsustainable subsidies. The Fiji Housing Authority found that some 70 percent of applicants were unable to afford repayments for the purchase of its "low-cost" houses in the mid-1990s (box 7).

Rental housing, where available, has been insufficient to meet rapidly increasing demand from lower-income families. It is generally highly subsidized and poorly maintained.

> **Box 7.   The Impact of Housing Standards**
>
> Two recent donor-financed housing projects, one in Fiji and the other in Vanuatu, clearly demonstrate the impact of different housing standards.
>
> In **Fiji**, initially, most plots developed by the Housing Authority (HA) were sold without houses. Many purchasers built their own houses in an incremental manner over several years while they lived on the plot (thereby also saving rental costs elsewhere), sometimes in a small shack at the back while the prime residence was being built in the front in pace with the available funds. The local government and HA tacitly tolerated such an approach which quickly filled all plots; by project completion most houses were already completed to a fairly good standard.
>
> Later, when HA switched to pre-building houses, only the lowest cost terrace (attached) houses on small plots of about 100 square meters sold well, while many of the expensive, large 2 and 3 bedroom houses remained in inventory for years.
>
> The demand for lower cost houses also led some local builders and lumber yards to offer very popular pre-fabricated house packages which were erected – by the suppliers or the owners themselves – on serviced plots at very competitive prices.
>
> In **Vanuatu**, by contrast, the local government resisted the minimum 130 square meter plot sizes and prevented any type of incremental "starter home" construction of the type common in Fiji. They insisted on high-cost, fully completed houses that were not affordable to lower-income families. As a result, less than 20 percent of the 500 odd plots developed by the National Housing Corporation (NHC) during the project were occupied by project completion.

The housing needs of most urban migrants have traditionally been met by the extended family (resulting in increased dwelling occupancy and household size) and the kinship group (resulting in increased density as extensions are added to buildings). For example, households of 20 or more in Majuro and 40 or more in Ebeye are not uncommon. However, this system of informal welfare support throughout the Pacific is highly

dependent on increasingly scarce urban land for continuation of subsistence agriculture.

The situation of rural-urban migrants who do not have family or kinship relations in the urban area has been even more difficult. Moreover, town dwellers are finding themselves less able to support rural migrants, a large and growing proportion of whom are renting or illegally occupying land in slum areas at the edges of towns, where basic services and secure tenure are lacking.

Pressure on urban housing and the need for shelter is intense because of the large size of urban households, which are as large as or larger than rural households in most Pacific island countries. The greatest rural-urban differentials in average family size are in atoll countries, such as the Marshall Islands and Kiribati. In South Tarawa average family size is 7.7 people and rising. In contrast, the average family size in Kiribati is 5.9 people and falling (Connell and Lea 1998).

Pacific people can construct their own houses. What they need is serviced land and security of tenure. Studies in Fiji indicate that security of tenure is the most important priority in low-income communities (World Bank 1995). Without it residents generally cannot receive metered water from the Public Works Department, and they are understandably unwilling to invest to improve their homes or neighborhoods. Community participation is likely to be sporadic at best where secure tenure is lacking. Problems with land tenure add substantially to the cost of providing infrastructure to fragmented areas.

Housing is thus largely an issue of land supply. Housing market mechanisms are not functioning due primarily to the constraints to development of customary land and the absence of secure tenure, which in turn inhibits the development of housing finance mechanisms. As a result, the private housing sector plays a limited role, and the building industry is unable to play its usual role as a generator of economic growth and creator of employment opportunities.

Chapter 2
Issues and Opportunities

Urbanization has increased the diversification and competitiveness of economies in the region, and it can continue to improve living standards. But this potential is being jeopardized by a lack of vision of the kind of economic, social, and physical environment desired by town dwellers in the Pacific, an absence of appropriate policies, and poor urban management and service delivery. Dealing with the worsening problems caused by urbanization and realizing its potential to increase living standards calls for a policy and institutional response that goes beyond resettlement schemes of uncertain viability. Indeed, in light of the importance of the urban economy and the proportion of the population that lives in urban areas, the time has come for urban management strategies to feature in national economic and social development strategies and for accountabilities to be defined.

The problems are structural. The task is strategic. The way ahead lies in reshaping the debate on urbanization with a view to building a broad-based vision of how to achieve a more equitable distribution of opportunities while safeguarding the fragile environment. Shaping this vision will require a consensus throughout Pacific island societies on policies and practical measures that draw on and enhance urban-rural linkages and harness the potential of towns to absorb population growth more productively.

Adaptability has long been a strength of Pacific people. It lies largely within the power of these societies, acting alone and through regional cooperation, to harness and enhance the positive impact of urbanization and the contribution it can make to improving the competitiveness of Pacific island economies and the quality of life for these societies.

A. Improving Urban Governance and Management

The search for national identities in the postcolonial era and the preoccupation with macroeconomic development has relegated planning and management of the growing new towns to secondary importance in most Pacific countries, despite the considerable impact wrought by the pace of their growth. Negative perceptions of urbanization by many political leaders, policy caution, weak institutional memory, the slow pace of administration, and a lack of public sector innovation further inhibit urban management in the Pacific.

There is a crucial role for local governments in the Pacific in planning and coordination. But these efforts invariably suffer from inadequate financial and technical resources to cover day-to-day operational and maintenance costs, much less discharge the extensive range of functions assigned to them.

Strengthening Local Governments

There appears to be little support in the region for strengthening local governments. In most Pacific countries, therefore, planning and managing services for urban areas is effectively a national government function. At the national level, responsibility is usually divided among many government departments and utilities, with little coordination. In South Tarawa, Kiribati, for example, urban services are handled by the Ministry of Home Affairs and Rural Development, the Ministry of Finance and Economic Planning, the Public Works Department, the Kiribati Housing Corporation, the Public Utilities Board, the Ministry of Health and Family Planning, and the Ministry of Environment and Social Welfare Development.

In Port Vila, the municipality and at least five national and provincial ministries and departments have responsibilities for land use planning and development control. Despite the large number of agencies involved, Vanuatu could claim only two qualified land use planners in 1999, one of whom was laid off as part of the government's comprehensive reform program.

In Fiji, responsibility for Suva is shared by a number of local governments, including those of Suva, Nausori, and Lami, while the expanding peri-urban areas are under the jurisdiction of rural local authorities administered by the Ministry of Health. The range of agencies involved in the town of Suva alone includes the City Council, the Department of Town and Country Planning of the Ministry of Housing, Urban Development and Environment, local planning boards, the Native Lands Trust Board, the National Housing Authority, and individual landowners. Metro Suva (the Lami-Suva-Nausori corridor) and the Nadi-Lautoka corridor are each forming metropolitan areas, but there is no regional planning to guide or control urban growth beyond municipal administrative boundaries—or even any reliable information on its pace or direction. Nor is there provision for any sort of metropolitan management.

The current institutional structure in most of the region is characterized by central government planning and control that does not involve local authorities in a coordinated manner; a lack of communication among municipal governments, rural local authorities, and urban villages in the same metropolitan area; a tax burden to support urban development that falls unevenly on beneficiaries in the urban region; and a lack of capacity to address the needs of the population, which vary greatly across jurisdictions.

Increasing the Efficiency of Urban Management

Until recently, there has been little, if any, recognition of the need to reduce the number (and costs) of the many national, provincial, local, and quasi-governmental agencies charged with urban management functions—each with its own agenda and few, if any, with adequate funds or managerial and technical expertise. Establishing a coordinating locus for managing these towns, creating a more inclusive process representing a broad base of stakeholders, and rationalizing the institutional framework for planning and delivering urban services is vital to halting the declining productivity and deteriorating quality of life in Pacific towns.

As the Pacific countries become more closely linked to the global economy, pressure for efficient urban management will increase. Governments need to view urbanization as a crucial part of national development policy, and they need to adopt measures that will enable towns to continue to grow in an orderly way.

Improving the Responsiveness of Government to Local Needs

Several obstacles stand in the way of good governance in the region. National governments—and to a large extent lower levels of government—tend to be organized along Western institutional models, which are poorly integrated with traditional structures and processes. Decisions are generally made by formal government bodies, based on top-down planning and budgeting, and do not often make sense in terms of traditional views of how decisions should be made, nor do they accurately reflect local level priorities for development. In these circumstances, it is not surprising that regulations that conflict with customary practices and traditional lifestyles—such as those relating to land use—are often ignored.

Improvement of governance in the urban environment should be based on one key assumption: to the extent possible, higher-level institutions should embody the basic norms and values of the people they are intended to serve rather than imposing on them a new set of norms and values. In addition, the decision-making process should be more responsive to shared norms of how decisions should be reached. This implies a shift in the role of technicians and other experts away from actually making decisions and devising plans to advising representatives of the people on how most

effectively to meet the needs expressed by communities and the local level.

Inclusion of representatives chosen by community institutions in higher-level bodies would encourage the extension of traditional methods of building consensus across and among different communities and groups, including women and urban youth as well as marginalized groups such as the landless poor, who have not utilized such methods before. It would also increase the sense of ownership among participants and strengthen the willingness by the members of the group to take the necessary steps to implement a decision.

The lines of communication between local and higher levels need to be improved. There should be a well-defined point of entry for those at the local level who wish to communicate their needs and priorities to higher levels. Improving communication between levels of government would greatly improve the ability of local communities to make their needs known to higher-level officials and to have those needs reflected accurately in planning and budgeting. It would also provide communities with a source of accurate and clear information. As traditional community-based institutions become more inclusive, they should be formally recognized as the representative institutions of people at the community level. At the same time, these bodies should be empowered to determine who will represent them at higher institutional levels, where decisions are made that affect development, service delivery, and other public activities at the local level.

Pacific countries are fortunate in that they have retained much of the vitality of traditional social and cultural organization at the local community or neighborhood level, whether this be in the form of the Samoan *aigas* and village *fonos*; or the *utus, kaingas*, and *maneabas* of the I-Kiribati. Within these groups, the processes by which authority is expressed and decisions made are well defined and understood. Although the specifics vary a great deal across cultures, most Pacific societies are characterized by a strong emphasis on group decision-making. Most decisions are arrived at through a process that allows all those eligible to participate in the discussion before a course of action is chosen.

The challenge in urban areas is to find a means to include all affected residents, including those from different clans and ethnic groups, in the decision-making process. Explicit attention needs to be paid to the needs and priorities of these otherwise marginal stakeholders or they will act as disintegrative social forces in the urban environment. This is a daunting task, but it is not beyond the capacity of Pacific societies. The tradition of negotiation and consensus building is strong and in most cases sufficiently flexible to incorporate "outsiders" into at least some kinds of group activities.

The likelihood of success in this process would be improved by clearly articulating the incentives for greater inclusion. Greater inclusion would give the group access to additional human and other resources at the local level and expand support from the community for local level demands. It would also strengthen the legitimacy of the traditional structures and decision-making processes—such as the Matai in Samoa or the Unimane in Kiribati—as the "voice" of the community beyond the restricted group it used to represent.

B. Moving Toward Community-Based Planning

In most Pacific countries urban planning is effectively a national government function, divided among many government departments. There are very few urban managers and virtually no capacity to enforce compliance with building codes or other regulations, much less to formulate integrated physical, economic, and environmental plans to guide urban development at the national or local government level. The most significant manifestations of the failure to execute demand-based integrated planning is the inadequate provision of water supplies, solid waste and sewage disposal, and housing that characterizes many of the high-density urban areas in the Pacific.

Appropriate land use planning is central to effective environmental management. But

institutional arrangements for land use planning are weak, and the options for effective intervention to solve environmental problems associated with land use are limited. Inadequate zoning laws and un-enforced building codes foster substandard housing, overcrowding, and poor sanitary conditions.

Throughout the Pacific, information gaps are a major stumbling block to the adoption of effective planning of any kind. Many of the data required to prepare urban plans are not available, and research on the degree of deprivation or how families and firms cope with deficiencies in urban services has not been performed. In the absence of any overall-planning framework, development controls are generally applied in an *ad hoc*, inconsistent and (sometimes) corrupt manner. Moreover, formal planning is still regarded in many Pacific countries as an imposition from the colonial past and is resisted where it threatens to impinge on the rights of traditional landowners.

Planning legislation is either outdated or nonexistent in most Pacific countries, and few towns have an approved land use plan. Despite—or perhaps because of—this deficiency, an effective approach to planning was made in Ebeye, in the Marshall Islands, one of the most densely populated towns in the Pacific, in 1989. The major landowners gave the Kwajalein Development Authority (KADA) a leasehold interest over more than 75 percent of the island. This enabled KADA to develop plans to establish commercial zones, expand recreational facilities, and build the island's first high school.

Similar reforms have proven more difficult in the capital, Majuro, where major landowners are represented in the country's political leadership. The establishment of a municipal government in Majuro has not led to effective land use planning. Zoning laws proposed in 1991 were defeated during public hearings. No other local governments have attempted to draft such laws, although national legislation assigns them responsibility to do so.

Ironically, Kiribati, one of the more traditional Pacific countries, has made most progress toward developing an appropriate municipal framework for coordinated urban planning (box 8). Integration with the Kiribati Environmental Information Management System (KEIMS) being developed within the Ministry of Environment and Social Development would increase the critical mass of its application and potentially widen the client user base. It would, thereby, increase the commitment to sustain the initiative since both have adopted the same proprietary GIS software (MapInfo) and there is a logical synergy of benefit between Land and Environmental management.

Improving Land Use

More than 80 percent of land in the Pacific region is under some form of indigenous control, with strict kinship rights affecting its development (table 1). In urban areas, this ranges from about 40 percent in Kiribati to nearly 100 percent in the Marshall Islands.

Customary land ownership and kinship traditions of sharing resources have protected communities against poverty by ensuring that all family and clan members have access to land. Customary traditions allocate land rights according to status in society, roles, age, and gender. These rights are under constant renegotiation to reflect the changing needs and interests of individuals and groups. However, this has also complicated the provision of even basic services and limiting economic progress and growth of income opportunities in towns. In many Pacific countries land remains in unproductive or under-productive use. Easing the constraints on land use and availability would significantly increase the productive potential of Pacific towns.

Modern economies rely on legal systems that recognize individual rights, gender equality, and individual ownership of property. Not surprisingly, land held under customary tenure is not normally accepted as collateral for loan finance by formal sector financial institutions.

Lack of security of tenure and the practice of renegotiating lease terms *ex post* are frequently cited by foreign investors as major constraints to investment, especially large-scale long-term investment.

Table 1. Land Ownership in Selected Pacific Countries

	Customary Land (%)	Government Land (%)	Freehold Land (%)
Fiji	83	9	8
Vanuatu	98	2	
Solomon Islands	97	3	
Federated States of Micronesia		60	40
Kiribati	40	60	
Marshall Islands	100		
Tonga		100	

Land leasing by the government or the private sector occurs in most Pacific urban centers in one form or another. Use of customary land remains problematic, however, even for essential public facilities such as water supply and waste disposal, since customary landowners usually oppose regulations that might restrict their rights. Landowners in South Tarawa, for example, succeeded in pressuring the government to return land that had been set aside for urban water supply reserves. Lack of basic land ownership information showing location and boundaries does not exist in most Pacific countries, increasing the number of disputes over land ownership.

Governments are rightly keen to protect cultural traditions. But intervention in the land market need not challenge customary values placed on land. The issue is not one of changing the traditional land tenure system *per se* but of unlocking land tied up in unproductive uses or held speculatively.

For example, many of the custom owners in Port Vila, some of whom own land individually, would like to register their land holdings and use them to secure financing for subdivision and land development for residential purposes. However, formalizing custom land holdings (involving certification of ownership by traditional authorities, surveying, registration and issuance of a lease) is time-consuming and costly – possibly amounting to VT 700,000 to 1 million for a block of about 6-7 hectares. Few

custom owners have such resources readily available.

Devising means to facilitate the registration of custom land should be a high priority for the Government of Vanuatu. One possible solution that has been under consideration is the setting up of a revolving fund, possibly managed by the SHEFA Provincial Council, which would provide loans to custom land owners to finance the costs of surveying, registration and titling of their land. Financing should be short term, say 2 - 3 years, and at market interest rates.

Forging a broad-based consensus that action is necessary to avert further deterioration in living standards holds the key to gradual progress in this area. The problem should be brought into the public domain and openly discussed among key stakeholders, including landowners and other affected parties, with a view to agreeing on practical measures to promote the efficient use of land while protecting natural resources for the wider public good.

Important trends are becoming discernable in a number of countries. Individualism and egalitarianism are replacing close kinship structures, with their emphasis on reciprocity, inherited social status, and rank. Concepts of property and ownership are shifting from a group to an individual orientation, and emigration and wage employment have disrupted ritual obligations and communal activities.

For example, in Samoa, village practices appear to have been diverging from "proper custom" for some time. There is a growing expectation that children will be able to inherit family house and land rights directly, without having to override claims by other branches of the wider descent groups of the village. (There is still no move toward freeholding of customary land, however.) In Fiji, the importance of the *Mataqali* as a land-owning unit reduced, as access to land has become more individualized. In many parts of the country, individual households intend becoming the owners and users of tracts of land, parts of which they are unwilling to lease or lend.

To facilitate improved land management, there is merit in intensifying networking and the pooling of knowledge within the region, discussing examples of good practice and experience in addressing this problem, and collaborating in pilot approaches in keeping with the established traditions and needs of individual Pacific countries.

C. Addressing Environmental Issues

Environmental management issues in Pacific urban centers require urgent attention. These issues have become particularly important in recent years because of the rapid increases in urban population pressures, often on small and low land masses; the vulnerability of urban areas to sea level rise; the economic and cultural dependence on the natural environment; the prevalence of natural disasters and the vulnerability of freshwater lenses on atolls to environmental; and climate change impacts (box 9)

Most countries in the Pacific have prepared National Environmental Management Strategies (NEMS) and some, such as Fiji, are particularly active in promoting recycling, awareness campaigns (including in schools), conservation of water resources, and the like. Fiji has also involved industries, such as Exxon, which sponsors and promotes environmental clean-up programs, and the tourism industry that has a growing eco-tourism subsector and uses ecological features in some resorts.

However, many NEMS do not deal extensively with "brown" issues of urban wastes. Recognition is not yet widespread that environmental management of urban areas—particularly integrated planning and management of land resources, including inland and coastal areas—is a prerequisite for successful long-term economic development.

Implementation and enforcement of environmental regulations governing inappropriate land use are weak in many countries, particularly in towns. For example, programs of the Environmental Protection Authority of the Republic of the Marshall

Islands include public education and monitoring of public water quality and supplies, pesticides, solid and hazardous waste management, toilet facility regulation, village environmental health, sewage disposal inspection, and dredging. Regulations governing these areas have been approved and are being implemented in dredging, solid waste, toilets and sewage, and pesticide use. Water quality regulations have also been approved. The Ministry of Health, Family Planning and Social Welfare has been given responsibility for advising on and coordinating all these environmental issues. However, enforcement of protective measures will continue to be limited until political support and institutional responsibilities in this area are clarified.

Moreover, coordination is often weak. In Kiribati, the Management Plan for Tarawa Lagoon was being prepared at the same time as the Urban Management Plan for South Tarawa. Both were preceded by the National Environmental Management Strategy, but there was no integration or cross-referencing of research, findings, recommendations, or conclusions, even though the government has

monitored the status of the marine resources in Tarawa Lagoon since the late 1970s.

Lack of legislation also hurts efforts to protect the environment. Kiribati has no legislation dealing effectively with the collection and disposal of waste of any kind, let alone toxic or non-biodegradable waste or for dealing with pollution of the sea or lagoon from land-based sources.

D. Improving Disaster Management

The number of natural disasters world wide increased fivefold during the 1990s, and damage increased by a factor of 9. About half the economic impact of these disasters was borne by developing countries—a massive burden relative to their GDP. Much of this burden is borne by the poor, especially in developing countries.

Pacific countries are exposed to the full range of natural hazards, including tropical cyclones, floods, landslides, extended droughts, volcanic eruptions, and earthquakes (table 2). Accelerated changes in demographic and economic trends, climate change, and sea level rise are all increasing the vulnerability of the growing population concentrations in towns, virtually all of which are located on coasts. Lower-income communities—which gravitate to marginal lands, such as foreshore mangroves, floodplains, and stream banks—are particularly vulnerable to flooding, cyclones, and storm surges.

Many Pacific countries have experienced and will continue to experience increased vulnerability to natural hazards as a result of high population growth rates, over-development, increased exploitation of biological and physical coastal resources, mangrove clearance, sand and aggregate extraction (figure 7), overexploitation of fisheries, and poor waste management. These changes may compromise the protective capacity of reefs, leading to a reduction in sediment availability (Gillie 1997a, b; Mimura and Peliskoti 1997; Nunn and Mimura 1997).

Table 2. Vulnerability to Natural Disasters

	Cyclone	Coastal Flooding	River Flooding	Drought	Earthquake	Landslides	Tsunami	Volcano
Fiji	High	High	High	Medium	Medium	High	High	
Vanuatu	High	HIgh	High	Low	High	HIgh	High	
Solomon Islands	High	High	HIgh	Low	High	High	High	High
Federated States of Micronesia	Medium	High	Low	High	Low	Low	High	High
Kiribati	Low	High		High	Low	Low	High	
Marshall Islands	Medium	High		High	Low	Low	High	
Palau	Medium	Medium		Medium	Low	Low	Medium	
Tonga	High	High	Medium	High	High	Low	High	High

Source: SPREP (1994)

Potential impacts include accelerated coastal erosion, inundation, and flooding, which will put further pressure on infrastructure. These impacts are expected to be exacerbated by climate change, sea level rise, and changes in storm frequency and intensity (see Volume IV). As population growth continues to increase pressure on natural resources and the environment, risks to public infrastructure and facilities and the large and growing proportion of economic activity in coastal towns increase.

Disaster management needs to go beyond minimising loss of life. Physical losses—including losses due to business interruption that are often comparable to those resulting from direct physical damage—can impose enormous burdens on the population. Secondary loss from damage to communication and power infrastructure can be particularly significant in counties such as Vanuatu, Fiji, and Samoa, where major tourism assets are located in or near urban areas and tourism revenues are significant.

Efforts in Kiribati

The recently updated Kiribati Disaster Management Plan (Kiribati National Disaster Management Office 1998) is already comprehensive in its coverage, addressing mitigation, public awareness, and training as well as relief, rehabilitation, and international assistance. A National Disaster Management Council—made up of secretary-level representatives of 10 sector ministries and chaired by the Secretary for the Ministry of Home Affairs and Rural Development—is responsible for overall disaster management on a

Figure 7. Sand Mining at Shoreline

continuous basis. A Mitigation and Prevention Committee has been assigned the role of preparing policies for disaster mitigation, including training, education, and awareness programs at all levels of government and the community.

The plan covers a range of issues and provides a reasonable statutory platform from which to launch positive change. Although the urban agenda appears to have been largely overlooked in the plan, current work to develop a geographic land and property information system, mapping and survey registration system together with the creation of an environmental resource database could provide the spatial information on which to base hazard and vulnerability assessments.

Efforts in Vanuatu

Vanuatu has taken an active approach to disaster management, establishing a permanent National Disaster Operations Center in Vila. Its plan, originally drafted in 1985, was reviewed to incorporate the lessons learned during the 1991/92 cyclone season, observations by the National Disaster Executive Committee, and recommendations of the Barr Report (AIDAB 1989). The plan now covers preparedness measures, national disaster response, and post-disaster review, as well as stages of implementation and a warning and alert system.

The plan does not include any disaster mitigation measures, and little attention has been focused on integrating vulnerability aspects into a comprehensive preventative strategy or integrating disaster management into national development strategies. The need for attention to hazard mitigation has been recognized, however. With assistance from the South Pacific Disaster Reduction Program, the National Disaster Management Office of Vanuatu is formulating a Comprehensive Disaster Management Program that will guide all future disaster management activities, including hazard and vulnerability assessment to facilitate the identification of mitigation activities.

One omission common to the plans for both Vanuatu and Kiribati is the lack of explicit reference to the roles and responsibilities of local governments. The broad list of functions that may be conferred on local councils presents a *prima facie* case for them to play at least an important interface role between the government and the community and for them to be represented in bodies responsible to formulating and overseeing prevention and mitigation measures.

E. The Costs of Doing Nothing

The absence of appropriate policies plans, strategies, and effective institutional arrangements to guide urbanization will not only close off the opportunities to harness the dynamic potential of the towns for economic growth, but will have an increasingly negative impact on the existing productive capacity of the urban economy. It will also reduce the quality of life in the region's rapidly growing towns.

Further pressure will be placed on the already stretched infrastructure services and the institutions charged to deliver them. Unemployment will likely increase. Environmental conditions and pollution, which reduce the carrying capacity of the limited natural resource base, will worsen, and serious outbreaks of epidemic illnesses may become more frequent. These public health risks are unlikely to be confined to low-income populations in informal and squatter settlements, since these communities provide much of the service sector workforce in higher-income households, in commerce and industry, and in hotels, restaurants, and other facilities associated with tourism. All of these effects will constrain economic growth, deter investment, and increase urban unemployment and underemployment.

Already the pace of urban growth has challenged the ability of customary traditions to protect people from poverty, and a growing permanent urban underclass is emerging in towns and cities in the region. Not surprisingly, further deterioration in urban conditions will be felt most directly by the poor, who represent a large and growing proportion of the population. The increasing hopelessness among these very youthful urban populations is almost certain to lead to increased levels of crime and urban violence.

A "no action" scenario is thus likely to lead to an increasing gulf between the "haves" and the "have-nots" in terms of access to land, shelter, basic services, and quality of life. Lack of action threatens to reverse recent progress in improving the coverage, quality, and reliability of urban utility infrastructure and services, as responsible agencies become increasingly dependent on government subsidies and external assistance.

This scenario is not inevitable. Action now by political and community leaders and other key stakeholders could set in place the building blocks that would reduce these risks. The

region's long tradition of family and kinship could be harnessed through an urban dialogue beginning in local neighborhoods and culminating in an urban "summit" in each country intended to create a shared vision and consensus on strategies, roles, and responsibilities to mobilize the benefits of urbanization and to achieve a more equitable distribution of opportunities for all while safeguarding the fragile environment. Achieving this consensus requires a more inclusive constituency of stakeholders in the decision-making process, including policymakers, public sector institutions, customary landowners, and ordinary urban residents. The well-established cultural traditions of communal decision-making make doing so a realistic proposition.

Chapter 3
An Agenda for Managing
Change and Adaptation

Urbanization has significantly improved the economic prospects and social conditions for a large and increasing proportion of the people of the Pacific. In many Pacific countries the urban economy generates more than 60 percent of GDP and is now a major, if not the major, contributor to economic diversification, competitiveness, and growth in the region.

A. The Need for Urban Policy

Few Pacific country governments have recognized the productive and employment-generating potential of the urban economy, however, and fewer still have articulated strategies to realize this potential. This lack of planning has left Pacific countries poorly prepared for economic globalization.

Population growth in many Pacific towns remains among the highest in the world. Governments and traditional leadership structures have found themselves unable to provide and maintain basic services for the large proportion of the population now living in towns. Deteriorating environmental and health conditions and declining real incomes and living conditions constitutes a crisis of urban management.

Population growth in the principal towns may be starting to moderate. In many urban areas in the region, increases in the populations reflect natural growth rather than migration from rural areas. Even so, migration is still regarded as the major cause of problems rather than as an inevitable response to forces facing the rural population in the transition from subsistence lifestyles to cash employment. Against this background it is not surprising that the policy response in many Pacific countries has been to encourage rural residents to remain at home.

Some countries have located productive economic activities (even such as garment factories) in rural areas, in an attempt to discourage migration to towns. Where such policies are founded primarily on incentives and subsidies, they are unlikely to prove sustainable in providing sufficient livelihood opportunities to reverse the trend of urbanization.

National development strategies in many Pacific countries recognize the overarching problems resulting from rapid, unplanned urbanization, but none contains a comprehensive set of policies to deal with them. There is no process through which issues affecting town communities are systematically reviewed. As a result, urban policy results by default from the interplay of other sector policies without having been considered in their own right. The lack of clearly defined roles means that no single body takes responsibility for urban issues. As a result, the benefits that might be derived from a comprehensive urban policy that is integrated into national development strategies are never realized.

B. Establishing a Policy for Urban Management and Planning

Problems of poor-quality urban services are systemic, structural, and political, but they have been addressed on a technical and sectoral basis. Successive governments have failed to address these basic issues or create an enabling environment for achieving community awareness, stakeholder consensus, and political support for appropriate measures. The result has been increasing urban poverty, inadequate or unaffordable infrastructure and utility services, lack of affordable housing, increasing public health problems and environmental degradation,

and growing corruption and political polarization in Pacific towns.

A more effective strategy for stemming the decline in urban conditions calls for Pacific countries to articulate a vision and create a comprehensive strategy for restoring the quality of life of town dwellers and for increasing the productive potential and competitiveness of the urban economy. The starting point for doing so lies in:

- Recognizing the major contribution the urban economy makes to national employment and GDP and the need for an appropriate policy framework that can be integrated into national development strategies.

- Understanding the important role that effective urban-rural links can play in revitalizing rural and regional economic efforts. Balanced urban-regional strategies need to be framed through a participatory process oriented to economic opportunities that reflect regional comparative advantages and potentials.

- Taking action to address the lack of data on urban conditions and issues, particularly data on land ownership and use, planning, population, health, education, economic activity and employment, and income and poverty.

- Incorporating a spatial component in national economic growth and social development strategies that focuses attention on towns.

- Reviewing education sector strategies and achievements in relation to the skills required in the domestic and international economy to improve competitiveness in response to economic globalization.

- Strengthening disaster planning and management, through adaptation measures that reduce the social and economic disruption of these events, to which urban communities in the Pacific are particularly vulnerable.

- Recognizing the importance and utility of full involvement of all urban stakeholders in the process of urban planning and management.

C. Expanding Livelihood, Improving Productivity

The UNDP report (Sustaining Livelihood's, Promoting Informal Sector Growth in Pacific Island Countries, UNDP 1999a) observes that whilst most employment policies and programs in Pacific countries focus on formal employment, only a minority of workers are currently in paid, formal sector jobs and that this situation is unlikely to change in the foreseeable future. However, the urban informal sector faces number of barriers that must be removed if informal sector activities are to grow in size and productivity.

The report concludes that, if governments want to encourage informal sector growth, they must examine the institutional and policy environment in which these enterprises operate and devise more supportive regulatory systems and development programs, particularly involving women and the urban youth. These mainly involved credit schemes, and start-up programs, and various types of special assistance to disadvantage groups such as women and youth.

Conditions that would enable small enterprises to succeed, which are often lacking, include adequate transport and communications infrastructure, non-formal education and skills development, assistance with production and marketing strategies, access to credit, information about viable business prospects or technologies, and removal of many obstacles in the form of legal restrictions and unsupportive government policies that these enterprises face.

Improving the base of information on existing employment and labor patterns would also facilitate framing policies and strategies. Tapping into the improving experience with micro-credit schemes in many countries around the World would also be beneficial for the Pacific countries.

D. Developing an Inclusive Approach to Urban Planning, Management, Service Delivery, and Quality Control

Urban dwellers will be unable to achieve sustainable livelihoods in the coming decade unless Pacific governments and societies set clear strategic directions and priorities for urban areas.

Prospects for sustaining the benefits of development efforts can be improved by harnessing the energies of the wide range of stakeholders and by integrating traditional decision-making structures and community groups at the village and local government level within the wider urban decision-making structure through ongoing consultation and participation. For such a process to be fruitful, however, information on government services, policies, and proposals must be disseminated and stakeholder views actively sought, especially from women and youth groups.

Nowhere is broad-based consensus more urgently needed than on issues related to land use, which directly affects the economic potential of Pacific countries and the environment and health of people living in Pacific towns. Land use is rarely guided by sound public good considerations, however. Public information campaigns can be an effective vehicle for building public awareness of the link between land use planning and environmental and health concerns, and they can help initiate meaningful consultations by stakeholders.

Giving a Voice to the People: The Role of Local Government

The opening of effective channels for community participation through the increased engagement of community leaders, customary landowners, and non-governmental organizations is needed to ensure more effective and sustainable development in Pacific towns. The formal and informal institutional mechanisms that might be used for making the voices of communities heard are likely to differ from country to country. However, throughout the region, municipalities and town councils could be used to disseminate information on government services more effectively. They could also serve as forums in which communities could voice their views on the management of local affairs, on government policies and plans, and on land use and environmental issues affecting them. This may also help address problems of resource constraints and poor coordination between central government agencies and between central and local governments. Such a mechanism could be particularly effective if local governments were made responsible for coordinating planning and service delivery functions in their areas, as suggested above.

Developing a Shared Vision

Many traditional development efforts in the Pacific have focused on short-term priority improvements to urban infrastructure and utility services as a basis for also starting to address some of the urban management problems, which require longer-term partnering. Certainly, infrastructure and utilities must keep pace with economic growth if productivity growth is to be maximized. However, the crisis of urban management is so great and the stakes are so large that without fundamental improvements in the urban management process, the potential impact of these development efforts remains at substantial risk and in some (perhaps most) Pacific countries, consideration should be given to convening an "urban summit." Such a summit would provide a forum in which all stakeholders could engage in shaping a vision to define priorities and achievable goals for stemming the decline in income-earning prospects and the quality of life. Stakeholders could also agree on actions to be taken, including actions for improving land use and availability; delineate roles and responsibilities of the private and public sector and of civil society; and set a timetable for implementation. In principle, this vision would create a strategic development framework that cuts across institutional boundaries by establishing a multi-sector, multidisciplinary, partnership-based decision-

making process. Community development indicators and benchmarks could be used to monitor progress and to update and modify programs as deemed necessary by representative forums.

It is not unusual for political dimensions or institutional considerations to cloud long-term strategic thinking. This is often the case when intractable and important topics—such as the customary land value system and its impact on social welfare and economic performance—are under debate. In such cases the strategic imperative may be subordinated to political expediency. Bringing a variety of stakeholder views can bring a broader, more balanced perspective to options for action.

E. Strengthening Urban-Rural Links

The future in the Pacific, as elsewhere, will be increasingly urban. The impact of the dramatic demographic shifts of recent decades is clear, and continued growth in the population of key towns is inevitable.

However, physical planning needs to be integrated with economic and social development planning in a way that also recognizes the symbiotic relationship between towns and their hinterlands. Urban and rural development plans need to be complementary and mutually supportive and should include improvements in social and economic infrastructure in rural as well as in urban areas. Good transportation and communications links with rural areas would ensure that the benefits of urbanization are spread more widely.

In many Pacific countries, the most dramatic population growth has been in informal peri-urban settlements. These communities participate in and contribute to the urban economy, but they fall outside town boundaries, lack access to many of the public services provided in formal communities in town, and are not captured in urban statistics. Policies and innovative institutional arrangements need to integrate these communities into the urban social and economic mainstream.

Forging better links between rural and urban communities will also help rural communities. Tafea Province, Vanuatu, for example, has adopted a highly participatory, bottom-up

approach to development that reflects the intrinsic economic potential, comparative advantages, and skill base of the province and its people (box 10). The practical economic orientation and broad-based local ownership of this approach could well prove more viable than traditional government programs. Its success will depend, however, at least partly on the effective functioning of economic links with Port Vila. Improvements in urban management in Port Vila will directly contribute to minimizing transaction costs and therefore to promoting a more balanced and equitable development strategy. Such an approach could well be appropriate for other Pacific countries.

F. Adopting an Effective Housing Sector Strategy

The first step to developing an effective housing sector strategy is understanding the problem. Data need to be collected on existing conditions and needs. Socioeconomic surveys could help identify residents' aspirations. Realistic assessments need to be made of affordability and real demand. The next step is to understand the land and housing markets. The availability of land and housing (types, standards, prices, owned versus rented) needs to be determined, and constraints to land supply identified. Infrastructure and building standards need to be reviewed and their impact on supply and prices determined (as was done in Fiji).

Financing aspects of the housing market also need to be understood. Analysis of the type and functions of financial institutions and financial intermediaries would help identify possible sources and cost of funds, especially long-term funds. Constraints to mortgage lending to lower-income clients also need to be identified.

The roles of the key players should be carefully defined. Generally speaking, the government should limit its role to studying the sector, identifying constraints, setting policy and playing an enabling or facilitating role. Private sector developers and contractors should acquire and service land, with private builders

constructing houses for sale or rent. Banks should mobilize savings and make mortgage loans at market rates.

Most importantly, however, formal housing sector activity needs to be seen as part of a more holistic shelter strategy that must also include low-cost serviced sites and upgrading of basic infrastructure, utilities and social services as a means towards improved security of tenure and livelihood in squatter and informal settlements.

G. Improving Disaster Mitigation

As with other disasters, adaptation to climate and sea level changes will not be achieved by an *ad hoc* response to specific threats. Rather, disaster management should be viewed as an essential element of strategic risk management, and development strategy for urban communities. It presents an opportunity to rethink the way local governments can fulfil their statutory functions.

The basis for designing adaptation efforts is the historical record of extreme events, including their timing, location and intensity. Interpretation of these records, in the light of a scientific understanding of the particular hazard phenomenon, provides the basis for hazard mapping and estimation of event frequency and likely consequences. Hazard maps can be used to identify existing development that is at risk and to designate areas which should either be avoided or for which special land use controls and construction standards should be required. For obvious reasons, hazard mapping for key urban areas is particular important, more especially so in high-density residential areas and where public or private capital investments are concentrated.

Disaster mitigation programs require policies and procedures that coordinate and mediate among government agencies as well as between the government and the private sector and community. Interventions and modalities must be culturally, socially, economically, financially, and politically acceptable to the communities

that will be most directly affected. The highest level of political support and leadership will be needed to bring all key players together and give legitimacy to disaster mitigation programs.

Given the limited human and financial resources available and the sensitivity of traditional landowners, adaptation programs need to draw on the views of a wide range of stakeholders and target sectors and areas in which the public interest is at greatest risk. Scoping exercises should be carried out to determine which sectors will be most affected and what coordination arrangements would be appropriate. The views of landowners, kinship groups and families, and community, village, and religious leaders as well as commercial enterprises should be solicited.

To generate interest and commitment, it is important that mitigation activities yield early results and reach as wide a constituency of stakeholders as possible. Public education and awareness programs provide an effective, affordable, and sustainable strategy. Regional cooperation is needed to compile loss scenarios for various parts of the country in order to provide a comprehensive account (including the longer-term losses of income to families, businesses, and tax revenues) and determine the costs of relief and rehabilitation. The benefits of such a regional effort would be large relative to the costs. A dissemination program could be installed in a regional center as a component of the regional observatory concept proposed later in this chapter.

At the national level governments should lead by adopting good practices themselves, prohibiting construction of government-owned structures and facilities in hazard-prone areas. Governments could also improve building codes, create incentives for compliance, provide technical assistance, and promote low-cost arrangements for retrofitting buildings to reduce vulnerability to damage. The focus should be on risk management rather than only on disaster preparedness. The potential for risk transfer through weather indices, insurance, re-insurance, etc. such as are being tested in the Caribbean and Nicaragua, should also be explored. Adaptation measures should also be incorporated in donor-assisted development projects.

Whatever form activities take, adaptation and disaster mitigation should become institutionalized, so that it becomes an extension of the responsibility that comes with customary traditions. This requires ownership of the concept by the people, which in turn requires promotion of the concept through community participation.

H. Developing Appropriate Adaptation Measures for Improving Urban Services and Environmental Health

An integrated, proactive, policy-driven response that addresses the range of factors that place communities at risk must be taken. The key priorities should be improving sanitation, water supply, and living conditions; protecting groundwater and coastal ecosystems; preventing sewage, chemical, and solid waste (containers) pollution in order to reduce the damage to reefs and the disruptive effects of disasters; and improving health facilities and services, in particular primary health care facilities.

Measures for Improving Use of Freshwater Resources

Adaptation options aimed at improving use of freshwater resources mainly involve demand management measures including pricing policies that discourage high usage, consumer education and awareness, etc., supply enhancement measures such as leakage control and water conservation and plumbing measures. In the short term, leakage control measures are generally likely to be more cost effective than development of alternative additional sources. It should be possible to reduce current physical water losses from more than 50 percent to 25–30 percent. In Kiribati such a reduction in water losses would generate 300 cubic meters of additional water a day. Effective land use planning and management are most important for the protection of water reserves. It is imperative in many Pacific countries that agreement be reached with private landowners

and the community at large on appropriate arrangements, including administrative and legal procedures governing land use to protect existing and future water resources or "groundwater protection zones."

Measures for Creating Non-polluting Sanitation Systems

Appropriately designed composting toilets have proven) to be simple to construct and effective in protecting groundwater and in conserving water (as no flushing water is required). They also produce a useful agricultural fertilizer.

Measures for Reducing Illness

Reducing the availability of mosquito breeding sites can lower the incidence of dengue fever. The most effective way to do so is through a community-based approach. Fiji's approach relies on community motivation and participation to remove or modify potential mosquito breeding sites such as used tires, container-type rubbish, and water storage drums. Public education and mobilization initiatives and enhancement of vector surveillance and monitoring methods are also appropriate.

The incidence of diarrheal diseases can be reduced by enhancing sanitation services and practices to minimize pollution of groundwater, lagoons, and coastal waters; improving the quantity and quality of water by protecting and developing groundwater sources; and improving primary health care facilities, especially in terms of both professional and community expertise in treating infant and childhood diarrhea.

The risk of ciguatera poisoning can be reduced by reducing pollution of coastal waters with human waste and industrial wastes, fertilizer run-off, and other chemical pollutants.

I. Pooling Regional and International Knowledge

Establishing policies for strategic and operational decision-making on urban issues requires a greater understanding of the issues, constraints, and opportunities affecting residents and businesses in Pacific towns. It requires that basic information about the quality, coverage, and reliability of basic services be collected about communities. It requires that performance in delivering urban and community services be benchmarked and monitored against recognized standards of good practice (and good value) in other similar small town environments. It calls for coordinated institutional arrangements and a regulatory environment that minimizes transactions costs and encourages investment—including investment in areas that would help diversify these economies into new, higher value–added activities, such as service exports in information industries.

Efforts are being made throughout the Pacific region to address these development problems. Each country suffers from a relatively small knowledge base, however, and countries have found it difficult to benefit from information and experience of other countries in the region. To strengthen regional cooperation on urban planning and management issues, a repository of knowledge and experience could be established regionally that would enable individual countries to gain insights into options and approaches to the complex problems confronting them. Such a repository would enable them to network with regional counterparts, regional and international agencies, and NGOs, which often have the most to contribute to shaping approaches to urban problems, particularly through participatory approaches. National urban summits would be an ideal vehicle for widening the debate to emphasize the importance of access to relevant information and knowledge as an essential ingredient to integrating individual nations into the Pacific regional and global economy.

A regional center—which could be known as the Pacific Region Observatory on Urban Development (PROUD)—would serve as both a regional knowledge bank and a forum for examination of and dialogue on urban and regional development issues. International assistance could be sought to reinforce the capacity of regional agencies, which is considerable albeit fragmented; support institutional strengthening and capacity building; and facilitate networking to maximize access to international experience on relevant issues.

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