

# TOWARDS A SETTLEMENT STRATEGY FOR SOUTH TARAWA

A report prepared for the Ministry of Home Affairs  
and Rural Development, Kiribati

Margaret Chung

South Pacific Regional Environment Programme

### Executive Summary

The present population of South Tarawa is 25,000 people. Projections of growth suggest that by the year 2010, that is, in sixteen years time, the population will be somewhere between 35,000 and 46,000. The lower figure can only be attained if in-migration and fertility rates are sharply curtailed now; the higher figure assumes present patterns of growth continue unchanged. If resource and land management also is unchanged, this population increase will worsen present problems with congestion, public health, water supply, waste management and environmental degradation.

The growth and distribution of population has been of concern in Kiribati for some time. The Government already has in place well-proven policy measures -- outer island development, resettlement, decentralising employment, and family planning programmes -- directed at modifying national population trends. But, barring some unforeseen event, South Tarawa's population will not be contained by any of these policies, at least not over the next decade or two. Rather, the momentum of South Tarawa's population growth will take time to slow down. Meantime, the number of residents will increase. The missing link in Kiribati's population policy, therefore, is a strategy to deal with the almost certain increase in South Tarawa's population.

The present emphasis on preventing urban growth seems to argue against investing in urban services in case they attract more migrants to South Tarawa. Yet without effective planning and investment, there has not been a lessening of growth; rather, there has been a proliferation of sub-standard, over-crowded housing with inadequate services. A settlement strategy is complementary to present policies, such as outer island development, which eventually will slow South Tarawa's growth. As more people are meanwhile added to Tarawa's population, they must be properly accommodated or everyone's standard of living will go down, with bad economic and environmental consequences. Major donors recognise the urgency of problems in South Tarawa's urban sector and are providing assistance. However, a prerequisite to the Government of Kiribati securing further assistance may well be their design of and commitment to a comprehensive, coordinated plan to deal with all urban growth issues on South Tarawa. Developing this strategy is also the principal recommendation of this report.

An integrated settlement strategy for South Tarawa is a plan of action to improve the living environment for everyone there: by better managing land and other resources; by increasing housing stock; by improving municipal administration; by upgrading urban infrastructure, particularly for water and waste management; and by generally improving living standards, particularly of more disadvantaged residents. There will be costs -- both financial and political -- in implementing such a strategy in the short term, but the cost of not intervening now may soon become crippling.

There is no universal type of settlement strategy that is suitable for Kiribati in the same way it is suitable for other countries. As always, planning strategies must respond to local needs and priorities. The first step in designing a settlement strategy for South Tarawa has been taken in establishing a task force, the South Tarawa Urban Management Committee. Next steps needed are to analyse specific development issues on South Tarawa; to set objectives to be achieved through settlement planning and management and which are linked to national economic, environment and social policies; and to determine how the planning and management system will operate. For the plan to be responsive to peoples' needs requires there is political commitment to the strategy at the highest level; there is understanding and contribution to the strategy from all sectors of the community; and that functions of local government bodies are compatible with the strategy or their capacity to provide services is strengthened.

## Introduction

This report originated in a request from the Government of Kiribati to the South Pacific Regional Environment Programme (SPREP) for assistance to the Planning Department of the Ministry of Home Affairs and Rural Development. This assistance was undertaken under SPREP's Environment and Population Project, the principal objective of which is to help Pacific island governments and communities use information about population composition, growth, and distribution in decisions they make about their environment and development policies. Population and environment are critical factors in seeking sustainable development. Taking full account of these concerns is, nevertheless, quite a challenge to national planners and policy-makers as both population and environment are multi-sectoral by nature and have long-term consequences. As these multi-sectoral issues often are fragmented into particular areas of departmental responsibility, integration needs to be explicitly promoted.

The terms of reference for this report were:

1. Outline other settlement strategy approaches and directions which focus on integrated physical, economic and social plans being currently developed or implemented in developing countries in the central Pacific and South East Asia;
2. to advise on the need, or otherwise, to prepare an integrated settlement strategy for South Tarawa and what form and process this may take;
3. to indicate what benefits the Government may gain by preparing a coordinated settlement strategy and framework in which to tackle land development and population distribution in South Tarawa; and
4. to recommend what assistance donors may offer to the Kiribati Government in preparing a settlement strategy for Kiribati, especially one that focuses on options, solutions and directions for population and development issues in South Tarawa.

The exercise was the initiative of the Ministry of Home Affairs and Rural Development (MHARD). This report was prepared by Margaret Chung, SPREP's Environment and Population Officer, following a one-week mission to South Tarawa in November, 1993. With Paul Jones, Urban/Physical Development Planner (MHARD) and Harry Redfern, Assistant Planner, Dr. Chung met and consulted with Baraniko Baaro and Taam Bieibo, the Permanent Secretary and Senior Assistant Secretary of the Ministry of Home Affairs and Rural Development, respectively; Teriata Betaro, Chief Lands Officer, MHARD; Timmi Tebaai and Craig Wilson of the Environment Unit; Mikaere Baraniko, Chief Planning Officer of the Ministry of Finance and Economic Planning; Rabunataai Tekaai, Clerk, Betio Town Council; Laslo Erdi, Water and Sewerage Engineer for the Public Utilities Board; and the Senior Health Inspector, Neeri Tiaeki, Ministry of Health, Family Planning and Social Welfare. Bismarck Crawley, the Geographic Information Specialist at SPREP, prepared the map. Our thanks to everyone involved for their assistance.

## Table of Contents

Executive Summary

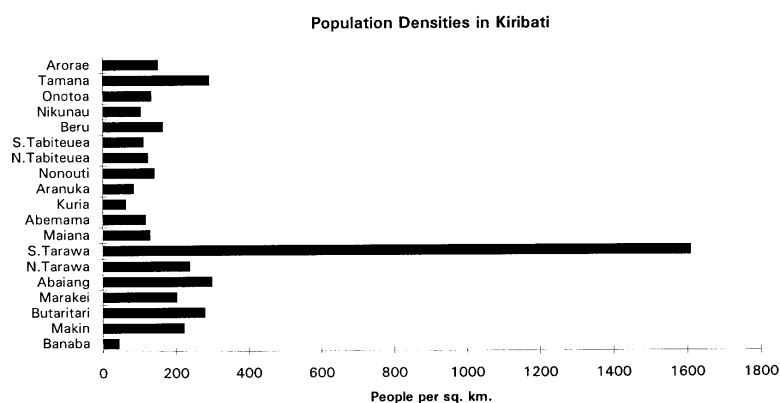
Introduction

<b>1.</b>	<b>Living Conditions on South Tarawa</b>	<b>5</b>
1.1	South Tarawa, the most crowded island of Kiribati	5
1.2	Environment and health conditions on South Tarawa	7
1.3	Concern over congestion	10
	i. Stopping in-migration	10
	ii Promoting resettlement	11
	iii Lowering fertility	12
1.4	South Tarawa's population will continue to grow	13
1.5	Conclusions	14
<b>2.</b>	<b>Settlement strategy approaches and directions</b>	<b>15</b>
2.1	Directing growth away from towns	15
2.2	Promoting spatial development	16
2.3	Coming to terms with urban growth	16
<b>3.</b>	<b>Improving the living environment for a sustainable future: how can a settlement strategy help?</b>	<b>18</b>
3.1	The purpose of a settlement strategy	18
3.2	Designing a settlement strategy for South Tarawa	18
3.3	Implementing a settlement strategy	19
3.4	Conclusions	20
<b>4.</b>	<b>Assistance to the Government of Kiribati in improving living conditions on South Tarawa</b>	<b>21</b>
<b>5.</b>	<b>Conclusions and Recommendations</b>	<b>23</b>
<b>6.</b>	<b>References</b>	<b>24</b>

## 1. Living Conditions on South Tarawa

### 1.1 South Tarawa, the most crowded island of Kiribati

Around 25,000 people, just over a third of Kiribati's population, live on South Tarawa. This concentration grew rapidly in the 1960s and early 1970s but has slowed considerably since. Nevertheless, almost twice as many people live on South Tarawa now as did twenty years ago, in 1973. Still, too, South Tarawa's population grows about a third faster than the national rate, at an average 3.1 percent a year compared to 2.2 per cent for all Kiribati. These rates are fast. They imply - if population components do not change - that Kiribati's and South Tarawa's populations will double in just over 30 years and 20 years respectively. There are now an average 1,600 people per sq. km. on South Tarawa, a much higher density than other islands, but a somewhat misleading figure in that the island is not uniformly settled. Some places are more densely occupied, particularly Betio, where there are 5,400 people per sq. km.



Source: Republic of Kiribati 1990 Census of Population, Vol. 1, Table 1

Disproportionate growth is not necessarily a problem. South Tarawa has grown in response to economic and political needs of nation-building: once the administrative centre of the Colony of Gilbert and Ellice Islands, now the capital of the independent Republic of Kiribati. An urban centre performs essential functions: accommodating government and business administration; providing an indispensable focus for economic growth. Many types of jobs cluster around towns despite any efforts to decentralise them. Towns are world traders, producers of invisible exports, the main centres of integration of island economies with the world; and Kiribati has a highly external economy. Towns themselves are not a bad form of development. The problem comes when overly polarised development has a negative effect on the quality of people's lives in both the crowded and empty parts of the nation.



## 1.2 Environment and health conditions on South Tarawa

Table 1 shows many of Kiribati's pressing environmental problems relate to congested conditions on South Tarawa, and stem from the combination of increased population, urbanisation, development projects such as causeways and the airport, changed technology and increased consumption, all on the one island. Environmental degradation is not simply caused by more people, but also by what these people do. New types of production and new lifestyles consume more resources and generate waste which can be hard to dispose of. Together with poorly planned land use and overtaxed water, sewerage, and waste disposal systems, this has serious environmental, economic and social consequences.

Crowded, unsanitary conditions on South Tarawa contribute to a death rate for children which is high by Pacific standards, particularly because of a high incidence of diarrhoeal diseases, with an average of 5.2 incidents per child each year (AIDAB, 1993). Poor sewerage is an important disease vector; others are uncollected domestic garbage, stray dogs and flies. While reticulated water supplies are safe, demand for clean water far exceeds supply, a situation made worse by wastage from deteriorating distribution mains, a problem the financially-strapped Public Utilities Board can do little about. Many households use water from unprotected, unclean wells. Settlements encroaching on water reserves threaten further pollution of ground water. Another pressure on the environment from the dense population is the over-harvesting of fuel-wood. This speeds deforestation of the coast and its erosion.

Living conditions are particularly poor on Betio. Many residents there are legally squatters, some living on land leased by the government for civil servant housing yet informally subdivided by its owners. The result is a highly congested, haphazard arrangement of sub-standard houses which now restricts any improvement of water or sanitation by running new mains, even if money was available to do so. When cholera broke out in 1977, communal toilets were built. Now, with three-quarters of those toilet blocks unserviceable through misuse (AIDAB, 1993) and the population grown still larger, the threat to public health is as immediate as ever. Compounding the physical congestion is the large number of people per household -- an average of almost eight -- and a situation that reflects the high number of migrants there, people who often look first to relatives for accommodation.

**Table 1 Environment and Development Problems on South Tarawa**

<b>Issue</b>	<b>Constraints</b>	<b>Population aspects</b>	<b>Opportunities</b>
<b>Land scarcity</b>	South Tarawa has a very limited land area of 15.8 square km. Land shortage is becoming more acute as population grows and land is taken up with infrastructural developments, such as roads, airports and buildings.	<b>Need for more efficient land use, particularly that now occupied by defunct buildings. Need to allocate more land to house growing population, especially for the growing number of landless people.</b>	Develop long-term plan for efficient and sustainable use of South Tarawa's land area. Promote well-designed, high density housing.
<b>Rapid population growth and high density of settlement</b>	Tarawa's limited land area, high population density and fast growing population. Limited opportunities for emigration.	<b>Must increase Tarawa's capacity to accommodate more people, through better land-use and environmentally sustainable economic development.</b>	Devise comprehensive land use & development plans, promote outer island development, decentralise from South Tarawa, improve family planning services.
<b>Need to conserve and protect fresh-water resources.</b>	No surface water, limited ground-water, low rainfall, periodic drought. Competing demands for water. Susceptibility of ground water to contamination.	<b>Settlements spreading onto water reserves contaminate ground water with sewerage. All residents need safe water supplies but economic charges will restrict use by low income households.</b>	Increase rainwater catchment and storage systems, improve water reticulation system and promote water conservation. Examine feasibility of desalination.
<b>Deterioration of marine resources</b>	Some developments damage marine systems, sewerage and solid wastes pollute beaches and the lagoon, over-fishing depletes fish stocks, idea persists that resources are infinite despite faster use by larger population.	<b>Lagoon pollution and contamination of fish stocks risks public health and threatens peoples' livelihoods.</b>	Public awareness campaigns, better assessment of coastal development projects, better waste disposal, coastal reforestation programmes.
<b>Threat to terrestrial resources</b>	Coastal mining and deforestation accelerate erosion and increase vulnerability to storms and high seas. Land-use planning and controls are weak.	<b>Dense human settlement. Housing requirements speed mining of sand and coral. Coastal deforestation is speeded by demand for house sites and fuel.</b>	More effective land use laws and enforcement, research into resources and development impacts, coastal reforestation, unified development strategy, public awareness.



<b>Deterioration of food production systems and increase in nutrition-related diseases</b>	Traditional food production challenged by economic and social changes, increased use of imported foods, limited nutrition education. Sharp rise in nutrition-related diseases.	<b>Limited access to land and marine resources, particularly for non-Tarawans; dependence on low-cost, low-quality imported food, growing child malnutrition and degenerative diseases.</b>	Promote home food production, control harvesting of in-shore marine foods, advance public knowledge about nutrition, promote food security.
<b>Inadequate housing</b>	Dense settlement on government leased land but otherwise limited availability of land for non-Tarawans. Low density housing but congested, haphazard arrangement of sub-standard conditions contributes to public health problems, social disintegration, and inefficient land use.	<b>Much of the housing in crowded parts of South Tarawa is government owned, in need of repair and crowded far beyond its designed capacity. Dense areas of informal housing restricts improvement of water and sanitation services. Average household size in South Tarawa is high, adding to public health and social problems.</b>	Implementation of urban plan, and building standards for low-cost but adequate housing. Upgrading of civil servant housing, possible transfer of ownership to occupants through reinvigorated home loan scheme, and possible expansion of housing development onto reclaimed land at Tamaiku.
<b>Waste disposal</b>	Ground water is susceptible to contamination, the sewerage system is now beyond its capacity and polluting coastal waters, disposal of hazardous wastes and domestic garbage is inadequate, and public awareness is limited.	<b>Together, insecure and crowded living conditions, poor sanitation, insufficient water, inadequate garbage disposal, and substandard settlements link economic and environmental impoverishment.</b>	Expand sewage systems and extend outfalls, reduce importation of non-degradable, non-reusable and toxic waste, implement recycling programmes and increase public education.
<b>Energy dependency</b>	No local fossil fuels, higher cost of imported fuels and increased dependence on them, particularly as fuel-wood becomes scarce.	<b>Rapid depletion of fuelwood in heavily populated areas and high fuel costs further disadvantage low-income households.</b>	Promote energy conservation and renewable energy use, expand fuelwood resources, and improve public awareness.
<b>Limited economic growth</b>	Dependence on short-term, aid-funded economic development, emphasis on export production, neglect of subsistence systems, little assessment of long-term impacts of development projects.	<b>Rapid population growth increases demand for jobs and social services faster than the economy can grow, increasing joblessness and cutting people's livelihoods.</b>	Commit all aid donors to EIA assessments, including impact on subsistence systems, study economic importance of traditional resource management, increase public education

Source: Adapted from Teuatabo, Neemia and Thaman, 1991, Kiribati National Report for UNCED

### 1.3 Concern over congestion

There has been concern about over-crowding in the Gilbert Islands for a long time, since before the Second World War. Yet not much attention was paid to the growing congestion on South Tarawa until the late 1970s. A series of population projections in the 1979-82 National Development Plan (Macrae, 1978) sparked some alarm, although many people then thought the figures were too grim. We see today they were surprisingly accurate about national growth, under-estimating it slightly. The estimate of around 44,000 people on South Tarawa by 1993, however, was almost 40 per cent too high.

The idea that the limited land areas and fragile environments of islands can support only a finite number of people has a basis in common sense. However, the effects of environmental resource constraints on a small island depend also on the way people use these resources - what technology is available, what the economy can afford, and what living conditions people will tolerate. A 1979 report (Green, 1979) calculated the 'optimum' population for Kiribati to be 25 people per acre, or 143,000 people, and thus for South Tarawa, a population of 68,000. This was no more than an educated guess, a high one at that, and one which assumed many things, including a level of planned urban development that I-Kiribati may or may not want to live with. But there is no indisputable figure. More important is the report's conclusion: that crowding on South Tarawa not only reflected its growing population but also wasteful, fragmented and disorderly use of land. A series of UNDAT studies in the early 1980s to revamp the urban management plan for South Tarawa echoed this: 'the basic problem is not the plan but the organisation for planning and administration of land along with other resources.'

These reports did not result in action. The problems they sought to address instead have grown one decade more immediate. It is important to investigate why. The fundamental issues are not technical in nature but are rooted in political, legal, and cultural realities on South Tarawa. Exerting political and community will to squarely confront these issues requires public understanding of what the future holds. Many people are reluctant to believe population forecasts and this perhaps is reasonable, given their erratic predictive power. But there is also unreasonable optimism in believing South Tarawa's growing population can be quickly contained. Stopping in-migration, promoting resettlement to other islands, and lowering fertility rates are the three solutions commonly mentioned. Each is an important policy in its own right. Still, as we shall see -- unless something quite unforeseen happens -- none of these factors is likely to halt Tarawa's population growth in the next decade.

#### i. Stopping in-migration

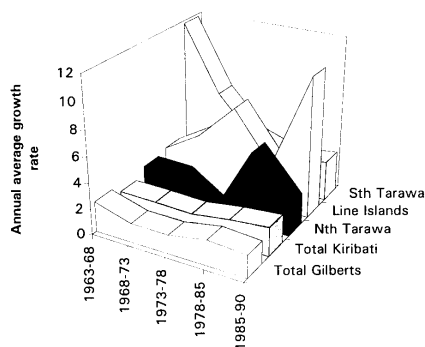
In-migration from other islands has contributed a lot to population growth on South Tarawa. In the 1990 Census, 83 per cent of people in South Tarawa said that their home island was elsewhere. Nevertheless, over half of all the people living on South Tarawa had been born there. Thus many non-Tarawan residents are not migrants in any real sense, but live there because their parents or grand-parents had moved there.

In the 1950s South Tarawa was closed to all islanders except those (with their families) who owned land or were employed by the Government. Yet most new facilities were developed there: high schools, the teachers' college, a new hospital, a small boat harbour, the administrative centre. After controls on movement were lifted in the early 1960s there was an influx of migrants from other islands of the

Colony. In the 1960s and early 1970s, around 850 people were added each year to South Tarawa's population, probably about three-quarters of whom were immigrants.

As the diagram on this page shows, the rate of growth has since dropped sharply. Although South Tarawa's population still grew on average by 800 people each year between 1985 and 1990, a smaller proportion were migrants, perhaps one-quarter. Most growth now comes from a larger number of births than deaths. Even if South Tarawa was immediately closed to all migrants -- unlikely though that is -- still the population would grow.

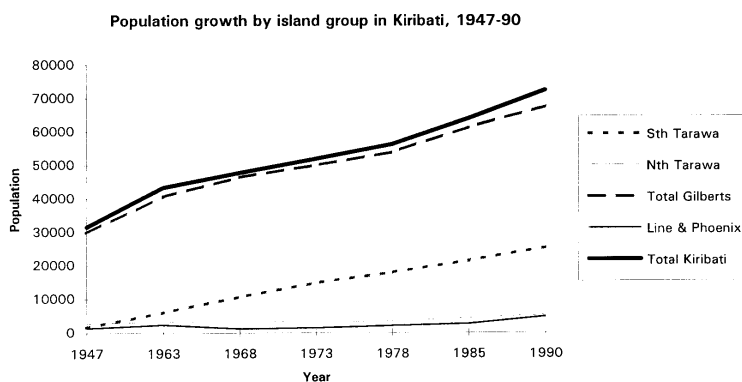
Population growth rates by island group in Kiribati, 1963-90



Source: Republic of Kiribati 1990 Census of Population, Vol. I, Table E

## ii. Promoting resettlement

The Kiribati Government's efforts to promote outer island development and slow the concentration of population on South Tarawa is an important programme. However, it can only moderately alleviate the growing congestion on South Tarawa. The diagram on the following page shows why. Although they are growing rapidly, at over 10 per cent a year, the populations of the Line and Phoenix islands are tiny. Their rapid growth since 1985 is equivalent to only half of the population increase in South Tarawa, even though South Tarawa's population is growing at less than a third their rate. This rapid growth would need to continue for many years before it had much effect on population growth in South Tarawa. As it is, the Government has suspended the resettlement programme while it assesses the environmental impacts and develops infrastructure for the new communities.



*Source: Republic of Kiribati 1990 Census of Population, Vol. 1, Table A*

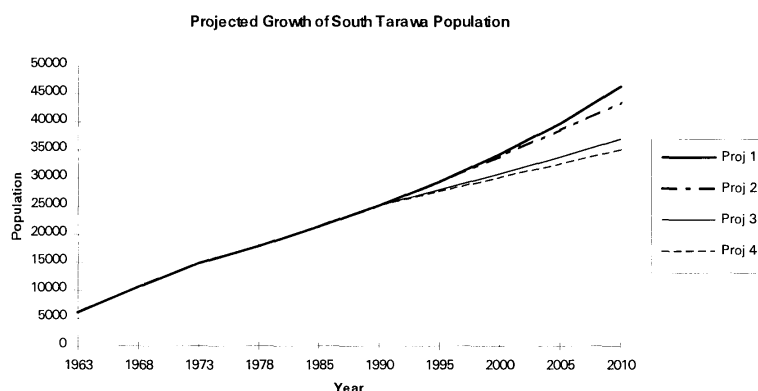
### iii. Lowering fertility

Lowering fertility is an important development goal because it benefits the health and well-being of women and children; the capacity of households to adequately provide for all their members; and the provision of education, health services, jobs and other essential services to everyone. Nevertheless, lowering fertility will not solve all problems. Fertility change takes effect slowly. Even if fertility declines soon, the population will continue to grow under its own momentum for at least another generation because of the large number of young people in Kiribati.

#### 1.4 South Tarawa's population will continue to grow

The following diagram shows why South Tarawa's population most likely will continue growing in spite of policies which encourage resettlement, outer island development and fertility reduction. It shows four possible situations:

1. that South Tarawa's population continues to grow in the way it is doing now.
2. that in-migration into South Tarawa slows down progressively over the next twenty years, as do rates of fertility and mortality;
3. that in-migration into South Tarawa stops immediately and abruptly, and fertility rates decrease slowly;
4. that in-migration into South Tarawa stops immediately and abruptly and fertility declines moderately fast.



Note:

1. Projection 1 follows Booth's assumptions (1985) for the national Kiribati population of a slow decline in fertility (TFR of 3.8 (1990) declining by 5 year interval to 3.6, 3.5 and 3.4 respectively), a slow rise in life expectancy (from Eo of 53 (males) and 54.2 (females), together with a constant rate in in-migration to South Tarawa of 1.1 per cent.
2. Projection 2 assumes medium rate of decline in migration (from 1.1 percent declining by five year intervals to 0.8, 0.6 and 0.4 per cent, respectively), medium rate of fertility decline (declining by five year intervals from 3.8 to 3.5, 3.25, and 3.0 respectively) and a slow rise in life expectancy.
3. Projections 3 and 4 assume an immediate cessation of in-migration to South Tarawa and the fertility and mortality changes detailed in projections 1 and 2, respectively.
4. All projections are based on a de facto 1990 population of South Tarawa of 25,100.

Population projections show what would happen if patterns of fertility, mortality, and migration continue on in certain ways. They can not take into account any other changes - political, economic, or even climatic - that may affect a population. Yet, they are useful guides to the future. The population of South Tarawa in 16 years time (2010) may be somewhere between 35,000 (Projection 4) and 46,000 (Projection 1). In-migration to South Tarawa is unlikely to immediately stop. Projections 3 and 4 therefore probably underestimate population growth. In-migration may slow down with outer island development or restrictions on in-migration. If it does not, Projection 1 may show the future. Possibly, both in-migration and fertility rates will go down, resulting somewhere between Projection 2 and Projection 3. That is, a

South Tarawa population somewhere between 37,000 and 43,000 in less than 20 years.

### **1.5 Conclusions**

Bar some cataclysmic event, the population of South Tarawa almost certainly will continue to grow. That is not to criticise present policies which go a long way to ease many of Kiribati's development problems. The point, rather, is that the momentum of South Tarawa's population growth will take time to slow down and, meantime, the number of residents will increase.

This suggests three conclusions:

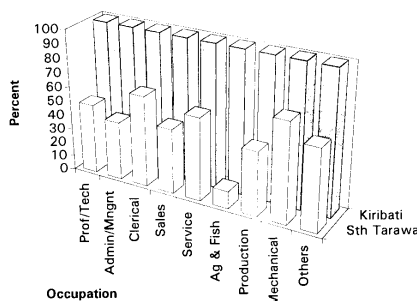
- Current problems of congestion, poor sanitation and public health will only become more acute if they are not addressed now.
- These additional people need to be adequately accommodated or everyone's standard of living will go down, with bad economic and environmental consequences.
- There is, therefore, a strong need to develop an integrated settlement strategy, or urban plan, for South Tarawa that addresses key issues of land, housing, sanitation and good environmental management.

## 2. Settlement strategy approaches and directions

### 2.1 Directing growth away from towns

Since the 1960s, the main thrust of settlement planning has been to stop main towns and cities growing by controlling national population distribution. As other countries have done, Kiribati's National Development Plan, 1978-82, tried to keep rural populations where they were; to resettle people in less crowded islands; and to slow migration to Tarawa. Other policies aimed to slow population growth by improving family planning programmes, and to decentralise employment from Tarawa wherever possible. These remain important policy objectives. Even so, cash employment in most sectors are concentrated on South Tarawa, a situation which partly reflects the economies of scale that Tarawa provides.

Concentration of Cash Employment on South Tarawa



Source: Kiribati National Census, 1990

Early urban planning in Tarawa, was characteristic of its time. It emphasized physical planning and optimal land-use, and relied on regulations and restrictions to achieve it. The emphasis on preventing urban growth seemed to argue against investing in urban services in case they attracted more migrants to town, or to provide services to squatters in case that legitimised their claims to land. In South Tarawa -- as in cities across the world -- the result has been a proliferation of sub-standard, over-crowded housing with inadequate services, a far cry from the urban plan that never was implemented.

Many people still believe growth of main urban centres must be stopped at all cost. Harking back to colonial times when towns often were off-limit to outsiders, several countries, including the Solomon Islands and Papua New Guinea, have proposed legislation to stop people moving to town. But experience shows such regulations are very difficult to enforce. Indeed, even colonial curbs were counter-productive, as was demonstrated by the influx of settlers into Tarawa after restrictions ended.

## 2.2 Promoting spatial development

Policies which aim to influence population distribution often also try to change the distribution of economic development. They aim to widen the national network of towns by improving national transport and communications systems and promoting urban 'growth poles'; that is small towns in outer districts to act as magnets for investments, jobs and economic growth. This concept is being applied to some extent on Kiribati but it has been developed more in other countries. The idea is to use the 'pull' that towns exert to attract people who might otherwise settle in the main town, to stimulate otherwise dormant rural economies and to spread economic activity across the whole country. Development that is overly polarised causes congestion in some places and under-use of resources in others. This has a bad effect on the quality of people's lives in both the crowded and empty parts of the nation. Developing urban and rural areas concurrently can constrain urban growth but spatial planners recognise that stopping it altogether is another matter. Urban growth is not all bad.

## 2.3 Coming to terms with urban growth

Settlement planning in the 1990s reflects growing understanding that:

- urban populations will grow in absolute size, at least in the short term;
- there are critical links between population, economic development, and environment; poor, disadvantaged people often live in environmentally degraded, vulnerable conditions;
- well-ordered settlements can make a large contribution to economic development.

The link between population and environment gives a new importance to urban planning. Agenda 21 (the action plan agreed to at UNCED) recognises that promoting sustainable settlements are essential to sustainable development, for two reasons:

- Human settlements are major contributors to environmental degradation and resource depletion, while they are also areas of poorly used opportunities for economic growth, communications, and human potential;
- Undesirable environmental implications of settlement growth can be addressed and reversed when settlements are managed in an orderly and equitable way through participatory and resource-conscious planning.



Settlement planning is not simply about land-use, but about integrated social, economic and physical planning. So-called economic growth that is achieved at a high cost to the environment limits options for economic development in the future and lowers human welfare. Often people do not change their ways as fast as resources decline but continue as if resources were inexhaustible, even to the point where they are almost gone. Traditional forms of resource use have not been replaced by alternative means of conservation. Legislation and planning can change lifestyles and economic practices which consume resources and generate wastes. Attitudes of individuals and businesses can also be changed through public education and taxation.

Thus, crowding is not simply caused by too many people, and it can be alleviated by better management. Links between population growth and environmental stress are affected not only by specific demographic and environment circumstances but by many others factors: social, legal, economic, technological, and consumption. The people of Kiribati stand to gain a lot from a coordinated settlement strategy which tackles land development and population distribution in South Tarawa.

### **3. Improving the living environment for a sustainable future: how can a settlement strategy help?**

#### **3.1 The purpose of a settlement strategy**

Improving the living environment in urban centres requires adequate land and shelter for all; efficient land-resource management; adequate water, sanitation and solid waste management for all; and efficient human resource management. This, in turn demands technical guidelines on how to better manage land, municipal finance and administration, infrastructure, and the environment, and how to improve living standards, especially of more disadvantaged residents.

A strategy is a plan of action that defines in specific terms the goals of the action and the ways in which they can be attained. A settlement strategy for South Tarawa would:

- define how living conditions are to be improved;
- identify resources available to meet these goals and cost-effective ways of using them;
- set out responsibilities and a time-frame for implementing the necessary measures.

A settlement strategy, therefore, includes both policy and technical directions. It aims to establish a process of urban management, not just the attainment of a pre-established plan. This process rests on closer integration between government departments and agencies in managing urban areas. Better coordination is essential for better decision-making and better resource allocation and will, in turn, allow for improved quality of life for residents and less pressure on resources.

There is no universal type of settlement strategy that is suitable for Kiribati in the same way it is suitable for other countries. Always, planning strategies must respond to local needs and to the priorities of people there. Policy and institutional development are politically sensitive matters. A successful settlement strategy depends more on political commitment than it does on technical programmes (Habitat, 1992:37).

#### **3.2 Designing a settlement strategy for South Tarawa**

One step in designing a settlement strategy for South Tarawa has been taken. A task force, the South Tarawa Urban Management Committee, has been established. This committee will promote and assist coordination between government agencies in planning infrastructure and service provision; collect information on land development status, environment and infrastructure in South Tarawa; improve the accuracy of population, household, housing and plot projections; raise the cost-effectiveness of service provision and infrastructure development; and work towards

a more efficient match between infrastructure needs, demands and environment resources, including prioritisation of infrastructure projects.

Other initial steps needed are:

- to analyse specific development problems on South Tarawa, such as land, housing, water, and waste management;
- to set objectives to be achieved through settlement planning and management, such as the adoption of agreed Development Standards; and
- to analyse the economic, social, cultural context in which the planning and management system will operate and determine to whose needs the system will respond.

The analysis of development problems on South Tarawa, as perceived by the community and the Government, should include an in-depth investigation as to why earlier plans for South Tarawa have not been implemented, why existing land-use legislation has not been fully enforced and, thereby, elaborate on the complexity of development problems on South Tarawa, and calculate what it would take to adequately address those problems. This would include detailed assessments of needs and resources by sector; for example, land use and housing surveys to estimate present needs and future requirements in housing construction and upgrading to house a growing population. Setting realistic goals requires assessment of actual costs and benefits, and who they accrue to.

The objectives of the strategy for South Tarawa then rest on the size and nature of the problems identified; the nature of the resource base; and standards or options affordable to people in the community and to the country at large. These objectives also need to be linked to the goals of national economic, environment and social policies.

### **3.3 Implementing a settlement strategy**

The aim of settlement planning is to greatly increase land and resource-use efficiency and effectiveness, as well as better decision-making and coordination. Settlement planning does not require an elaborate, expensive institutional base. What it does require is full, on-going coordination between various government ministries or departments, the private sector and the public. Many ministries and agencies have important roles in settlement management. Environment planning and management has a particularly obvious role. Community involvement in devising and implementing the strategy could be organised through the Betio and Bairiki Village Area Committees.

In regard to the way in which the strategy will operate and be responsive to peoples' needs, there are three essential institutional arrangements for its implementation:

- ensuring there is political commitment at the highest possible level;

- ensuring there is public understanding and contribution to the strategy on a sufficiently wide basis ;
- ensuring that current functions of central and local government bodies (e.g. TUC) are compatible with the strategy, or that their capacity to provide services is appropriately strengthened.

### **3.4 Conclusions**

- The need for political commitment to address critical issues in South Tarawa can not be over-emphasised.
- Broad-based involvement of the community in both devising and implementing the strategy is also essential. There needs to be full discussion of the issues, options and strategies by all sectors of the community.
- This includes involving the private sector and community NGOs in the planning, implementation and management of activities. This is necessary to avoid overburdening the Government administration, to encourage the private sector to generate resources and employment, and to involve people in the improvement of their own settlement conditions.
- Government agencies, particularly local government bodies, need institutional strengthening so they can provide necessary services.

#### 4. Assistance to the Government of Kiribati in improving living conditions on South Tarawa.

There is no technical 'fix' that could ameliorate problems of congestion, urban decay, and environmental degradation on South Tarawa, without there being political commitment at the highest level. Improving settlement and resource management involves political, social, legal, and economic considerations, not merely technical ones. Besides considering how outside donor organisations could assist, therefore, it is necessary for people directly concerned with South Tarawa's development to develop their understanding of how and why efficient land-use management has not progressed and how political will at both the national and community level can be consolidated to tackle these problems.

As the following table indicates, major donors recognise the urgency of problems in South Tarawa's urban sector and are providing assistance. There has, however, been concern expressed by at least one major donor that technical assistance alone will not provide a sustainable solution to urban health conditions there. Rather, it was suggested that a multi-disciplinary and coordinated approach -- including engineering, public education, social mobilisation, institutional strengthening, land-use planning, human resource development, and so on -- was essential for there to be any effective improvement. Thus a prerequisite to the Government of Kiribati securing further assistance to the urban sector may well be their formulation of and commitment to such a comprehensive, integrated strategy, which is also the principal recommendation of this report.

An initial step in developing a settlement strategy would be to analyse development problems on South Tarawa. These research activities might possibly be assisted by donor agencies, but the policy and management discussions which this research would inform, and the decisions which would ensue, can only be determined by political, social and economic realities as the people and Government of Kiribati see them to be.

##### Present interest by major donors/aid agencies in assistance to South Tarawa urban sector

Sub-sector	Health & Education	Institutional Training	Transport	Water	Sewerage	Environment	Housing	Ports/Communications
AIDAB		*		*	*			
ODA	*	*	*				*	
New Zealand	*	*						
EU		*						*
Japan								*
SPREP						*		
UNDP	*	*						

Source: MHARD, February, 1994

SPREP has provided Kiribati with assistance in a wide range of situations, including assistance in devising the national Environment Management Strategy. SPREP's population and environment project is available to assist Pacific island governments and communities use information about population composition, growth, and distribution in decisions they make about their environment, assist governments coordinate their national policy positions on population and on environment; and to help environment, planning, and other government departments with technical assistance that is related to environment and population issues - such as environmental health, urban planning and other land-use issues, demographic impact analysis of development projects, solid waste management, and other areas of concern to governments, NGOs, or community groups. The project also runs short workshops in population planning skills, assists people from the region attend other short-term training; supports research into population-environment interactions; contributes to improved data collection and analysis; and improves public information and education about connections between population and environment issues.

## 5. Conclusions and Recommendations

Bar some unforeseen event, the population of South Tarawa will continue to grow for at least the next two decades, even if migration to Tarawa slows and fertility declines. Coming to terms with a growing population is to meet a necessary challenge. The serious point to consider is that living conditions may not steadily decline but may abruptly deteriorate. Environmental degradation and natural resource depletion can suddenly and sharply worsen with the demands of growing numbers of people and the cumulative burden of past over-exploitation.

- Current problems of congestion, poor sanitation and public health will only become more acute if they are not addressed now.
- The expected larger population needs to be adequately accommodated or everyone's standard of living will go down, with bad economic and environmental consequences.
- The need for political commitment to address critical issues in South Tarawa can not be over-emphasised.
- There is, therefore, a strong need to develop an integrated settlement strategy, or urban plan, for South Tarawa that addresses key issues of land, housing, sanitation and good environmental management.
- Broad-based involvement of the community in both devising and implementing the strategy is also essential. There needs to be full discussion of the issues, options and strategies by all sectors of the community.
- This includes involving the private sector and community NGOs in the planning, implementation and management of activities. This is necessary to avoid overburdening the Government administration, to encourage the private sector to generate resources and employment, and to involve people in the improvement of their own settlement conditions.
- Government agencies, particularly local government bodies, need institutional strengthening so they can provide necessary services.

## 6. References

AIDAB (1993) Field appraisal of the South Tarawa Sanitation Project, mimeo.

Lodge, Michael (1987) 'Land law and procedure' in Land Tenure in the Atolls, R. Crocombe (ed.) Institute of Pacific Studies, Suva, pp. 73-107

Newels, R. (1993) 'Spatial planning and management' in United Nations Department for Development Support, Integrated Macroeconomic Development Planning and Management for Sustainable Development: Guidelines for Island Developing Countries, United Nations, New York.

United Nations Centre for Human Settlements (Habitat), 1989, Decentralization Policies and Human Settlements Development, United Nations, Nairobi.

United Nations Centre for Human Settlements (Habitat), 1992, Improving the Living Environment for a Sustainable Future, United Nations, Nairobi