South Pacific Bureau
for Economic Co-operation

South Pacific Commission

Economic & Social
Commission for Asia and the Pacific

United Nations
Environment Programme

South Pacific Regional Environment Programme

TOPIC REVIEW No.3

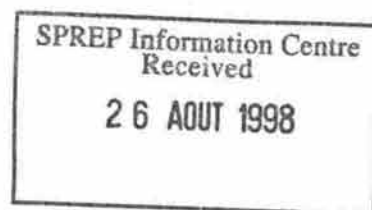## URBANIZATION AND ITS EFFECTS ON THE SOUTH PACIFIC ENVIRONMENT

by

John Low

SOUTH PACIFIC REGIONAL ENVIRONMENT PROGRAMME

Noumea, New Caledonia

TOPIC   REVIEW

URBANIZATION AND ITS EFFECTS ON THE
SOUTH PACIFIC ENVIRONMENT

by

John Low
Assistant Director
Office of Environment and Conservation
Papua New Guinea

573/81

SOUTH PACIFIC REGIONAL ENVIRONMENT PROGRAMME

URBANIZATION AND ITS EFFECTS ON THE

SOUTH PACIFIC ENVIRONMENT

by

John Low
Assistant Director
Office of Environment & Conservation
Papua New Guinea

In contrast to the rest of the developing and developed World, the stimulus to urbanization in the South Pacific has been much later and as yet less severe in its consequences for countries of the area. Nonetheless, increased urbanization within the Oceanic region, albeit at a much smaller scale than elsewhere, is beginning to impact on many countries of the area.

The urbanization process has generally been considered to co-exist hand in hand with modernization and industrialization and some commentators have even welcomed the process as a healthy expedient to development in the Third World (Ward, 1970). However, as a participant at the Pacific Science Assoc. Inter. - Congress on Urban Areas held in Guam noted, "On one day ---- Pacific Island News (Guam) carried stories dealing with such topics as pollution resulting from raw sewage emanating from a housing development, a power outage, litter control, the oil and energy crises, a 30% increase in licensed vehicles on Guam in a year's time and a public hearing on the control of dangerous substances". (FORCE, 1975). A similar listing would have been available from a Port-Moresby newspaper in 1980.

It seems clearly evident that aspects of the modernization and development process provide unmistakable incentives for the growth of urbanization and this may be augmented by a corresponding decline or stagnation in traditionally rural life support systems.

The growth of one and the decline of the other leads inevitably to an examination of the "push" and "pull" factors in urban migration that are so often basic to the discussion of the phenomenon of urbanization. For example, in Papua New Guinea, a voluminous body of research has been undertaken into the causes and scope of the urbanization process. So rich has the field become that the PNG Institute of Applied Social and Economic Research has recently published a substantial bibliography on internal migration and urbanization the contents of which evince an inexhaustible curiosity by social researchers of the process (Faircloth, 1978).

There have been several conferences conducted by the South Pacific Commission, and the Pacific Science Association since 1960 : urbanization was the key subject at the annual Waigani Seminar in 1979. Perhaps much of the most recent interest in the area has been an outgrowth of the 1976 Habitat Conference in Vancouver and the resultant work of the United Nations Commission on Human Settlements.

Push and Pull Factors

Of most general interest in the above-mentioned body of research in Papua New Guinea and through the South Pacific are the "push" and "pull" factors. The "push" factors usually associated with urbanization refer to conditions in the rural areas which provide incentives for migration to the cities. These are generally land shortages preventing the maintenance of a healthy nutritional base at the rural level, a lack of cash earning opportunities, boredom with village life styles and traditional social controls, and lack of health and educational facilities. The urban "pull" factors attracting people to town are: the chance to earn a cash wage income, curiosity, an experience that is sometimes viewed as a rite of passage, the "bright lights" , and opportunity to use educational skills.

These considerations, while generally applied most commonly to the migration of settlers to establish informal settlements in the urban area, may also apply to those moving into the more formal sector.

But what has cause the growth of the cities themselves and their continuing cumulative and accelerated growth? Generally, the causes seem to resolve around the increased opportunities provided by a rapidly growing public service mainly in the nations administrative centre, and a general increase in processing and manufacturing which is usually concentrated around port/cities. The economies of scale, existing urban infrastructure and larger labour market ensure that developers will gravitate to these larger centres when governments are not firm in promoting development elsewhere. Thus ORAM (1970) in regard to Port-Moresby has noted "Decentralization could increase; however, the dominant influences are likely to be administrative lassitude, market forces and the Australian model which will reinforce Port-Moresby's ascendency". To illustrate this point, the ocean

shipping port for ore from the Ok Tedi copper project in the west
central part of the country will be at Port-Moresby instead of at
one of several other sites in the very underdeveloped Fly River-
Gulf of Papua area which received only half-hearted examination.
This decision was made in a country which stresses its desire for
rural development and decentralization!

At the 1975 Pacific Science Association meeting on Pacific
Urban Centres, there was considerable discussion of the effects that
metropolitan countries might have in exacerbating the urban growth
problem in a manner that might be quite artificial. This seems
particularly true where islands such as Guam are used as military
bases by metropolitan governments. Here considerable difficulties
have arisen in urban and waterfront planning because of decisions
made which were out of the control of the local authority. There
are similar problems in Ebeye, Marshall Islands. Large scale
externally-oriented tourism may also have a major skewing effect on
urban environments and social conditions.

While the size of Pacific urban centres is small, the propor-
tional rate of urbanization is just as large as in major settlement
areas, and without proper planning, the problems associated with the
trend in larger countries can easily appear in the South Pacific.

The Scope of Urbanization in the South Pacific Region with special emphasis on Papua New Guinea

In 1961, the first major conference on Pacific Urbanization
took place in Honolulu intending to focus attention on a situation
that was bound to grow in the future. Since then several conferences
have concentrated on various facets of the urbanization issue, many
of them of an environmental and social nature; a unit was established
within the South Pacific Commission to examine and research these
various issues.

The 1963 South Pacific Conference on Rural Health Conditions
which discussed urbanization determined that Fiji, French Polynesia,
Cook Islands, Tonga, New Caledonia, and Papua New Guinea were showing
signs of rapid urbanization, whereas American Samoa, Gilbert and Ellice
Islands (Kiribati and Tuvalu), Niue, Trust Territory of the Pacific
Islands, and Western Samoa were not showing evidence of substantial
urbanization. The Solomon Islands, Vanuatu (New Hebrides), Marianas
and Guam were not included in the listing (SPC, 1963). It may be
inferred that the ability of many citizens of the second group to
emigrate to the United States or New Zealand has relieved much of the
pressure for urbanization there, and that with very small islands,
there is little scope for urbanization except with Ebeye, Marshall
Islands and its relationship to the military base at Kwajalein.
However, with the others, the availability of significant resources
for exploitation, a large and growing population and rapid development
programmes there seems to be a high degree of urbanization. For example,

in Tahiti, with both a large military programme and a significant boost to tourism since the 1960's, the growth of Papeete has been very fast. Both the high wages and a marked proclivity to wage employment by Polynesians indicate considerable growth potential for Papeete now and in the future. (Finney, 1975). In contrast (at least in 1963) was a great increase in population in the Gilbert and Ellice Islands (12,000 in 1947 to 48,777 in 1963) but which caused no noticeable growth effects in the two major centres of Tarawa and Ocean Island. This might be due to the lack of any cash earning opportunities so that people remained in the villages living a subsistance lifestyle.

After several years experience and research, it became evident that many of the "push and pull" factors which were important to a clear understanding of the urbanization process in other countries were not apparent in much of the South Pacific. Perhaps most significant is that the "pull" factors appear to strongly out weigh the "push" factors. In many countries, the "pull" of Honolulu and Auckland far outweighed the "pull" of Pago Pago, Apia or Nuku'Alofa; hence these latter towns did not grow at the accelerated pace of Port-Moresby or Suva where citizens had no such options for international migration. The land situation in Fiji provides a much more common "push" factor for Indian migrants to Suva than it does for the Melanesian migrants who are more "pulled" by the "bright lights" (Belshaw, 1963). But the case for Fijian Indians appears close to unique for Pacific Islanders. This dominance of the "pull" factor is unlike much of the rest of the developing world where "push" factors are acutely important and provide a particularly stressful and critical urban settlement situation. Even in Papua New Guinea's Chimbu Province, which is heavily overpopulated with declining yields on agricultural lands, it has been contended that the population explosion has actually encouraged people to stay on the land to protect it from being infringed by encroachers, such is the importance of land ownership to Papua New Guineans (Harris, 1976). However, a legally sanctioned trend to individual rural land ownership patterns could initiate a compelling "push" factor.

One of the clearer outcomes of a "pull" orientated urbanization situation typical of most of the South Pacific (with the Fijian Indian exception) has been the lack of formation of an informal trade sector in most South Pacific cities. Migrants have either found wage employment with existing institutions or if none was available, after living with friends for some time, they have returned to the village. It appears that the village option is still open to most urban migrants and certainly in Papua New Guinea urban migrants indicate an overwhelming desire to eventually return to their home villages.

Their housing situation in town, while more compact than in the village, is not necessarily any worse in quality than would be the case in the village. Where cash opportunities exist in rural areas, the migration is deemed to be a temporary expedient to obtain capital for business development back in the rural areas. In such areas, permanent urban migration is viewed with considerable disdain (Strathearn, 1975). Whereas longer term urban migration to Port-Moresby is undertaken by migrants from the Gulf and Western Provinces, where few cash earning opportunities are available, these migrants too intend an eventual return to the home village. The off-spring of these families, however, have a particular problem; they identify more with Port-Moresby as their home and are unlikely to have land rights in the home villages. This group seems increasingly to be contributing disproportionally to some of the newly experienced urban problems in the city (MORAUTA, 1979).

Port-Moresby itself, althoug the primary city in Papua New Guinea, represents a particularly uninviting environment for migrants without access to significant cash resources. The arid climate makes gardening virtually impossible and the high prices of market produce and store bought food make it difficult to survive for long without cash, (GUPTA, 1979). The first, recently published, census figures for 1980 indicate that these factors have taken their toll on the previous high growth rate for Port-Moresby whose population is now far less than projected from data gathered at the 1971 census. The city of Lae,on the other hand, does provide a more inviting prospect from the subsistance point of view and its growth is now slightly above the original projection. A recent survey undertaken for the Department of Urban Development has indicated that 2/3 of Lae's population is informally housed compared to 1/3 in Port-Moresby. It is possible to live within the squatter settlements of Lae with minimal cash resources because of the availability of subsistance resources. The consequent intensive gardening is causing a uniquely interesting set of environmental problems for that city. Forest clearing and cultivation in the nearby Atzera range is causing flooding of rivers and consequent damage on the flood plains roads and bridges every wet season. The city of Lae has undertaken a programme to bring these settlers down from the hills, to provide land in areas not prone to erosion and to provide compost fertilizer and lessons in continuous cropping agriculture. The hills are to be reforested.

So although growth in the availability of wage income has been high in both cities, Lae's immediate hinterland seems to have provided a much more salutary environment for "pull" factor migrants, and provides an opportunity for better capital accumulation for those who intend to return to their home areas to start businesses.

The environmental problems of these two cities are quite distinct and they may represent many of the environmental problems that are appearing throughout the South Pacific and possibly even in cities outside of the region which are housing substantial numbers of South Pacific migrants.

SOCIAL AND PHYSICAL ENVIRONMENTAL PROBLEMS OF THE URBANIZATION PROCESS WITH EMPHASIS ON PORT-MORESBY

There are several environmental problems that arise from the urbanization process, most of them closely interrelated and many of them affecting individual welfare in a very direct manner. It is fortunate that these problems have not reached in the South Pacific the intensity evident in other parts of the Third World or in Western Countries. In those countries, some claim that the seeds for destruction of the urbanization process have been sown, by such factors as higher energy costs, increasing social tensions, and anonymity. These factors are now being reflected in an increasing desire for ruralization of society in many highly concentrated urban areas.

Health (Physical and Mental)

A central focus of concern at South Pacific Conferences on health and urbanization has been potential health problems arising in the urban situation. Communicable diseases can spread much more easily in the urban environment, particularly where housing and sanitation facilities are substandard such as in squatter settlements. The incidence of tuberculosis, for example, is particularly acute in Port-Moresby where it is often the custom that many people will sleep in one room. Typhoid cases have been found from time to time in Port-Moresby; however, the sewage disposal systems have not deteriorated to the degree that there has been an epidemic outbreak. The semi-arid climate may have also reduced the spread of disease as it has for dengue fever; this now seems to be considered an urban disease associated with crowding and suitability for mosquito breeding. (Force, 1975). The hot and humid climate characteristic of so many Pacific urban settlements makes the spreading of diseases, even with adequate sanitation, considerably more likely and common than would be the case in a temperate urban situation.

Of considerable concern, also are nutritional deficiencies which seem common consequences of urbanization. The switch from generally nutritious traditional foods to sugar loaded snacks poses considerable problems for the long term health of urban populations. It is not uncommon to see even civil servants entering their offices with a breakfast of Cola and a bag of cheese pretzels and expecting to sustain a day's work on it.

Epidemiological studies have indicated that Polynesians have a great susceptibility to diabetes.

Where traditional foods at the market are quite expensive, as is the case in Port-Moresby, and snack foods relatively cheap, there could be a considerable problem. Malnutrition of urban children is an acute concern for the future. While not in itself a direct environmental problem, it contributes to a general deterioration in standards and in the ability to use physical and mental resources to deal with problems.

Mental health also seems to suffer in the urban environment (Sinclair, 1962). This is commonly linked to a breakdown of traditional support mechanisms and to difficulty in adjusting to a new work pace. It may be particularly acute for those thrust into responsible positions in the public service away from the more leisurely pace of village life.

The social anonymity to which young people particularly are exposed is a destructive influence on life in the urban environment. The forming of gangs and widespread juvenile deliquency are becoming a common feature in many South Pacific cities as traditional control mechanisms breakdown. The problems of Honolulu are approaching those of some of the mainland cities of the U.S. (Time, Dec. 15/80). Port-Moresby has been periodically plagued with this problem.

Increased social welfare assistance and greater health extension work might go some way to rectify some of these problems, but the root causes are deep seated.

Automobile and other alcohol related accidents and increased noise levels are other health associated aspects of increasing urbanization.

URBAN PLANNING

Within the scope of urban planning fall many of the problems associated with the burgeoning growth of cities. The speed of urbanization has often greatly outstripped the capacity of national and local authorities to deal with such matters as housing, waste disposal (sewage, litter and solid waste), transportation infrastructure, electric power, water and land acquisition. Each of these areas we may examine individually in the case of Port-Moresby and with reference to other settlements in the South Pacific area.

When the term of colonial stewardship of many island communities was expiring (a time which coincided with rapid urban growth in some areas) a lack of funds and a short term future perspective both combined to present the potential for real problems when cities grew at a very rapid pace. In this Port-Moresby has much in common with other Pacific urban centres. It seems a characteristic view of all metropolitan administrations throughout the Pacific that the proper place for inhabitants of their territories was the village and not the town (Bruijn, Harre). This aversion to seeing administrative centres as nothing more than just that has resulted in components of urban infrastructures being vastly overloaded.

Housing - Many conferences of the South Pacific Commission and other organizations have revolved around the development of housing which is both adequate from sanitation and health perspectives and at the same time within reach of the low paid urban worker. The search for the ultimate solution in this area, that the literature would suggest , has been explored intensively in the 1960's throughout the world, seems to have been relatively unsuccessful. Quite often, the urban settler is not prepared to make nor can he afford, a significant investment in housing. The "pull" factor associated with much urbanization in the Pacific may actually exacerbate this tendency. The capital value associated with construction of a good house is usually not understood by urban dwellers. Even top civil servants, who are used to renting good quality housing, have resisted opportunities to buy houses at very low prices. It is not then much wonder that lower income earners, who have to spend a considerably greater portion of their income on housing, and also see their long term future in their home village, are reluctant to build good quality housing. This problem is complicated by the lack of available land in Port-Moresby (and in other centres in the region) which is still under customary tenure.

Thus there is a considerable tendency, and considerable economic justi- fication, to live in squatter settlements and pay a nominal rent to a customary land owner. Several years ago, at a time when the Housing Commission was considering raising its uneconomically low rents, higher level public servants in at least one city said they would move out to build squatter settlements rather than pay the higher rates.

Until such time as urban dwellers perceive themselves to be a permanent part of the urban scene, it seems unlikely that there will be willingness to provide more than the very basic housing that is needed. It also seems that government-designed low cost units do not fit the social needs of Papua New Guineans who would much rather live in large unfinished houses than a small finished house (Herlihy, 1974), so that "wantoks" (relatives) can also live there. This factor may contribute to the lack of success of site and service schemes, and government housing with the inability to choose one's neighbours, a considerable disavantage when compared to squatter settlements. Consultative planning more than anything else, is needed to arrive at housing solutions that meet the needs of sanitation and of economic and social viability for what may be regarded as temporary urban dwellers.

Waste Disposal - Squatter settlements represent a problem mainly because of inadequate disposal of excreta. At the same time, many cities are being threatened with an increase in communicable diseases, because of inadequate "ad hoc" planning of sewage disposal facilities during the colonial era.

About two thirds of Port-Moresby's sewage is now directed to treatment ponds. However, in the downtown part, there are ocean outfalls which are overloaded because of a lack of control on building permits. This has created a serious pollution problem in the Port-Moresby water-front area. This has been exacerbating by lack of maintenance of mains and septic tanks and a development freeze has been placed on this part

of town until the problem is rectified. This will require consolidating existing outfalls and dispersing the sewage further out to sea where it will have less impact on the shore. It will cost K. 1.3 million. Other sewage treatment facilities will have to be expanded if Port-Moresby is to grow significantly while maintaining environmental quality.

Solid waste disposal has also created considerable problems in the Port-Moresby area, through the use of inadequately supervised dumping sites. Although some land fills are now being well managed, older dumps are still being illegally used and creating significant visual and possibly disease vector problems.

Litter is a considerable problem; few village migrants, or apparently anyone else, has an understanding of the need for the proper disposal of bottles, cans and papers. A particularly significant problem, in this respect, in Papua New Guinea and possibly other Pacific areas, is caused by broken glass to people who prefer to walk barefoot. Cut feet represent a considerable portion of entries to the Port-Moresby hospital Casualty Section. The Office of Environment has recently received a consultants report on the rectification of the litter and bottle problem and hope to be implementing a programme in the near future, which would also deal with the growing problem of junked cars and their proper disposal.

Transportation Infrastructure - Papua New Guinea's growing wealth may best be seen in the exploding growth in motor vehicle ownership within the five years since independence.

Between 1975 and 1978, total motor vehicles registrations increased overall in PNG by 25.9%, and most likely by a higher percentage in the Port-Moresby area, which in 1978 constituted 22.8% of total registrations. This growth on limited road infrastructure has taken its inevitable toll to the detriment of the Port-Moresby commuter who previously would have been able to travel relatively quickly from one area of the city to another. This situation has been further worsened recently by the demise of the Port-Moresby Bus Company which provided inexpensive transportation throughout the city, but like most urban bus companies anywhere in the world ran at a loss. Competition from licensed owner-operated minibuses, an inefficient fare collection system, excess capacity during off hours, and lack of government sympathy for the situation resulted in the closure of the company and an expansion of the informal minibus sector, which is practically the only evidence of individual national entrepreneurship in Port-Moresby. The increased number of buses and cars has caused a notable difference to traffic growth and speed within the last year and has caused pressure for a rise in fares, which are already considerably more than the bus company's. The increased number of heavy vehicles is also doing more damage to the roads, and there is already pressure for the widening of certain roads at considerable cost.

Despite the flat nature of much of Port-Moresby's topography, there has been remarkably little interest in bicycling or even motorcycles. The Office of Environment partially funded a bicycle parth between several suburbs connecting with the Waigani administrative centre, the University and the commercial area of Boroko; however, this path is virtually unused, some contend because of danger of attack on its lonelier stretches and because of possible stealing of bicycles. Certain parts of Port-Moresby would seem to be good prospects for bicycling and perhaps it would be more appropriate to build bicycle paths parallel with existing main roads. Outside the main rush hours, traffic still moves adequately, however, and the impetus for car ownership may have more of a status connotation than an element of rational transportation requirements. It may become necessary in the near future to implement considerably higher registration fees to discourage automobile ownership.

Shipping and consequent harbour works have caused environmental changes to the Port-Moresby harbour front area in the past few years. Increased importation of materials to Port-Moresby and the growth of container shipping have required expansion of harbour facilities with resultant environmental stress in this area, and stress to on-shore planning in the harbour area. The limited storage facilities in the harbour area and the need for transportation of goods over the few road linkages to the other parts of the city have contributed to traffic congestion in the downtown area.

At the time new waterfront expansion was proposed and began to be undertaken, public opposition to the monopolization of the waterfront by industry, contributed to demand for an examination of the options for other areas to become a future harbour terminal area close to Port-Moresby. However, the final study settled on the existing location as the only feasible site at this time.

Airports have also contributed to environmental problems in several Papua New Guinea cities, although not in Port-Moresby, and to major disruptions in transportation flows. This has been particularly notable at Lae and potentially so in Rabaul where the use of larger aircraft has necessitated removal to more remote airfields, away from the urban centres.

Increased fuel costs do not as yet seem to have effected significantly the amount of private automobile usage in cities.

Town and Infrastructure Planning - Lack of effective controls on building through town planning legislation and the issuance of building permits without a clear appreciation of the capacity of the available infrastructure, have caused not only problems in waste disposal but also in the supply of electric power and water in Port-Moresby.

Water pressure has often been inadequate to reach the far reaches of the overextended distribution system at its extremities and on hilltops.

Electric power, which has been supplied largely through a hydro-electric facility, has been overextended to the degree that the impoundment area has been nearly drained and is now supplemented with a gas turbine facility. A second gas turbine is about to be purchased at a considerable cost in fuel consumption compared with the hydro-electric scheme. Two recently approved facilities - a hotel and a steel fabricating plant - use a considerable amount of the new capacity. The latter facility could have been relocated to a town with greater electric power generating capacity.

There is a town planning division of the Department of Urban Development which is undertaking planning for towns throughout the country. The outdated legislation for town planning was to have been revised several years ago but to date, no new legislation has been produced. In the meantime, there seems to have been little constraint on the issuance of building permits by the Port-Moresby City Council until lately, and it is now clear that much construction had been allowed beyond capacity of the community's infrastructure to service it properly.

Land availability may place a constraint on further expansion of the city, like many cities of the South Pacific. Much of Port-Moresby has been built on lands leased from customary owners; much of it was originally swamp land, which had been filled in by developers during the boom in Port-Moresby's growth in the 1950's and 60's. While legislation has been passed to allow compulsory acquisition of lands for urban expansion, this is a particularly contentious issue in Papua New Guinea where land ownership is considered so important to traditional status, and it has been extremely difficult to alienate more land near Moresby without substantial compensation payments. This is in spite of the fact that the traditional villages of the area are marine oriented, and the quality of land and climate is very poor for agricultural purposes.

In the Lae area, where lands are better for subsistance maintenance, a very strong association of local landowners exists to withstand further pressure for alienation of land either formally by the government, or de facto by increasing squatter activity. The loss of such lands will virtually turn these people into part of the urban dispossessed who must then make their own way in the urban environment.

Although Port-Moresby traditional owners are more oriented towards the sea, it is notable that the concern expressed in Lae towards land, is reflected by Port-Moresby villagers towards encroachment on their marine resources. Traditional owners maintain strong views on pollution of the sea and overfishing by non traditional owners on the reefs close to Port-Moresby (Gaigo, 1981).

It is clear that there is a very real need to give special consideration to the needs of traditional villages that have been assimilated into the urban process, perhaps to their ultimate detriment.

Port-Moresby has been largely planned to an Australian model and is in fact notable for a lack of indigenization of the urban format. Perhaps only in the informal squatter settlements is there any indication of how the city would be organized if there was more of Papua New Guinean design to development. Means for public partici- pation in planning are still non-existant and would probably not be used if they were available because residents fail to identify with their capital city. The city is build around the automobile, and includes widely dispersed suburbs divided into industrial, residential and commercial areas with scant attention given to humanizing this pattern to a city in which such a relatively few own automobiles. As a result, Papua New Guineans have begun to adapt their living areas to a pedestrian lifestyle, with old trucks being converted to corner stores, old minibuses appearing in the back- yards of low convenant housing areas to be converted to sleeping quarters for wantoks, and informal marketing of betel nut in busy commercial areas.

Despite these first signs, the informal sector in Port-Moresby seems close to invisible. There has been considerable discussion of whether the kind of town planning that now exists has actually inhibited the growth of an informal sector and there has been concern from time to time to relax building and planning standards so that the informal sector might be encouraged to flourish. Little thought, however, seems to have been given to the health and sanitation consequences of such a move.

Social Environment - It seems clear that, as in other cities of the world, the traditional social order has undergone great stress in Papua New Guinean cities. The incidence of crime, excessive alcohol consump- tion, and mental illness leading to family problems, have taken their toll on the social fabric of the community. The strong extended family ties common to most of the South Pacific and particularly well developed in Papua New Guinea, seem to break down under the stress of wage employment, and more nucleated families are developing amongst more educated and better salaried Papua New Guineans. This, in turn, has caused its stress on Papua New Guineans who have traditionally found strength in the strong family mutual obligation system. These problems, in turn, send ripples throughout other facets of urban, and sometimes rural lifestyles. This process should certainly provide some food for thought for village oriented people of the South Pacific. Is the materialism, of which the urban areas are exemplary, really a justifiable alternative for those who might be content to live in an affluent subsistence pattern? Is the tradeoff worthwhile?

Optimal Rural-Urban Balance for the South Pacific

The most striking social change of all in the growth of urban areas has been the loss of communalism to the individualization process of the city. It is a process needed for capital acquisition and material consumption and this seems to be a considerable motive for many in the migration to city. While many of the physical environmental problems of urbanization can be solved by better long term planning, the social environmental consequences of urbanization should provide a focus for assessment of the desirability of the urbanization process. The large "pull" factor associated with the urbanization process in the South Pacific indicates that there is a great deal of voluntarism in the opting of subsistance villagers to join the urban migration. This is a considerably different motive for South Pacific people than would have been the case for many of the rural dispossessed of South East Asia, Latin America or of Industrial Age Britain. The voluntary nature of the urban migration could provide the focus for an interesting process of consultation and dialogue within Pacific countries as to the relative merits of the urbanization process, its effects on social values, and through this, a determination of the desirability of either fostering, controlling or preventing the growth of urban areas and the subsequent changes that would inevitably be made to the national way of life. The luxury of choice in a determination of the values in the urbanization process is one which many countries throughout the world would envy.

Policies for the Future

The colonial era and the early independence years seem to have witnessed a shift from negativism to indifference to the process of urbanization. However, since in independent countries, decision-makers live in urban areas, it becomes difficult to remain for long indifferent to one's surroundings and its problems. This fact has tended to give immediacy to urban problems at the expense of more remote rural problems, and even decision-makers from remote areas may be able to support considerable urban expenditure while their constituents do without. Given the large "pull" factor, however, in South Pacific urbanization, it must be asked whether this attention will in fact only increase the intensity of the "bright lights". People in rural areas have been bewildered to see Port-Moresby youth gang leaders given assistance to start businesses while they themselves have not had such help. What psychological effect does the provision of piped water to an urban squatter settlement have to a rural villager who has to walk distances for his water?

Several of Papua New Guinea's eight aims stress that the focus of development in Papua New Guinea must be the rural areas and the need for decentralization of economic activity outside of the urban areas. Despite this, the National Development Strategy provided heavy emphasis on urban activities and despite the official concern for rural welfare and development, urbam management has become a strategic objective (of 9) of the National Public Expenditure Plan. In 1981, 12% of National Public Expenditure allocation went for urban management compared to a target of 2%. It has thus been extremely difficult to ignore the perceived exigencies of urban development.

This compared with 7% for helping less developed areas with a target of 9%. Most of this money is provided for urban housing, residential lot development and water and sewerage infrastructure.

In 1977, a Department of Urban Management was created which has largely taken over the responsibilities of the Housing Commission and town planning. The Department has since been renamed the Department of Urban Development, which may be indicative of a promotional twist to an agency that was intended to be regulatory.

A essential value judgement must be made about South Pacific society, and its village-based orientation, to determine what degree of administrative and fiscal attention should go to the betterment of urban life. Is an increased expenditure in urban areas an implicit negation of rural development principles?

It is notable that the World Bank sectoral programme on urbanization stresses a restorative, accommodationist approach to urban development and stresses its inevitability. This may represent a sensible approach in countries where only the urban areas can provide a source of livelihood (World Bank, 1974). This situation does not as yet seem to be true in most countries of the South Pacific, and one must then ask whether attention to urban problems should be at the expense of rural development.

An examination of the causes of urban growth in each country, both in the informal and formal sectorsm and a determination of the priorities of ural development and revenue available might determine what priority should be given to an urban policy and whether that policy should be long range infrastructural planning, accommodationist or actually preventative. It is recognized that this latter option could be interpreted as callous and most likely politically unacceptable in democracies.

To a degree, in countries of significant size, there must be decisions on whether one urban area should receive primacy over others, as has been the case of most other cities in the developing world, or the growth of smaller centres should be encouraged. There are many factors certainly in these policies beyond the control of much planning. For example, urban centres associated with the extraction of non renewable resources with a limited lifetime, constrain the amount that should be spent on infrastructure that would supercede the lifetime of the industry. The development of such centres is wholly dependent on the success of a mineral exploration effort, the results of which are unpredictable.

Where urban growth is to be encouraged, considerable financial resources must become available for planning, infrastructure and housing, and there must be a conscious long term decision by government for the expenditure of such funds for these reasons. Generally, the only urban areas that can be planned with such predictability are government centres, which have more control over potential revenues in the long term future. It is, therefore, not surprising that the cities which are generally seen to have had some of the best physical urban planning in the world have been government centres. However, in some cases, these cities have also been called souless and lacking in the vitality of more informally planned cities.

Generally, cities are much more dependent on the vagaries of the industrialization process than rural areas and thus, as in so many areas that are at the mercy of such unpredictabilities, it is difficult for decision-makers to justify considerable expenditure to achieve optimal planning. More likely the accommodationist approach will continue, probably causing many problems in its wake as in the case of Port-Moresby where the issuance of building permits overstretched the infrastructure.

More effective enforcement, stronger town planning legislation and national control are necessary to avoid such problems in future, in the formal sector.

At the same time, the necessary popular participation to urban planning must be encouraged to provide for a human style of development for South Pacific cities, to limit their deleterious social impacts, to maintain the communal strength of South Pacific societies, and to avoid individualization of society which has been so often the inevitable and destructive result of the urbanization process elsewhere.

BIBLIOGRAPHY

Bruijn, Comp. Annotated Select Bibliography on Urbanization in the South Pacific, SPC. Noumea, 1965 (Belshaw, Sinclair, Bruijn).

Conroy-J-, Urban Growth and Unemployment, IASER, Boroko, 1977.

Curtain, R., The Urban Proletariat and Peasants in Town : Temporary as Permanent Migration in PNG, IASER, Boroko, 1976.

Dwyer, D.J., ed., The City in the Third World, McMillan, London 1974.

Dalton, K.J., Chimbu People under Pressure : The Social Impact of Urbanization, MAB, ANU, 1979.

Faircloth, S., Bibliography on Internal Migration and Urbanization in PNG, IASER, 1978.

Force & Bishop, edo., Impact of Urban Centres in the Pacific, Pacific Science Assoc., Honolulu, 1975.

Gaigo, B., The Olden Days and Present Fishing Practices among the People of Tatana Village , Unpub., 1980.

Hay, Lugod (eds), Third World Urbanization, Moaroufa, Chicago, 1977.

Harre, J., (ed), Living in Town, U.S.P., 1971.

Herlihy, J.D., Political and Administrative Response to the Problems of Port-Moresby Migrants Settlers, Unpub., 1974.

Langmore & Oram, Port-Moresby Urban Development, New Guinea Research Bulletin, No.37, 1970.

Levine & Levine, Urbanization in PNG, Cambridge, 1979.

Morauta, L., Facing the Facts : The Need for Permanent Urban Residents, IASER, Boroko, 1979.

May, R.J., (ed), Change and Movement Readings on Internal Migration in Papua New Guinea, IASER, 1977.

Gupta, D., Growth Pole Theory and Urban Growth in PNG, UPNG (unpub.), 1979.

Harris, G., Internal Migration in PNG : A Survey of Recent Literature, UPNG, (unpub.), 1972.

Strathearn, A., No Money on Our Skins, New Guinea Bulletin, No.61, 1975.

Shuster, D., Urbanization in the Pacific, U. of Hawaii, 1979.

Skeldon, R., Evolving Patterns of Population Movement in PNG with Reference to Policy Implications, IASER, 1978.

(ii)

World Bank, Urbanization, Sector Working Paper, Washington, 1972.

Ward, R.G., International Migration and Urbanization in PNG, (unpub.),
       1970.

Urbanization in the South Pacific, Report of Advisory Committee on
       Urbanization, Bishop Museum, Honolulu, 1961.

Technical Meeting on Urban Local Government, Report, Port-Moresby,
       1964.

Regional Seminar on Health, Social Planning and Urbanization, Report,
       Noumea, 1970.

Regional Conference on Population Problems, Urbanization, Resettelement
       and Rural Development, Report, Suva, 1975.