PACIFIC ISLANDS DEVELOPMENT PROGRAM

The Pacific Islands Development Program (PIDP) at the East-West Center helps meet the special development needs of the Pacific islands region through cooperative research, education, and training. PIDP also serves as the Secretariat for the Pacific Islands Conference, a heads of government organization involving leaders from throughout the Pacific region, and for the Pacific Islands Conference Standing Committee, which was established to ensure follow-up on development problems discussed at the 1980 Conference.

PIDP’s research, education, and training activities are developed as a direct response to requests from the Standing Committee. PIDP’s projects are planned in close cooperation with the Committee to ensure that the focus and the organization of each project address the needs identified by the heads of government on the Committee, a process which is unique within the East-West Center and in other research and educational organizations serving the Pacific.

A major objective of the program has been to provide quality in-depth analytical studies on specific priority issues as identified by the Pacific island leaders and people. The aim is to provide leaders with detailed information and alternative strategies on policy issues. Each island country will make its own decision based on national goals and objectives. Since 1980, PIDP has been given the task of research in eight project areas: energy, disaster preparedness, aquaculture, government and administrative systems, nuclear waste disposal, business ventures development and management, roles of multinational corporations, and regional cooperation.

EAST-WEST CENTER

The East-West Center is a public, nonprofit educational institution with an international board of governors. Some 2,000 research fellows, graduate students, and professionals in business and government each year work with the Center’s international staff in cooperative study, training, and research. They examine major issues related to population, resources and development, the environment, culture, and communication in Asia, the Pacific, and the United States. The Center was established in 1960 by the United States Congress, which provides principal funding. Support also comes from more than 20 Asian and Pacific governments, as well as private agencies and corporations.
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Pacific Islands Development Program
FOREWORD

The papers contained in this volume have been prepared as background materials for the second meeting of the Pacific Islands Conference, to be held in August 1985 in the Cook Islands. The Standing Committee of the Pacific Islands Conference decided at its February 1984 meeting that the theme of the second meeting of the Conference should be "Development and Change." The Standing Committee, with the help of a pre-conference planning meeting held in May 1984, identified five issue areas to be discussed at the 1985 Conference:

- The Pacific Islands in the 21st Century
- Urban and Rural Life
- Health and Nutrition
- Our Young People: The Future of the Pacific
- The Role of the Private Sector in Development

The Standing Committee directed the Pacific Islands Development Program, as Secretariat of the Conference, to commission background papers for each of these issue areas.

The purpose of the papers is to provide overviews of major policy questions associated with each of the issue areas. The issues will be discussed by panels of leaders and representatives from governments participating in the Conference.

The Pacific Islands Development Program commissioned the writings of individuals in government, regional organizations, and academic institutions. While the authors of the papers are authorities in their respective issue areas, their papers represent their own views and are not intended to be definitive. Rather, it is hoped that the papers will be of some assistance to the Conference panel members as they prepare to participate in the Conference discussions.

On behalf of the Secretariat of the Pacific Islands Conference, I would like to thank the individuals, organizations, and institutions who prepared these papers. And I hope that the Conference participants find the papers useful.

Filipe N. Bole
Director
Pacific Islands Development Program
The Pacific Islands in the 21st Century
GOVERNMENT POLICY AND THE DESTINY
OF PACIFIC ISLANDS

by I.Q. Lasaqa

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii
I.Q. LASAQA is secretary to the cabinet, Prime Minister's Department, Suva, Fiji.

The Pacific Islands Development Program is publishing this report as background material for the 2nd Pacific Islands Conference, August 1985 in the Cook Islands, and for general use by Pacific island governments. To ensure maximum dissemination of the material contained in the report, it is not copyrighted and island governments are encouraged to copy the report or portions of it at will. PIDP requests, however, that organizations, institutions, and individuals acknowledge the source of any material used from this report.
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GOVERNMENT POLICY AND THE DESTINY OF PACIFIC ISLANDS

by I.Q. Lasaqa

INTRODUCTION

There are a number of complex issues relating to the kinds of Pacific island societies that will exist in the twenty-first century. What kinds of societies are desired or desirable for the Pacific islands of the future? What would be the main features of those societies? What forces or trends are evident in Pacific societies now that may influence the shape of things to come?

This essay is an attempt at prognostication, and thus is an exercise fraught with uncertainties because of the diverse characteristics of the Pacific islands and the myriad of forces—many of them externally induced—that impinge on their people.

In discussing these issues, the broad characteristics of Pacific islands nations that have a bearing on the nature of their societies must be taken into account. This is important because these characteristics would inevitably influence the nature of policies conductive to the attainment of the goals of society, including their articulation, timing, and mode of implementation.

There is no doubt the people of the Pacific islands wish to control their own destinies, but what does this mean? Is it possible given the present circumstances? Can Pacific islanders really control their own destinies, or is that control a matter of degree, possible only in relative terms?

In any assessment of the future of a society, no matter how small or insignificant it might be, the discussion cannot be confined to purely social considerations. A society operates within a broad framework of factors, which, for convenience and ease of understanding, are categorized as economic, social, physical, and political. These factors influence one another, are in turn modified as a result of their interaction, and have a bearing on the functioning of the whole society.

To begin, an outline of the major features of the island region can provide a basis from which to examine the salient features of island life and the forces and trends operating in those societies that are likely to persist into the coming century.

The insular Pacific comprises a region of small islands with limited physical resources, separated by vast oceanic distances and including a variety of island types and cultures. It is a region of rising population, both indigenous and immigrant in origin. This is largely as a result of improved health care, which has led to an increase in life expectancy. There is population pressure on available resources, resulting in migration from land-poor to land-rich locations, from rural to urban areas, and to nearby
metropolitan countries where possible. Rural development, through self-help and the promotion of self-reliance, has been adopted virtually throughout the region as a strategy to stem the tide of rural-urban migration and in an effort to improve living conditions in the countryside. Attempts to increase and diversify agricultural production and raise income levels in the rural areas are a cornerstone of this strategy.

The towns and cities of the Pacific islands have grown as centers of administration, trade, and industry to varying degrees, depending on available resources. This growth has been concomitant with economic and political development, and has tended to increase economic sophistication and encourage individualism and economic change. But the economic opportunities of the urban areas and the search for and promise of jobs in the urban scene all have a price to be paid—weakening of tribal ties, social maladjustment, problems of housing, and discontinuity of income and employment. During the past 150 years the Pacific islands have experienced an increasing degree of monetarization and a decreasing reliance on subsistence production. This process has required and resulted in changes in attitudes, incentives, institutions, and social relations with implications for all aspects of life in the islands. It has also influenced the role of leadership in island societies, especially at the local level. All this is related to the desire for new goods and services for which the people have acquired a taste and to which they have become accustomed. They too would like to enjoy some of the good things in life.

The introduction of new technology has been associated with the process of economic development and has facilitated greater involvement in the market system. At the same time, the acquisition of new tools has improved productivity and resulted in a realignment of the labor force, with consequent changes in social relations, in both rural and urban areas. Perhaps it is in the field of transportation and communications that the effects of new technology have been most dramatic and far-reaching. Sea and air travel have expanded greatly throughout the islands; areas once inaccessible to the main urban centers can now be reached within a matter of hours. The mass media has enabled the people of the islands to learn about events in distant lands soon after they have occurred. Obviously these developments have had an influence on the progress of self-government and political autonomy in many Pacific islands nations since the early 1960s.

But despite the progress in political status in many island groups in recent years, and although there is a firm desire to be economically self-sufficient, there is still a fair degree of economic reliance by Pacific states on the outside world. This dependence is an aspect of the development problems faced by the island nations as they attempt to improve living conditions within their shores. In a sense Pacific island development is a process of integration into the larger economic, social, and political systems of the world. However, scarcity of resources, fragmentation, and distances from external markets limit the progress of some of the smaller islands. They are likely to remain marginal for a long time in the future and in the face of developments around them.

MAJOR FEATURES OF PACIFIC SOCIETIES

In any essay on the future of Pacific societies it is not possible to predict in detail the forms these societies will take, because it is impossible

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to foresee the how Pacific societies will react to what the future may bring. Perhaps all that can be attempted in an exercise of this sort is to highlight those aspects of island societies that are likely to persist and help form the basis of Pacific island life in the twenty-first century.

Despite contact with Europeans and other outside influences in the past 150 years, the broad outlines of Pacific societies and their major characteristics remain intact. Although it is true that there has been some degree of modification in Pacific societies, past experience has shown that the major features of these societies will remain for a long time. Pacific islanders have been victims of aggressive external influences; however, they have always tried to manipulate the situation for their own benefit. The outcome has been the continuity of important aspects of their cultures.

Pacific societies are characterized by social cohesion and group solidarity. There is a high degree of cooperation among members of the social group because membership is based on blood ties and closely defined social criteria. Membership in the group, based as it is on common descent, common residence, and participation in particular activities, emphasizes social responsibility, which is aimed at fulfilling shared group goals, mutual reciprocity, and some measure of personal sacrifice for the benefit of the group. These are features that have persisted despite the influence of external factors in the past century and a half. Because they are part of the very nature and being of Pacific island people, they are not likely to be cast aside easily in the years ahead.

Although there has been increasing urbanization in recent years, the village is still the dominant settlement form in the Pacific. The village provides the most obvious physical expression of the social life of the people of the Pacific—it epitomizes the continuity of their societies in the face of change in the past 150 years. Because the village contains people who are related through blood and social ties cemented by common residence, this settlement form is likely to endure for an indefinite period. Close social ties among villagers encourages the release of social tension. It places a premium on good fellowship; it also encourages cheerfulness and laughter in the company of relatives and with others whom there are warm and familiar relationships. The village thus encourages tolerance, good will, and harmony. These are characteristics of Pacific societies that arguably have their origin in the small size of village society and the need to ensure that the village continues to function as a viable entity apart from the pervasive and unifying influence of Christianity, for which a Pacific pattern of worship seems to be emerging.

Common residence in the village is a reflection of the joint ownership of land by the social group in many Pacific islands. In Polynesia and Micronesia, where elaborate chiefly hierarchies developed, the land rights of individuals are dependent upon their status within the land holding group. In Melanesia, on the other hand, where status is achieved and not ascribed, the individual tends to have more rights on the land than the group. However, in all cases the retention of land and associated rights has demanded conformity to the group's social code and fulfillment of its obligations. In this way the chiefs, elders, and "big men" continue to wield considerable power in the allocation of land for both subsistence and cash-earning purposes. Almost 25 years ago, D. Oliver wrote:

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Throughout the more sordid chapters of modern Oceanic history events have shown all too clearly that, next to introducing epidemics or firing bullets into their bodies the most effective way to destroy natives is to take away their lands. Land is far more than a source of subsistence to the Pacific islanders. It is a fundamental of their social groupings, a measure of their status and self-esteem, and an ingredient of their spiritual lives. If a single criterion were to be used to test the survival value of any native community it would be: To what extent have they retained their lands?3

The successful functioning of Pacific societies also depends on the traditional roles of its members; these roles place much emphasis on seniority and status. Such an emphasis will not disappear overnight—its disappearance could alter the very fabric of society. Thus, although the pattern of land use could be subject to considerable modification to meet changing needs, changes in land use will probably not alter the basis of ownership, which is part and parcel of the nature of the society and associated social relations.

For many Pacific islanders the village, the home district, and the island are still the major focus of existence. Although they are aware of what goes on outside their immediate village and island environment, the focus of their interest is on the village and the island and how living conditions in these settings might be improved. Because of this largely insular outlook, the independent governments of the Pacific islands will want to encourage and emphasize a national identity and unity, especially where there is a multicultural population. National unity is a major theme of government policy throughout the islands.

In view of the rural background of the vast majority of island communities, subsistence farming is likely to continue as an important livelihood. There has been a continuous modification of island economies involving increasing commercialization, but the subsistence sector will never disappear completely, if only because of the part it plays in the people's endeavor to be as self-sufficient as possible. The subsistence sector of island life is also an important vehicle for fostering self-reliance among islanders. Self-reliance encourages some degree of economic independence, to which all island countries at least aspire to if not actively strive toward.

These are some of the major features of Pacific island societies, which, in the face of rapid change in the past and in the years ahead, are certain to persist into the twenty-first century. They are aspects of island life that—despite a century and half of contact with outside influences—have demonstrated a remarkable degree of resilience, and will ensure social continuity well into the next century. At the same time, some of the major trends in island life that will have a bearing on the future of Pacific societies cannot be ignored.

EMERGING TRENDS IN PACIFIC ISLAND LIFE

We live in a rapidly shrinking world, and no society can shut itself off from the rest of the world and withdraw from the century in which we live. The Pacific islands are no exception to this general rule—they have been subjected to a host of outside influences, many of which have given rise to dominant
patterns and trends in island life that are likely to persist. These must be taken into account in any consideration of the future of island societies.

The egalitarian ethos of western civilization—the emphasis on the democratic principles and the worth and basic rights of the individual—has tended to weaken the cohesive nature of Pacific societies since contact with Europeans 150 years ago. Christianity, with its emphasis on the equality of human beings before God, has also its effects. The result of all this is the pursuit of individual goals and the glorification of individualism as the only salvation for Pacific islanders. It is true that the use of land is based on the individual and the nuclear family. In the urban areas individual goals are most strongly pursued, because the new commercial system and the employment scene emphasize individual gain in the context of job contracts and monetary reward for the sale of one's labor and skills. Despite the growing influence of individualism, it is not likely to be a complete substitute for village solidarity and social cohesion, if only because the village will probably not disappear in the future, and village-wide social activities are very much a part of the existence of islanders. They are not likely to cast aside those aspects of their lives that are part of their identity and being. Although villagers everywhere in the islands are free to opt out of village society and live on the land they own or cultivate, there has been no mass exodus away from the village in recent years.

The towns and cities of the Pacific islands have developed primarily as administrative and entrepot centers and provide a range of cultural experience that is in sharp contrast to that of rural areas. They are will expand their influence in the lives of islanders largely because of their economic, administrative, and political dominance. Intercultural contacts in towns will expand because of their mixed populations and consequent patterns of mixed residence. In many instances, especially through unemployment, urban life will not always provide social satisfaction to the new migrants from the rural areas, and the anticipated economic security will become elusive. This is one reason why urban life for many islanders tends to be organized along traditional lines of affiliation, for cultural and related activities and for assistance to kin as necessary, and to support the development endeavors of the village. This trend is not unlikely to weaken in the future. All this is part of the islanders' attempt to determine the benefit of pursuing particular courses of action. In so doing they are constantly moving back and forth between the new and the old, adapting the old to suit the new, and mastering the new whenever possible. This is the real meaning of continuity through change, which is so evident throughout the Pacific islands today and is certain to persist in the future.

Associated with the growth of individualism is the loosening of traditional aspects of island societies. This is largely the result of urban influence and the new materialism—the desire for a regular cash income with which to purchase those items of consumption only cash can buy. However, there is a parallel search for a system of administration that is most suited to the needs and circumstances of the islands. In this regard, islanders are finding increasingly that their traditional social groups, based on the village and the island, with their associated councils provide the best avenue for maximizing local participation and consultation in the endeavor to improve living conditions.

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In many cases local institutions were ignored in the colonial past, and elders who were part of these institutions were superseded by a bureaucratic arrangement that was incongruous with the way of the land and the people. However, there is a growing realization that maximum involvement of the people in their own welfare can only be effective through institutions accepted by them and in which they have confidence.

The youth of the Pacific are fast becoming a major force in island communities. They constitute a large proportion of the total population, and, depending on how they are integrated into the entire process of nation-building and national development, the opportunity to harness their talents for the national good may not be so easily realized. This is important, because this sector of the population is much exposed to outside influences through the mass media, and unemployment is becoming a critical problem for them. When job opportunities are hard to come by, youths easily become victims of social maladjustment in the urban areas, giving rise to crime and other unsocial behavior. Youth groups are not only vocal; they are also able to effectively articulate their concerns, and in many cases they have tended to identify themselves with wider movements, including the peace and antinuclear movements.

This is a logical development given the rising level of education throughout the Pacific islands and the consumption and acceptance of ideas that have their origin in London, Paris, New York, and Tokyo rather than in Port Moresby, Vila, Nuku'alofa, or Apia. These movements are mainly urban-based; they do not seem at this stage to attract the general rural population, who seem unaware and unconcerned about these issues. In time, as young people come to shoulder the responsibilities of adult life and have the demands of their families to worry about, they will realize there are other matters of greater immediate personal interest than those externally induced concerns and ideologies. Life in the Pacific islands does not need the destabilizing influence of outside concepts that may have little relevance to the improvement of living conditions in this region.

In the Pacific islands in the past 30 years, declining death rates and high birth rates due to improved health conditions have resulted in a high rate of population growth and a large youth population. Even now some island populations experience annual growth rates in excess of 3 percent—for example, the Solomon Islands, Vanuatu, Wallis and Futuna, the Northern Marianas, and the Federated States of Micronesia. Increasing economic development, the demands of the cash economy, and inflationary trends in recent years have tended to impose a realization on island communities, especially those with limited resources, of the dangers of uncontrolled population increase. The effects of measures to counter this trend will not immediately show positive results. Because these measures affect the attitudes of island people, which are not easy to change, some island countries may continue to experience high rates of population increase in the early part of the twenty-first century. However, in some cases the rate of population growth is likely to moderate, largely as a result of the adoption of family planning measures and the realization that large families are not necessarily an economic advantage, but rather may lead to economic hardship.

An important feature of the emerging Pacific is the increasing sophistication of new technology in the productive processes of island life. As resource exploitation becomes increasingly commercialized and as industrial development
and manufacturing expand, especially in the larger island countries, new technology is introduced. No doubt more sophisticated equipment will be introduced in the future as development proceeds. In the larger urban centers where commerce and the service industries have emerged and expanded, computer technology has grown at an increasing pace, particularly in some of the larger island states. In some countries courses in computer technology are already being introduced into the schools. This has implications for job opportunities and job choices in the future.

In 1962 K.B. Cumberland stated that "the Pacific is one of the few areas into which the Cold War has not yet penetrated. It will require positive thinking, a consistent policy and something better than passivity to maintain this policy."4 Superpower rivalries have been part of the international politics of the Pacific basin in recent years and may intensify in the closing years of this century. Not only will this grow out of the initiatives taken by the major powers, but island countries themselves, in exercise of their independent sovereign rights and the obligation to do what they consider appropriate for their people, will pursue certain policies that will contribute to superpower rivalry in the Pacific.

WHAT ARE THE OPTIONS?

Faced with a broad range of external influences, demands for improved living conditions, and ever-increasing aspirations, what are the options available to the people and governments of the Pacific islands? Which of these options might be consistent with their overall goals in the years ahead?

There have been numerous commentators on this theme in the past 30 years. Most of them have been outside researchers and academics, many of whom have conducted extensive field investigation in the Pacific islands. It is only in recent years that islanders themselves have begun to articulate their views on this vital issue.

In 1959 O.H.K. Spate observed "that for the Fijian countryside the objective should be a community of independent farmers, living or working on holdings heritable, and alienable at least between Fijians, but retaining in each village or old Tikina area a common centre—church, school, guest house, parish hall, chiefly residence—where the old dignity which the koro is so rapidly losing might be recaptured".5

R.F. Watters arrived at virtually the same conclusions ten years later when he said:

Policy should above all aim at assisting the transition of village society to independent peasantry, whose members would join for social and religious purposes in a central community centre or church.... Rather than attempt a frontal assault on tradition (which anyway is politically impossible), policy should attempt to refashion life in the countryside by creating a situation in which the enmeshing bonds of kinship will no longer seem to be advantageous to the people, and in which the burden of customs can be avoided. Such a policy would be popular with Fijians, for many villages possess a number of would-be galala who have been refused exemption....6
The Fijian experience since 1967—when the Fijian administration was reorganized along democratic lines, and the regulations governing the lives of Fijians were abolished, freeing villagers to use their time and resources as they saw fit—has not demonstrated a widespread support for the principles advocated by Watters.

The objective proposed by Spate has a number of complex implications. It implies a drastic change in the land tenure and settlement systems throughout Fiji and could alter the basis of the mataqali (clan) as a cohesive social unit and change its very raison d'etre. Again the path taken by Fijian society since 1959 has shown a strong adherence to the village as a settlement form and as the focus of rural life. Comments by C.S. Belshaw on the Fijian approach to development are perhaps more helpful and seem to display a keen awareness of Fijian aspirations: "To provide increased capital out of their own resources, Fijians must engage in innovative acts of production, over and above their normal village routines. One of the most fascinating conclusions to be drawn from observation in the Sigatoka area is that this is precisely the direction that individual Fijian initiative is taking." One might add that such an experience is of general application in Fijian society and not limited to the Sigatoka area, where Belshaw conducted his fieldwork in the late 1950s.

In Western Samoa, J. Fox and K.B. Cumberland wrote, "Nor is it clear to what extent the Samoans will be prepared to allow economic necessity to interfere with the many aspects of the fa'a Samoa [traditional Samoan way of life] which still militate against the successful conversion of Western Samoa into a progressive and industrious country desirous of securing socially satisfying and improved standards of living by utilising more fully the resources available to it." The implication is that the fa'a Samoa is a limiting factor in the rapid advancement of Western Samoa and in the provision of a wide range of services necessary for raising rural living conditions. The Samoan experience during the past 20 years has shown that the fa'a Samoa has persisted, and considerable progress has been made in extending the basic social and economic services and providing the infrastructure to meet the rising aspirations of an increasing population.

B. Lockwood wrote in 1971 that "A number of writers on the Samoan economy see the matai [chief] land control system as the main blockage to economic development but to me it seems to be just one more illustration of the Samoans' general satisfaction with things as they are.... They want a cash income because it allows them to have certain goods and services which otherwise would be denied them.... Money is only one of the many means to achieving them and, once achieved, money adds little to the enjoyment of the fa'a Samoa, the Samoan way of life." The choice is clear: The maintenance of the Samoan way of life is of paramount importance to the villager, and involvement in the cash economy is seen as a means of maintaining it.

Not all foreign writers have taken the view that Pacific island societies must adopt a Western social and cultural orientation if they are to get on in the modern world. R. Gluck for instance, said of Papua New Guinea:

One of the key factors...requires that the village community realises the benefits that can be obtained from balancing long and short-term development objectives. The overriding consideration in this framework is that the village wishes to develop so that the community or
clan is maintained as an organisational unit while the benefits of development are introduced. The market economy, which in the western capitalist sector dominates society to the point where individualism is promoted at the cost of traditions and communalism, is to be avoided. In this framework the community ethic rather than individualism is assumed to be dominant and large-scale and impersonal market systems are therefore regarded as having disadvantages that outweigh any benefits.10

The other side of this argument is that it is often assumed that villagers need to be told by outsiders what is good for them and how they might go about attaining their goals. Too often it is not realized that villagers know what they want from development and how they want to develop. What villagers might require is guidance and assistance in achieving their objectives.

H.C. Brookfield outlined the same basic issues, but from a different standpoint, when he said:

Given the will to do an honest and adequate job (and this is fundamental), the means exist to set out the environmental impact of any major proposal, and to lay out alternative strategies, for the decision of informed national and regional legislatures. The question then comes back to the quite fundamental one of public attitudes. This would not satisfy [those] who will assume that any such control system can be subverted by pressure groups and private interests with large and open purses. I respectfully submit that this is not necessarily the case, and that the experience of the United States is not necessarily applicable in all lands, in this matter as in others. The highly individualistic ethos of personal gain prevailing in the United States is part of the environment of such practices; where the national ethos is different from this, different results follow. What we heard at Waigani from Melanesian speakers is most heartening in this matter, being suggestive of a strongly emergent social consciousness much more likely to add weight to collective than to private goals. This seems...strongly developed in Papua New Guinea.11

Pacific islanders themselves have contributed to the debate on this important topic, especially in the last decade. When discussing the meaning of "On Being Tahitian," Turo A. Raapoto wrote:

We are not preaching a return to the past; there are always retrograde minds eager to accuse. If the imagination can be defined as the faculty to create something new from something old, then it is our duty to understand, to become impregnated with our past, our culture, our language, to create a new world in our image and in our dimension. It isn't a matter of replacing something old by something new.12

The message is clear: Change and development in island societies and cultures must be based on the past, with a careful selection and adaptation of new ideas to better fit them for the requirements of the new age. Such a stance is sensible; few would argue against it. However, what to change, how far, and how fast; what to include or borrow from the new; how far the old should be modified—these are questions that would have been assessed in each situation.

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Roniti Tewaki made the same general observations in discussing "The Future of Kiribati Culture." He said:

It would be incorrect to assume that all of the past has disappeared, many of the old ways of doing things still exist and are important to the Kiribati way of life in the present. However, there has been a modification in many ways or a blending of modern techniques and ways of thinking to produce a new way of life more suitable to modern realities. While cash has become an important aspect of economic life in Kiribati our people have not totally given up the subsistence way of life they practised in the past.13

S. Latukefu who saw the problem in terms of the modernization of traditional culture, stated:

It should be pointed out that the tradition and customs of our forefathers were devised by them to suit the particular needs their day, which were the needs of a largely isolated stone-age subsistence economy...the keynote to this process of growth or modernisation is change. In the process of modernisation it has been inevitable that less modernised societies should borrow ideas, technology and values from the more advanced and more modern societies.14

Perhaps one of the most direct and confident statements of options open to Pacific islanders has been made by E. Hau'ofa:

They cannot have the basically "western" lifestyle based on high per capita GNP to which they aspire, without changing, in a very fundamental way, the systems of social relations and community life, all of which arose from and are therefore appropriate to subsistence existence. To say they can have the goods and services of industrialised societies while maintaining values that are inappropriate is to indulge in fantasy. And to persist with the present mode of "development"—small-scale, partly subsistence/partly commercial operations—is to progress towards rural depression and to poverty.

If the Pacific island societies want to maintain their distinct ways of life and their cultures, and if they wish to preserve their environments, then the capitalist system is certainly not the right one to adopt. They have to find alternatives. But there are two problems. First the Pacific islanders seem, by action although not by rhetoric, to have made the choice already and opted for capitalism. By rhetoric, although much less by action, they want to maintain distinct identities. Second, not one existing model of society provides a real alternative for development in the islands; all the models have been devised for countries and populations very much larger than the tiny islands and small scatter populations of the Pacific.15

It would appear that the available options cannot be adequately treated in an either/or kind of situation implied in Hau'ofa's formulation, and that it might still be possible for Pacific islanders to adopt only those aspects of capitalism, that are in their interest and are consistent with their overall social and economic goals. The attainment of a high level of GNP is not so much a result of the system of production, large- or small-scale, as it is of
the price mechanism and the market system. When the export commodities produced by islanders (e.g., sugar, cocoa, coffee, minerals) are sold in distant overseas markets, the price levels are very much beyond the producers' control.

Given the diversity of island types and their associated resources, the range of social and cultural systems and administrative backgrounds, there can be no single road that all Pacific island countries in order to attain the social, economic, and political goals. To this extent it is easy to agree with Hau'ofa that no single model has been created to suit the requirements of island nations in the twenty-first century. But this is not to say that the people of the islands and their leaders cannot, out of their own experience and the experience of others, create societies that combine features borrowed from other regions and mold them to suit their own situations. Other countries have done it, and there is no valid reason to prevent island nations from pursuing the same path.

On the economic front, especially in the larger Pacific islands, the plantation and estate mode of agricultural operation will persist in the future. This does not rule out the need for small-holder farmers, especially if the crops concerned are remunerative, such as sugar cane, cocoa, coffee, and vanilla. The small-holder farmer could be a villager or a resident on the piece of land, which could be part of a planned agricultural subdivision, leased customary land, or land held on traditional title.

The approach implicit in the views expressed by Teiwaki and Latukefu has much to commend it. Indeed these writers indicate the social, economic, and political choices made by islanders in the context of the situation they face at the present time. Islanders choose those new and outside ideas they consider to be consistent with their aspirations, and if these new introductions demand social adjustment, they are prepared to pay the price. If, on the other hand, the necessary social adjustment appears unacceptable to them, other options will have to be pursued. The new adoptions then become part of their way of life.

ARTICULATION OF GOVERNMENT POLICIES

There are a number of common themes that run through government policies in the Pacific islands. Rural development in all its varied facets is identified as a major policy objective of island governments. Through this policy agricultural production is to be diversified and productivity increased as much as possible. When export crops are involved both quality and quantity are to be raised; in local production self-sufficiency is the goal, and it helps to instill as high a degree of self-reliance as possible.

The diversification of economic activity is an important component of policy in the islands. The objective is to take into account both the type and location of economic activity, so that underdeveloped areas can share in the fruits of development, which will lead to a wider distribution of income and the limitation of population growth. This means providing improved and effective links between the different parts of the country. An important aspect of these policy objectives is improvement in the capacity of the local people to undertake the essential tasks demanded of them through a wide range of development programs. Both training programs and the promotion of employment, which the development programs will produce, are essential elements
of this strategy. The village provides an important arena in which these policy objectives are to be worked out, with the aim of increasing village income, and using local resources as far as possible, while not upsetting the fundamental social institutions and way of life. It is vital that the village development program relates to the traditional system of values, for without such accommodation little progress can be achieved.

At this juncture it might be useful to comment on the ways in which these aspects of government policy are associated with the basic features of Pacific societies and the major trends that have emerged and are likely to persist in the future.

Rural development, with the village as the unit and basis of development, is certain to enhance cooperation among its residents and therefore strengthen village cohesion and solidarity. The promotion of agricultural production among village-dwellers should lead to a greater degree of self-reliance and self-sufficiency among villagers. In this way the continuity of the village can be assured, together with those group functions that depend on the village for their survival. These factors may put a brake on the growth of individualism in the rural areas, which even in the past 15 years has not resulted in a mass exodus away from the village, although villagers increasingly use their time for individual gain; however, this strengthens their ability to support group goals.

The diversification of economic activity is certain to widen the basis of resource use in the village, some of which may encroach on the subsistence sector of the village economy. Economic diversification could be part of a regional development approach that would result in a wider distribution of the fruits of development. Such a process will demand some degree of technological innovation in order to cope with the increasing population and rising unemployment, especially in the urban areas. Regional development is essentially a question of decentralization, for which suitable administrative units and systems would be essential. In this context, the smaller units of traditional society appear to provide the appropriate administrative units, which the people are familiar with and have confidence in. Such an approach will enable the people to identify with the village, the district, and the island as the focus of their efforts to improve living conditions.

In view of the close connections between government policies throughout the Pacific islands, the basic features of Pacific societies, and the trends developing in these societies, the articulation of government policies clearly must be a matter of vital concern to both the governments and the people. On the one hand government policies must work in harmony with the dominant features and structures of island societies, while on the other governments must capitalize on or modify trends that are either conducive to or inconsistent with the goals and aspirations of these societies. In this way government policies can be generally supportive of the goals of island societies and contribute to their evolution as desired by the people.

It must be realized by the populace and not just their leaders, that there is plenty of local talent and capacity to devise social forms that are consistent with their collective goals. The people of the Pacific do not need to look to overseas experience all the time to formulate societies that are in accordance with their aspirations. However, this is not to deny the value of outside
examples of changes in social forms, if only to illustrate what islanders should avoid. The islanders' belief in local capacity and their ability to find and formulate their own salvation should be inculcated in the people.

Associated with this belief in local talent is the thought that the world does not owe a living to the people of the Pacific islands. The Pacific island countries must pay their own way in the modern world, which is not always perfect. And in "paddling their own canoe" they need to realize that in each island country the people must pull together to achieve common objectives. Their societies contain features that have a strong tendency to bind them together for the common good. These social features have the capacity to assist and fortify the people of the Pacific now and in the future. The alternative is social disintegration, which would unavoidably have wider repercussions in the economic and other sectors of island life.

Much has been said about the need to make education in the islands relevant to the needs of the people, with the emphasis on a rural orientation. It is probably not always readily recognized that each member of island society has a role to play in the improvement of society and that some roles will require more hands than others. Every role is an essential part of the process of development and nation building. The thought needs to be driven home that not all parts of island countries possess similar potential for development, because nature has not endowed all parts of the same archipelago similarly. However, there is an obligation to develop each area and island to its maximum potential. This will take time, effort, and ingenuity. It demands also a sense of commitment to the overall goals of society and a lot of dedication to local development efforts.

Especially in the large and high islands of the region, an integrated approach to development programs seems to provide the best hope of ensuring that all relevant factors are given adequate weight in the development process. Such an approach will demand that the resources of any area be assessed in a systematic way, perhaps on a village basis, with cognizance of the power structure and political realities of the locality. This means also that appropriate action be determined by the local people, with outside assistance and advice as necessary. Wherever possible the use of local resources should be encouraged, as this is consistent with the demands of self-reliance and self-sufficiency. The point must be emphasized to the local people that indigenous materials are not necessarily inferior to imported ones.

The decentralization of administrative and decision-making institutions seems to offer an essential means of ensuring a high degree of local participation in island affairs. Working through and with local institutions would be a natural mode of operation in the Pacific region, given the fragmented nature of island countries and the isolation resulting from long oceanic distances and mountain ranges. Local institutions—from the village council through the island, district, provincial, and regional levels—offer a natural hierarchy for local consultation and decision making. These structures encourage maximum participation by the local people in their own affairs without losing sight of national objectives; this is what participative leadership is all about. By working through the different tiers of local institutions and through local leaders, the felt needs of the people can be identified accurately and in a way that will enable them to see improved or new methods of doing things in terms of their own requirements. In this way any
innovation becomes theirs, not an alien or imposed introduction, and change will be seen by them in the context of available resources, their capabilities, and compatibility with their cultural traditions.

The image of the outside adviser can be vital to the success of any development introduced at the village level. The language used and the style of communication must be pitched at a level the villagers will understand. Too often such agents of change do not spend sufficient time with the people they are trying to assist, and the way they dress and their bearing may project the image of former colonial masters in the eyes of the villagers. This could sow the seeds of suspicion among rural folks. Rejection or passive resistance to the efforts of government officials and others would be a natural outcome of such a situation and must be avoided.

Throughout the islands there is already a network of extension services that provide a channel of communication between the center and the periphery of an island nation. All of these communication networks are probably not developed to the same extent, and their authorities are not decentralized to the same degree; nevertheless, they are there, and probably need to be reassessed and revitalized in terms of the role they could play in achieving the goals of society. In certain situations only minor modifications may be required, while in others new methods may be essential, and in still others traditional methods and approaches could validly serve new purposes.

The idea of establishing a rural growth center in a new region in the larger islands of the Pacific might serve to illustrate these points. A rural growth center is essentially a location chosen for the development and provision in a rural locality of services normally available in the urban centers. It brings to rural areas those services and goods they would normally obtain from the towns, often some distance away. Thus it involves the provision of economic, social, and administrative services that demand the installation of basic infrastructure such as roads, water, electricity, and health facilities. Under normal circumstances the growth of such centers is associated with the normal development of the region they serve. If the economic services provided by the center are needed, private enterprise will see to it they are available, because it will profit the private sector to provide such services.

When governments enter with a deliberate policy to encourage and assist the establishment of such centers, incentives may need to be offered to potential developers to ensure the centers' development. The rationale of these growth centers must be explained fully by extension workers to the potential clients. Such an explanation would include the services to be provided, the relationship between the centers and other institutions the locality, and the possible short- and long-term effects of the development of the center. In the very small countries of the Pacific the development of rural growth centers does not offer a viable option. However, this does not remove the vital need to maintain close and effective communication and transport links between the seat of central government and the periphery. This is not always easy because the of costs, but it should not be forgotten—because it is an essential aspect of the national development and unity of island nations.
The desire of Pacific island countries to control their own destinies has been particularly strong since the early 1960s, when island countries emerged as self-governing or independent states with a political status equal to that of their former metropolitan masters. In this context, the term "control of destiny" means the ability to determine the course of progress now and in the future and the preferred path to attain goals and future status.

In a world that is rapidly shrinking as a result of modern communications and technology, when the development process on a global or regional scale is a process of interdependence, the contention that a country or a group of people can control their destiny is not easy to sustain. The open economies of Pacific island countries are inevitably subject to external economic forces that make their well-being partly dependent on decisions and actions taken outside their boundaries. It should not be forgotten that one nation's export is some other nation's import, and the terms of the exchange are not always determined by the exporting nation.

Trade agreements Pacific island nations subscribe to exemplify the general dependency principle. One way to reduce a nation's vulnerability in this respect is to diversify the destination of their exports and the sources of foreign exchange, even if there is dependence on only one or a few export commodities. The same theme seems to apply to the broadening of island nations' aid sources. A deliberate policy of external economic partnership and diversification can only be beneficial to island nations. But where there is metropolitan support for the national budget, especially by the former colonial power, any move to reduce such a contribution by raising more revenue locally can only be in the long-term interest of island nations and add to overall self-reliance and the mastery of their destiny. Immigration to nearby metropolitan countries such as New Zealand and the United States is still a possible option for alleviating the population and development problems of some Pacific island nations. This is one side of the dependence coin that has a political and historical foundation. And if the standard of living in the islands becomes dependent on remittances from migrants, violent fluctuations in the economic situations of the metropolitan countries that arise from their own decisions can have a sudden and drastic effect on life in the islands.

Dependence on an external power for social and economic welfare is perhaps best illustrated in the islands of Micronesia. Francis X. Hezel described the evolution of this dependence quite clearly:

I remember back in the 1960s when Micronesians used to speak with real fervour of the need for self-reliance. It was generally assumed in those simpler days that a self-supporting island state was the ultimate goal and the touchstone of anything that went under the name of economic development...; it meant Micronesia would pay its own way. The glorious march towards self-reliance...implied a certain degree of material deprivation or belt-tightening in the name of more important distant goals...[but such deprivation] was seen as paying rich dividends in the self-esteem and political autonomy of a people who were destined to rule themselves.... The formula was simple and incontestable: economic development (increased productivity and reduction of imports) + cutback in cost of government = self-reliance.
political autonomy.... But those were the uncomplicated years of another era.... It was also before Micronesians had learned that a national income was not entirely dependent upon the pounds of fish or bars of soap or hotel rooms the nation sold; it could just as well be generated through the sale of rights—fishing, defense or denial rights.... Washington, which ten years ago was busy piling up new forms of financial aid for the Trust Territory one upon another, is now calling for modest government spending in line with the avowed goals of self-reliance. Meanwhile, Micronesians who formerly spoke eloquently of keeping costs under control have now become the chief proponents of large government and high budgets.... Governments may be financed not only by the resources that a nation markets, but also by the rights that it puts on the block.... Economic development in the future will almost certainly amount to nothing more than a proliferation of the same kinds of service industries that have sprung up in the past. Self-reliance therefore, will mean reliance by Micronesians upon their own abilities to negotiate what sums of money they need in return for whatever marketable rights they are willing to surrender.16

The question that must be asked is whether Micronesia had an alternative to what has actually occurred. Given U.S. political control over the territory, its policies since 1945 (with an emphasis on U.S. security interests), the scarcity of local resources, and the people's experience of U.S. material generosity over the years, perhaps the course of events in Micronesia that led to various forms of association with the United States was the only viable option open to the populace of these small and scattered islands. It is development the Micronesian way.

There is another aspect of the development situation in the Pacific islands that has been well expressed by West Indian economist Norman Girvan:

One aspect of development study that is all too often overlooked is that related to the desired structure of consumption to which the society should aspire. If the goal is to "catch up with the rich countries," and to "close the widening gap," then the consumption patterns to which the society implicitly aspires are those of the developed countries. The ends of development, therefore, will be essentially imitative. But suppose it is precisely this imitative pattern which underlies the mechanisms of dependence.17

As H.C. Brookfield has asked, "What greater form of dependence is there than imitation?"18 A policy of self-reliance and self-sufficiency in food and other areas of consumption, including a program of import substitution, therefore can only work to lessen the island nations' tendency to imitate the consumption patterns of developed countries. This will demand the production of local goods of a quality comparable to imported ones, and the use of local commodities must be seen as an overall national goal consistent with a policy of national self-reliance and the partial control of the nation's destiny. In all these matters a realistic stance should be adopted, because there is no way any country can hope to produce all its own requirements.

For Pacific island nations, turning back the clock has not been an option for at least 150 years. All that can be done is to try to meet local demands as much as possible. Such an objective will require the local capacity to meet...
that demand. This implies the training of local personnel in all fields of activity—especially in the professional and technical areas—to staff the institutions necessary for national development and self-reliance, including the conduct of international relations on an equal footing.

One final point should be made. All Pacific island countries receive financial aid from bilateral and multilateral sources to support their development programs. In some cases foreign aid from former colonial masters contributes significantly to operating budgets. Ideally and from a long-term perspective the best aid enhances the capacity of island countries to be self-reliant. With this in mind, S. Levine has observed that although "the word 'development' has had an interesting history, as a positive and useful concept it may be strengthened if its definition is restricted simply to this: the capacity to be self-reliant."19

Some development projects implemented by island governments require a long gestation period, and their role in enhancing national self-reliance is not always immediately apparent. However, the idea that development should be seen in terms of its contribution to national self-reliance has much to commend itself in the context of the Pacific islands and in terms of the islanders' desire to control their own destinies. This is the only way they can hope to effectively reduce their dependence on external economic and other forces.

CONCLUSION

In the Pacific islands as elsewhere, development is a process of change, modification, and adjustment in the patterns of life and the manner of doing things. In this complex and continuing process there is an important element of choice, and choice is determined by the goals and objectives of a society, both in the short and long term. The peoples of the Pacific islands have been exposed to outside influences for a long period, during which there has been a tendency to imitate the patterns of living of the Western world, and some of these are not consistent with desire to maintain their identity as Pacific islanders. The lesson to be learned from all this is that Pacific islanders need to work out how best they should adjust their own society and accommodate new introductions—how fast and to what extent—in order to continue to maintain their identity in a rapidly changing world.

Coping with the modern world does not necessarily mean jettisoning the old and accepting the new. For the Pacific islands it means a mutual accommodation between the old and the new to meet the demands of the present and the future. Such an approach will enable islanders to influence the course of their future, although they might not be able to completely control their destinies.

Projects and programs of development that will enhance self-reliance deserve support and encouragement. In this way islanders can be assured their political autonomy will continue to be a source of pride and self-respect.
NOTES


PLANNING FOR PACIFIC SOCIETIES
OF THE 21ST CENTURY

by Rodney V. Cole

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii

I-B.i
Pacific Islands Development Program
RODNEY V. COLE is assistant executive director of the Development Studies Center, Australian National University.

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This paper will examine how Pacific island societies can achieve greater control over their own destinies. Assuming that some form of democratic government is appropriate for the region, it will discuss how government policies can be used to articulate and develop the kinds of societies that are desired.

ARTICULATING ISLAND NEEDS THROUGH PLANNING

Societies have always planned in order to achieve economic, social, and political benefits for their populations. In earlier times planning took the form of casting horoscopes, reading signs, observing the paths and patterns of the stars, or watching the way in which flights of birds moved and changed in the heavens. In recent times planning has become a more formal and sophisticated art. Modern governments have the benefit of more complex analytical and physical planning tools such as economic models, computers, and satellites. The planning process has become more widely understood and perhaps better appreciated as a basis for developing forward-looking policies, but it retains the objective of improving the well-being and status of the people for whom the plans are drawn.

The planning process is still imperfect because it depends on the input of individuals and their judgment as to which variables are most appropriate for a given set of circumstances. Plans assume that nature remains stable, if not cooperative, and that climatic conditions do not interfere with their execution; more sophisticated plans do provide for the vagaries of nature on a random basis. Plans also assume that the resources needed to fulfill their objectives in human and natural terms exist or can be created.

Pacific island governments are no less given to planning to develop a more comfortable and effective society than are other governments, and governments all face similar problems in determining both the content and execution of plans. The same frustrations are experienced by both the planner and those for whom the plans are developed.

Until some better way can be found to determine future executive action, development plans are probably the best means of articulating the needs and ambitions of society. But plans must go beyond rhetoric. They must be truly representative of national desires and objectives and not merely be a "begging bowl," a document created to meet the bureaucratic requirements of other countries that might, for whatever reason, choose to offer assistance to those less fortunate nations whose planning decisions may be implemented only with the help of others. Plans and their manifestation in the form of policies and action must recognize the abilities and strengths of the society for which they are designed as well as their shortcomings and weaknesses. There are many cases of supplicant countries quite cynically preparing lists of programs and
projects as mere "shopping lists," and inviting the donor to "take its pick" among the range of investment options placed before it. In these cases neither side usually really believes in the possibility of achieving the results forecasted but each is willing, for reasons of political or social expediency, to help meet investment targets or achieve political gain, turning away from the unpleasant reality of proper evaluation and appraisal. Following the path of least resistance, though, often leads to unfortunate consequences such as the creation of expensive infrastructures, which have little long-run benefit and which absorb scarce resources in their ongoing maintenance.

In recent years it has become fashionable for the academic and international community to make pronouncements on the nature of societies and the economic future of small island states or land-locked countries. Much time has been spent defining and the identifying positive and negative issues affecting the socioeconomic well-being of ministates. This was thought to be a useful exercise from the viewpoint of societies under examination—particularly in their relationship with those providing support for their activities. Classification as a "less advantaged country" was to quality them for the economic, financial, and social benefits of such a status. The identification of particular negative or positive attributes of small countries does not, however, add a great deal to the knowledge of the societies themselves in planning for their future or adapting to the problems of the modern world.

The issues identified by social scientists and international organizations are issues that the people in island nations live with daily and that are very much a part of the realities of island life. However, if change in social and economic terms is a goal of island leaders, it is important that issues such as remoteness and lack of resources—which are so often taken for granted—are recognized as having both benefits and costs. Planning techniques, such as cost-benefit and social impact studies in contrast do not merely facilitate the recognition of problems and issues that must be studied but provide quantitative tools which can assist in the decision-making process. In the long and short run, though, planning is for people, and policies are to help people cope with day-to-day issues and problems. The end result of the planning process must be an improvement in the lot of the people and their society, if the existing forms of society and government are to survive.

Accommodating Local Communities

Government policies and the processes by which they are formed must recognize that nations with small, open economies are vulnerable to a host of external influences. In a region such as the Pacific, many other countries with similar resources are seeking to develop a better lifestyle for their people. Because of their small size the island states of the Pacific cannot be independent of the outside world, but such dependence is only a matter of degree. The most successful developing economies, Malta and Singapore, are much more dependent on the world economy than any of the Pacific islands. The real problems appear to lie in the conflict of Pacific lifestyle and the policies necessary to achieve the sort of society people want.

It is important, therefore, that the best advice covering all aspects of society's activities is available to island political leaders and planners. It is also important that they are clearly aware of parochial issues, as well as the more visible national and international issues, when devising a plan or
charting a path for national economic growth and social progress. Consultation with people in the rural villages is not always easy, but it is crucial if the sorts of societies people desire are to be designed, even if the reality of the executive process is difficult to achieve. In countries with the geographic features of Niue, local consultation in the planning process is relatively easy; consultation in Tuvalu, on the other hand, is more difficult because of the dispersion of the population and the lack of adequate transportation.

In the larger countries, consultation, if a choice of the central government, is facilitated through the devolution of decision-making to local or provincial administrative bodies. These bodies, if properly constituted, should be consulted in the formulation of plans, because they, from their close contact with the people, should know what the people need and desire. But "consultation" may only be as far as those responsible for the eventual national plan can go; to incorporate every local wish in a composite national plan is usually impossible if not because of cost, then because of difficulty in implementation. It is, of course, possible to overcome some of the constraints to local development by the central authority through devolving decision-making, so that regional governments mobilize resources and implement policies that have a large local impact. However, care is needed in such devolution to avoid excessive planning, overtaxing, and waste of resources. The advantage of consultation and a degree of devolution is that people can be encouraged to feel that they are involved in their own destinies. Through such involvement, people can be aware why planned targets cannot be met.

Accommodating International Issues

In addition to accommodating the needs and desires of local communities, the planners and governments must take heed of the international issues bearing on their ambitions for a better society. Obviously it is not possible for small nations to prepare the range of studies or forecasts necessary to help them chart their economic and social paths.

Universities and multi-lateral agencies can assist in the short run, although ultimately only high-level regional agencies should undertake such work. Trade, investment, tourism, forestry, fishing, regional shipping, and the money market, for example, are of such Pacific-wide concern that there must be available to island planners resources that can assist them in their work. These resources would include an up-to-date series of country statistics and detailed information on what other governments and commercial interests are doing on both a regional and international basis.

Once the plan is formulated, the political leadership must then obtain the necessary authorities for its execution.

GAINING CONTROL OF OUR OWN DESTINIES

Within the last two decades a majority of Pacific island states have achieved political independence. During the same period, significant changes have taken place globally, which have had lasting, often dramatic, effects on the small island states of the region. For centuries change in the Pacific has been steady—ongoing but not dramatic. Change was absorbed by the societies of the region, even though the impact of the early explorers and subsequent colonization by metropolitan powers was traumatic in terms of health, life-style,
and economic status. In the last two decades change—globally and in the region—has accelerated and, in contrast with earlier times, cannot be met and absorbed without real and possibly irreversible effects to the region. The shrinking horizons of the Pacific—with air travel, migration, the communications revolution, and the introduction of many of the worst elements of alien cultures—have all hastened change to the point of conflict. The heightened economic ambitions of the island people, particularly the younger generation, and the desire of governments to improve social conditions have increased the need for knowledge of regional as well as international trends.

While it might be possible for a family or a village to opt for Fisk's "subsistence affluence," for most people this provides too narrow a set of options. Governments must therefore work out how to achieve the positive aspects of development without the negative effects. Although it might be possible to cushion some of the more sinister aspects of our global society, thanks to the insularity of Pacific nations, there are other unavoidable areas of conflict. The movement of goods, services, and people into an island state and the outflow of goods and people can be strictly controlled, but if a society is to retain democratic principles, governments must recognize, the rights of individuals (within the law) to control their own destinies and the movements of the goods and services they desire.

Issues Acting Against Control

Assuming that Pacific governments are able to provide, through the democratic process, the sort of societies their people want, what are the external pressures that militate against control over their own destinies? One of the major external forces with which the islands have to cope is the influence of economic factors. Islands must trade to maintain their ability to acquire the goods and services that their people want. The islands are price takers in international markets but this has advantages. With skilled manpower they can buy in the cheapest market and add value to processed goods, as Hong Kong does, for example. The island states cannot manipulate the world economic forces or exercise control over markets for their goods but they can take advantage of their smallness in world markets by adopting systems of production that are efficient and competitive.

In the field of international communications the islands are very much locked into the system, and efforts to force change to their benefit can result in isolation. It might not at first sight appear to suit an island to have aircraft arriving and departing in the middle of the night or day, but legislation altering the timing may simply result in overflying.

Macroeconomic policy with regard to setting foreign exchange levels, determining monetary policy, and trying to contain inflation are issues where small countries are in no position to challenge world trends. Dependence on others for guest worker visas, family reunion facilities, and remittance of foreign earnings all contribute to a feeling of inability to act unilaterally when the occasions seem warranted. Tourism is often viewed with suspicion. Although tourism makes it economic to establish improved infrastructural facilities, provides a market for local resources (e.g., foodstuffs), and earns foreign exchange, the focus is more often on a possible threat to national culture, accentuation of income disparities, and excessive foreign influence on the economy.

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Ways to Improve Existing Situations

So far this paper has considered the issues that work against a Pacific society acting in isolation. The question to be considered is how can islands break out of such a position and at the same time retain control over their destinies. Exerting control does not come easily or cheaply and would seem to be possible only where there is conscious political will backed by carefully constructed policies designed to give governments rights (and contingent obligations) to do things their way.

Perhaps the first step is to identify where an island's competitive advantage lies and to exploit this to the full. In a paper on "The Island States of the Pacific and Indian Oceans: An Autonomy of Development," Nigel Wace described a range of economic activities that might "directly or indirectly exploit the advantages of insular isolation." But these are relatively highly specialized activities and could not, except in small countries and in exceptional circumstances, give total control to a nation's destiny. More importantly, climates favor a diversity of agricultural activity on a year round basis and access to developed country markets in the region offers a range of options for the diversification of development activity.

By banding together and acting in concert, islands can strengthen their international bargaining position. For example, by exploiting the 200-mile zone of jurisdiction Pacific states can negotiate from strength in the granting of licenses to fish in their waters. This individual advantage is focused and managed through the Forum Fisheries Agency. Similarly, through the mechanism of the South Pacific Commission and the South Pacific Bureau for Economic Cooperation, such matters of common interest as trade, the environment, communications, quarantine, and regional shipping can be developed to the socioeconomic betterment of the islands. The development of common user facilities in education and medicine can spread the burden of providing services, which for one country would be impossibly and often unnecessary. For example, the number of doctors needed by Kiribati would not justify a medical school (an extreme example to be sure), but doctors are needed in that country just as they are in the major countries of Europe.

In the field of civil aviation, much can be done to achieve economics and, through closer cooperation, provide a more competitive and effective service both for island people and the tourist industry.

With few exceptions agriculture retains a major role in the Pacific in terms of export earnings, employment, and provision of sustenance for the local population. It is therefore not unreasonable to conclude that it is in determining the optimum utilization of land that the most crucial and often most difficult decisions have to be made if countries are really serious about becoming more self-reliant.

Decisions must be made regarding land use, whether it is better to grow crops for export and import some foods (e.g., rice) rather than aim for total self-sufficiency. Choices must be made between multiple cropping based on imported fertilizers and the possible destruction of existing plantations or crops in favor of crops better suited to the needs of the people or to the international marketplace. Decisions need to be made on systems of production, marketing, crop varieties, and land-use practice.
As Helen Hughes noted, "Being small, South Pacific countries need to trade to be viable" ("Asian and Pacific Developing Economies," Asian Development Review, 3:1). Their best trading prospects for the most part lie in the exploitation of natural resources, i.e., the land, the sea, or the beauty of the island environment. It may be important for Pacific islanders to review existing practices and adopt a more competitive stance in their dealings with the rest of the world.

Perhaps the most important factor in economic development (given there are natural resources to exploit) is the human one—manpower. Trained people are needed at all levels of endeavor from the senior echelons of management to the most humble worker on the shop floor or in the field. Given time, governments are capable of developing manpower to meet their needs. But planning and time are crucial and often overlooked, with the result that plans, splendid in their concept, crash in their execution because of lack of skills to carry them out.

Training is particularly important where lack of suitable agricultural land or shifts in production patterns demand new skills to meet the needs of changing circumstances. While migration to neighboring metropolitan countries has tended to conceal the real growth in some island populations, the implications of high birth rates must not be lost sight of in long-term economic planning. In particular, what might the effects of such population growth be on the domestic economy if the migrant outflow ceased or if people returned home?

The question of resources, both material and human, are important in the complex issues of development planning. In the Pacific the availability and range of resources varies widely from country to country. The authorities in each individual country must identify what resources are available and what options exist for their best management. They must then set out to exploit those resources to maximum advantage. It is here where money (in whatever form is most appropriate) enters the development equation.

Few countries can mobilize adequate financial resources to act alone in the execution of development plans. Fortunately, as a general rule, there are adequate financial resources of one sort or another in the Pacific to ensure that a country can obtain financial support for its development endeavors if it seriously needs it.

Domestic savings in the larger countries of the region are aggregated through the banking system or national provident funds. They are then channeled on a loan basis through agencies such as development banks, housing commissions, and electricity authorities or through the public sector program to fund new capital works. It is, however, very much the multilateral agencies that are called upon to provide term finance to support the implementation of the major segments of development plans. The World Bank, the Asian Development Bank, and the European Investment Bank all help member countries finance activities consistent with national objectives of growth and equity.

Although loan finance is an essential part of modern development efforts, it is not always a practical option for the smaller, less-endowed countries. Niue's Minister of Agriculture Young Vivian, during a South Pacific Conference debate in 1977 on proposals for a Regional Development Fund, said, "Niue would very much like to borrow money to finance our development but there is no way..."
we would ever be in a position to repay our loans." So what is the solution for countries with limited domestic resources or borrowing capacity? Aid is the only real option (other than a return to "subsistence affluence") for the resource-poor island countries that seek to develop. But not only the small countries of the Pacific look to aid as a major source of finance for their development activity—all countries in the region look to development assistance of one sort or another to support their economic and social plans for national progress.

Aid is much debated—its good, bad, and indifferent points are examined and analyzed by both donor and recipient. One of the effects it appears to have, at least in the short run, is to reduce the recipients' control over their own destinies. The manner in which aid is offered, delivered, used, and accounted for often colors the relationship between donor and recipient. Motives are often suspected; the recipient countries suspect donors are looking for influence over their policies and programs of development and are thus unreasonably interfering in their destiny. Donors have to satisfy their taxpayers that they are not wasting aid monies, leading administrators to be unduly intrusive into a developing country’s affairs. The aid relationship between recipient and donor needs to be sensible and sensitive, with each party recognizing the position of the other and each adopting an attitude that is neither overbearing nor resentful.

Epeli Hau'ofa of the University of the South Pacific, addressing a conference of Pacific planners organized by the Australian Development Assistance Bureau (ADAB), suggested that "all of us in our various communities have long ago been drawn into a single economic system controlled by international industrial, commercial and financial corporations backed and defended by powerful government and military organizations working in cooperation with the other." He said that aid represented the equitable distribution of scarce resources and that the countries of the Pacific are "all in a single economic grouping in which we have hierarchies of rights and certain available resources. These rights are analogous to the rights to land in the traditional tenure systems in the Pacific island." He went on to claim that aid was a matter of right, not privilege.

Hau'ofa's philosophy represents an attractive and appealing viewpoint of the recipient, but it places too much trust in the hope that individuals and governments can be persuaded in one way or another to display an altruism that does not often exist in reality. Unfortunately, the political realities and expediences of aid are real. However, if the political connotation is recognized by donors and recipients as but one of the motives for giving aid, then there is a chance that both giving and receiving can lead to a better world.

This paper has been based on the premise that the kind of society that Pacific island nations desire can only be achieved by planning and that the plan must identify clear goals, resources, and the means to exploit those resources to achieve the desired goals. This is no novel or unusual approach, as all island governments have in fact adopted planning as a means of focusing on needs, priorities, and the means of achieving a better way of life for their people. There may indeed be alternatives to articulating government policies for the type of society most appropriate to the needs of individual countries other than through development planning. However, if plans are drawn up in consultation with the people for whom they are designed, if they result in the
optimum utilization of such natural resources as are available to an island nation, if they recognize the need to educate people to their long-term benefit, and if they do not rely heavily on external financial resources for their execution, then development planning is probably the best way to achieve desired ends.

Perhaps the most crucial aspect of any plan is the intangible will to succeed, the will to control the destiny of the nation for which the plan is drawn. If the will to succeed exists then success must surely follow.
JAMES A. DATOR is a professor of political science at the University of Hawaii and a specialist on future studies.

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INTRODUCTION

Other papers prepared for this conference have discussed familiar things—the past and the present. Not everyone would necessarily interpret the past and present the same way, but at least we have been discussing facts. Now our discussions move into the future, and there are no "future facts." Unlike the past, the future is the arena of possibility, of novelty as well as continuity. It is also the arena of uncertainty, for no one can be sure about the future.

This is not to say that the future is beyond our concern; nor are all beliefs about the future equally valid. Some people are able to make better estimates about things to come than others, perhaps partly because they are better able than others to make their wishes their commands—they are able to shape the future the way they want it to be. Or it may be the possession of data and theories about the future that give them more accurate foresight.

All decisions are about the future. Leaders are constantly making decisions that both affect the future and require information from the future. Thus the ability to forecast and shape the future is exceedingly important to decision makers. The attempt to understand things to come is no idle quest.

There was a time, in the Pacific islands as elsewhere, when it was relatively easy for leaders to forecast. The best and most likely forecast was to assume that tomorrow would be like today, that the future would be like the present. What led to this assumption was the clear experience that today was essentially like yesterday, that the present was basically a continuation of the past, that there was nothing (or nothing much) new under the sun—and, moreover, that to assume otherwise was dangerous or stupid.

To be sure, there were areas of uncertainty—accidents did happen. Acts of nature or nature's God would occur and completely change the course of destiny. But these events by definition were extraordinary and out of human control. We would do our best to read the signs and portents, but we wouldn't expect miracles—we had to accept our limitations. In addition, however capricious nature might be, society was quite stable; social change was extraordinary. The best forecast, therefore, was to expect a linear continuation from the past through the present and into the future.

However, something has happened to utterly negate the surety of that assumption. The experience of the Pacific island region (and most of the rest of the world) for the past hundred years or more has not been that the future is like the past—except to the extent that the future is always different and unexpected. Nothing seems unchanging but the fact of change itself.
This confusing experience has often led to a second and opposite conclusion: "que sera, sera." The future is unknowable. It is foolish to think about the future—much less plan or save for it—because we have no idea what is going to happen next. Who knows when the next war, the next missionary wave, the next set of outside intruders bringing whatever happens to be the current social fad will appear? Forget it, some people decide. I'll just do whatever is safest or will be best for me now, and forget about the future. Let the future take care of itself. What has posterity ever done for me? These plaintive cries are frequently heard. They are understandable, but they are also plainly irresponsible. The responsible decision maker does the best that can be done to consider how a decision affects the future and what information from the future can be used to make a better decision.

There are additional points, however: When is the future? Are we talking about tomorrow, literally? Next year? The next ten years? The next century? Generally, it is helpful to think of the future of social systems as being divided into three time zones: the immediate, the intermediate, and the distant future. The exact duration of each depends on what aspect of society is being considered. For some things the distant future may be only ten years away; for others it may be a millenium. A helpful rule of thumb is this: The immediate future extends from the present over the next 5 to 10 years; the intermediate extends up to the next 25 or 30; the distant future is beyond that but roughly in the 50 to 100-year time span for most social considerations. Another way of understanding the three time periods is to think of your expected life span as the immediate future, that of your children the intermediate, and that of your grandchildren the distant. Beyond that, for most people in most situations, is a void—life may go on, but their involvement in it does not.

What follows will deal to some extent with the immediate future but mainly with the intermediate time period. When I discuss "the future" in this context it will usually signify a period roughly 25 or 30 years from the present. There is information from within that time span that decision makers need to know when making decisions. In addition, responsible leaders need to contemplate the effect of their decisions at least 30 years from the present. This is not to say that they should not also consider impacts on the immediate and the distant future, but leaders have the responsibility to consider the intermediate future, both as a resource and a recipient of their decisions.

If this intermediate period represents "the future" there are certain additional characteristics that must also be considered. Probably the most important is the fact that helpful statements about the future may appear to be ridiculous from the viewpoint of the present. The future will have technologies, beliefs, and behaviors that do not—indeed, cannot—exist in the present. This characteristic of statements about the future must be understood. More decision makers should expect to hear "nonsense" about the future. If what they hear is what they already know and experience, it is likely they are not getting information about the future but about the present. Of course, some of what is true today will be true tomorrow, but much will not, and it is the duty of the futurist to stress the differences somewhat more than the continuities.

In making statements about the future of the Pacific island region my focus will be on the social impact of new technologies, while not ignoring the impact of other forces that will affect the future—such as internal population

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growth or external political change. The model used to sharpen this focus comes from a statement by Canadian futurist Marshall McLuhan: "We shape our tools, and thereafter our tools shape us." The introduction of a new technology always has a social impact. Historically this impact was unforeseen, unexpected, and usually not understood—the observed change was often attributed to something other than technology, when it actually had to a significant extent a technological base.

The theory underlying this focus is that human values and social institutions always and only relate to things that humans can do or aspire to do. There are no values relating to behaviors humans cannot accomplish. What humans can do is determined by the kind of technology available to them. New technology often permits new behavior, making possible what was previously impossible or making easier the previously difficult or rare.

Since values and social institutions are based upon behavioral possibilities, when new technologies are introduced new behaviors become possible; hence, old values and institutions are potentially, and often actually, challenged. In simplified form this is how technological change causes social change; this is the reason I will focus on the possible social impact of technological change in the Pacific island region in order to understand something about the future.

There are two things yet to do: one is to specify the major new technologies that will be introduced or diffused into the region—or that might impact it from without—and the other is to indicate some of the possible major social consequences of their introduction. There are two major technological developments, one already well underway and the other still in a relatively early stage, that require discussion. The first might be called the "electronic revolution" and the other the "biological revolution."

THE ELECTRONIC REVOLUTION

No revolution has an exact starting point—there was always something before any particular incident or development that caused or influenced it. Nonetheless, although the roots of the electronic revolution are little more than 20 years old, beginning with the development of reliable—but very large and expensive—computers, the social impact that makes it a revolution is much more recent. The social revolution began with the marketing of small, comparatively inexpensive personal computers and the development of electronic networks enabling personal computers to communicate with each other and with information sources that are electronically stored and remotely accessible. These developments occurred quite recently, in the late 1970s and early 1980s.

It is certain that technological development will increase, both in software—the ease and power of individual use—as well as in hardware—the sophistication and availability of the machines themselves. Successive generations of personal computers will become as ubiquitous as the most common technology available today.

The impact of microelectronics on human behavior and values will effect changes as profound as those human society experienced when grain and animals were first domesticated thousands of years ago or, more recently, when fossil fuels and the earth's minerals were harnessed as energy sources and tools. The
differences between the impacts then and the ones we are experiencing now are
that (1) the present impacts will alter society more rapidly than did earlier
technological innovations, and (2) there have been ample attempts to warn the
general public and relevant decision makers that major social changes are
occurring or imminent. Both of these differences are important. Because the
pace of technological innovation in earlier periods was generally more
leisurely than it is now, societies were able to cope with the strains the new
technologies induced, often with apparent ease and a strong sense of cultural
continuity. Only a person who was able to keep a good record of the changes
that had taken place would perhaps be aware of the important differences.

Now not only are new technologies introduced and diffused more rapidly
throughout society, but such introduction is almost always routine and
multiple. Many new technologies—not just one or two—are available to people,
so that there is almost never a chance to become fully accustomed to a new tool
before it is replaced by another and yet another.

Much of the process of societal modification that is a consequence of
technological change is well understood by social scientists. Many of them may
deplore the changes that occur, but others welcome them—or at least understand
that they are part of a quite typical process of social evolution. Whatever
their value orientation toward the process, they at least appreciate the role
of technology in social change. They do not assume that technology is somehow
neutral, or that it is possible to have new technologies coexist with conven­
tional customs without carefully planning for the relationship.

As a consequence, social scientists understand that the true revolu­tion­
aries in societies are the businesspeople and planners, who by encouraging
people to acquire new products also are encouraging them to acquire new
lifestyles and values—although this is not usually a conscious process. These
"revolutionaries" are often people who believe themselves to be the most
conservative or concerned about traditional moralities; yet the social
consequences of their economic or planning activities are not likely to be
supportive of conventional values and ways of living. To the contrary, they
are likely to erode them.

With that background, what future developments in electronic technology
and what social consequences of those developments can be expected?

• Personal computers will be small, cheap, and friendly enough to become
as pervasive as wristwatches are today. Virtually everyone will have one, and
they will be used for many different purposes. They will have large memories
and the capability to be linked to any other computer (like telephones now);
they will be as easy to use as telephones (the user will need only minimal
knowledge); they will be completely portable.

• Computers will enable people to communicate with each other over
unlimited distances. These computers will be linked to a wide variety of data
and information sources, some physically remote from the users.

• Computers and their networks will continue to increase in capabilities
over the foreseeable future, so that it will be possible to consider them
"intelligent." This intelligence will equal and probably replace human
intelligent attention in many situations where it is now necessary.
No current institution will fail to be greatly modified by the use of personal intelligent computers and their networks. Virtually no community will not be significantly affected by the impacts of these computers, though it is possible some may try—at the obvious (and perhaps desired) cost of isolation from most of the rest of the world.

Although perhaps not all futurists would agree with everything I have stated concerning the future of personal computers, I believe there is enough agreement in the literature to warrant consideration of the possible pros and cons of such developments. Assuming that the electronic hardware and software will evolve as postulated, what follows is an examination of some of the possible consequences.

Since the electronic revolution will impact all arenas of life, it is difficult to know where to start or stop in discussing the significant aspects. I have chosen therefore to discuss some of the possible implications in five different areas: (1) the economy, (2) the focus or purpose of life, (3) government, (4) traditional culture, and (5) education.

The Economy and the Electronic Revolution

The effects of the electronic revolution on the economy can be viewed from two different perspectives. One concerns the implications of decisions about whether to be active in the development and production of the technologies themselves—software as well as hardware. The other considers possible consequences to the very structure of the current economic system caused by the widespread use or non-use of electronic technologies. These two issues are separate but interrelated.

Should Pacific island communities attempt to be developers and producers of electronic components? An enormous amount of attention is currently being paid to this question, and the answers are varied. Many success stories are told about Silicon Valley and Route 128 as "high tech" locations in the United States, but an equal number of horror stories are also heard about these areas, and about others that are attempting to compete with them. The impression is conveyed that direct involvement in high tech electronic industries is problematic. Some individuals may prosper, but many more fail—and the social consequences often appear to be more negative than positive.

Some believe it is the nature of these high tech companies to be highly mobile and ephemeral, sensitive to differences in wages, costs, and prices and therefore willing to move quickly to areas where the wages and costs are lowest and profits highest. They seem to have little local loyalty, but rather operate in a global market for labor, technology, capital, and customers. Areas that have attracted them by offering low wages, tax breaks, relaxation of environmental or zoning requirements, subsidized education, and shared land preparation costs frequently discover that the companies have hit and run without the community having received much benefit from their presence—rather, having experienced considerable environmental and social disruption. Only those communities that entered the high tech game early—and through people who had some attachment to a specific place—seem to be doing moderately well. Yet even their future is uncertain.
Whether—or how—to get into the high tech game is a question of enormous importance to the future of a community, and it should be faced directly. To avoid becoming informed and making a decision is to make a decision by default. Global competition is keen, and the longer a community waits the less likely it is to find a niche. The point is now to seek that niche, to see how a competitive advantage might be gained. This is difficult, sometimes impossible, but each community should reach its own conclusion after the attempt has been made.

I believe it will not be possible for any community to avoid the effects of the use of electronic technology, or even to avoid its use. Unless a community chooses to be autarkic—or is rendered so by the actions of others—electronic technologies will be increasingly ubiquitous. What differences will that make?

The first and most obvious influence will be on the kinds of jobs available in the future. The second, and only slightly more problematic, question will be whether there are enough jobs of any kind to provide "full employment" for any community.

It would be foolish and perhaps irresponsible to suggest there will be no jobs available at all in an electronically guided future. But it would be even more irresponsible not to admit there is a reasonable expectation that only a fraction of those presently in the work force will be needed in the future. So much of the mental and manual labor that is now performed out of necessity by humans will be done more efficiently and economically through electronic technologies. It is improbable that humans will be able to compete with them for these jobs. As older industrial or agro-industrial jobs decline or disappear, new jobs in new and expanding industries will emerge, but it is unlikely that the number of the new will equal the number of the old. It may be good individual and community strategy to try to be in the forefront of the labor force possessing the newer skills and attitudes, but it is a dangerous illusion to believe that a sizable portion of the future labor force will find employment in either the new or the old jobs. Thus it is good individual and vital community strategy to begin to prepare for a society of "full unemployment."

Preparation for full unemployment is a policy that should be contemplated as much as a policy of full employment. The evidence is sufficiently strong to encourage decision makers to begin to work toward the creation of a society where no more than 10 to 20 percent of the labor force will be needed to fill the jobs humans must still do. Some of these jobs may be glamorous high tech or otherwise futuristic activities; others may involve serving or helping people. Still others might be highly distasteful jobs that even advanced technologies cannot perform.

There are several potential responses to this possibility. One currently followed by many parts of the world is to ignore the problem and hope that the forecast is wrong and that jobs will somehow be as plentiful in the future as they have been in the past. If this is not the case, those parts of the world that have adopted this stance are likely to be heading toward tremendous social unrest. People who have been trained to expect to find jobs and to be needed as paid workers, whether at blue-collar, white-collar, managerial, professional, or other levels, are likely to experience confusion at being unable to orient their lives as they had anticipated. In addition, if the distribution of goods and services produced for human use— but without as much human labor
as is currently required—is not somehow provided for by a method different from the current money-for-services-rendered system, there will be even more disruption.

Modern industrial societies have more or less operated on the assumption that "he who does not work, neither shall he eat." Except for temporary periods or deserved and earned situations in industrial societies, everyone is expected to work for wages or salary. With the wages they purchase goods and services the labor of others has produced. In the hypothesized world of the future, goods and services will not be as dependent upon human labor for their production. Does it not seem obvious, then, that we need to invent a new distribution system not based on wages-for-labor but on some other principle? Is it not equally obvious that we need to invent a new method for equitably allocating jobs?

If we fail to do this, we might fall into a trap similar to that caused by the public and private health and sanitation revolution of the early twentieth century. Dramatic and sudden improvements in medical and sanitation knowledge and technology produced the population explosion that plagues the world today. The death rate was lowered and the lifespan lengthened without at the same time lowering the birth rate. The result was the horrendous social problem of global dimensions that we grapple with today, which appears to be so unmanageable as to foreclose the roads to alternative futures. Dealing with the problems of poverty, famine, crowding, neglect, and abuse caused by our failure to act in anticipation of the bad consequences of good inventions may prevent us from having the future we desire.

Our failure to face squarely the possible consequences to the economic system caused by the diffusion of advancing electronic and related technology will be at least as serious. Moreover, we should welcome this opportunity rather than fear it. Some people have been able to find life-enhancing occupations in industrial society, but many more have had to spend their lives in drudgery and life-shortening, spirit-reducing jobs. Working, although necessary for individual and group survival at one period of history, is not in itself so glorious that it should be preserved when it is possible to design and bring into existence societies where the purpose of life and human worth are not primarily defined through earning a living.

The Focus and Purpose of Life and the Electronic Revolution

The foregoing discussion on the economy leads into speculation on the effect of electronic technology on the future focus and purpose of life. In industrial societies people are what they do—they are defined by the jobs they hold or their relationship to a significant job-holder. If people don't have jobs, what will be the purpose of their lives?

It is a measure of the pathology of industrial society that the question must even be asked. There must be countless activities that humans could engage in that would give meaning to their lives and yet not be called "work." Indeed, the concept of work is relatively recent in human experience. It is strongly related to patterns of interpersonal dominance and levels of technology that began with the emergence of civilization several thousand years ago and reached its height only in the last two or three hundred years in industrialized societies. Now, as industrialism seems about to give way to
various forms of post-industrial society, it should be recognized that the
invention of work also must be disinvented. Societies need to renew and revive
traditional reasons and styles of living and to create new ones.

Although work may no longer be the focus of life, idleness or mischief are
not the only alternatives. What now appears to be idleness and mischievous-
ness might be viewed as creative leisure and healthful playfulness in a
different social situation. Humans want to feel their lives have a purpose and
that they mean something to each other. Because their manual or mental labor
may not be needed by others as it is now does not mean that other reciprocities
could not be found. It is here the richness of the traditions of Pacific
island cultures might make an important contribution, not only to their own
future but also to that of the rest of the post-industrial world.

Life in what are sometimes called societies of "subsistence affluence" may
have more in common with life in the sort of future we are contemplating than
with that historical interlude, now fading away, that was called "industrial
society." Values and ways of life considered to be undesirable or evil in
industrial societies might become great virtues, or at least matters of
indifference and personal preference, in the future. Such behaviors—referred
to as "laziness," "frivolousness," "tardiness," "refusal to take a steady job,"
"wasting time," and "daydreaming"—are arguably undesirable traits in a society
dependent upon human attention and diligence for the production of the basic
necessities, as well as the luxuries. However, these were not generally
considered to be critical vices in most traditional societies, and are not
likely to be especially undesirable in the future either. Thus, relearning how
people peacefully spent their time in traditional societies that did not
require much work, as well as encouraging the invention of new peaceful
activities, assumes considerable importance for the future.

Government and the Electronic Revolution

Discussion of the possible impacts of the electronic revolution on
government, as with the economy, necessitates the consideration of several
different facets. On the one hand, there are policy questions relating to the
development and diffusion of the technology itself. On the other, there are
questions about how the use of this technology might alter the structure,
operation, and operators of present political systems at local, national,
regional, and global levels.

The current structure of the electronics industry is rather curious, and
can be viewed as an advance model of industries of the future—global in its
manufacturing and marketing; changing at a dizzying pace as new technologies
come and go; heavily dependent upon a rare combination of cutting-edge
technological knowledge and skills as well as dynamic entrepreneurial and
managerial abilities; voracious in its appetite for labor and capital.

At the same time there are elements in the electronics industry that
permit many "cottage" and "mom and pop" activities, which can be carried out
anywhere in the world. Unlike the old smokestack industries of the recent
past, much of the software and some of the hardware development can be done at
home or in places remote from one another. There are aspects of the industry
that currently could be performed on the most remote island in the Pacific with
a very small population, provided there are people who have the skills and

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communication technologies appropriate to the task. Other aspects of hardware and software development are still very labor- and capital-intensive and can only be done in unpleasant and tedious assembly-line environments. It is likely that many of these manufacturing situations will be increasingly automated themselves, hence requiring smaller inputs of human labor.

Internal and external pressures to engage or not engage in selected aspects of the electronics industry will increasingly demand the attention of local decision makers. This too is a futuristic tendency of which the electronic industry is merely a harbinger—the economic processes of the future will increasingly be carried out on a global basis. It will be progressively less realistic for nation—no matter how big—to make essentially independent decisions or to be responsible for the economic health of their citizens in the way traditional political theory (regardless of its ideological content) presupposes. Thus many of the important economic decisions affecting a community will be made without adequate participation by those who will be significantly affected by them. This is probably the most perplexing and currently mystified aspect of the political economy of the future. Most important economic decision making will occur at a transnational level; most important political decision making will continue to be made (ineffectively) at national and subnational levels. This does not bode well for a healthy future for democracy and the nation-state system unless some important structural and attitudinal changes are made.

The problem is related to the electronic revolution in this way. It is already clear that a massive information gap is opening between those who have access to and effectively use the rich electronic data bases that presently exist and those who do not. As these bases become vastly richer and as technological access to them becomes friendlier, what percentage of the population will have effective access to the information they need to be able to control their own lives? Will such access continue to be restricted to an elite, as it is now, with the rest of us being given canned games and entertainment in hopes we will be pacified? This is a likely consequence unless current decision makers endeavor to make it otherwise.

It is likely that the structures of political decision making that have been associated with the modern industrial state will themselves be significantly modified by the use of electronic communication technologies. Representative government, with its panoply of written constitutions, legislatures, executives, administrators, judges, laws and regulations, elections, special interest groups, and political parties, has not existed forever. It came into existence in a particular historical period, and as that period fades away it is likely that the political structure associated with it will also fade—or crumble.

I am specifically referring to the development of some form of electronically augmented direct democracy. At the University of Hawai'i, several members of the political science department have been conducting research on various aspects of this possible evolution. This has included experiments with Televote and Electronic Town Meetings carried out over the last several years by professors Ted Becker, Christa Slaton, and myself. We believe the development of a more direct, electronically augmented form of political participation and policy making is likely in the foreseeable future,
and that wise decision makers should now be aware and supportive of the possible shift in this direction.

As with other effects of the electronic revolution, there may be a return to more traditional forms of decision making, augmented and therefore modified by the new technology. Traditional skills, attitudes, and behaviors—even those perhaps considered obsolete or undesirable in a society developing toward industrialism—may gain renewed usefulness and vigor, even though new technologies and human aspirations may need to modify them significantly to make them fully suitable to the future.

The basic picture that emerges concerning the impact of the electronic revolution on political decision making might be that there will be greater global integration of the entire political economy, facilitated by worldwide electronic networks. At the same time there will be a decentralization—down to the smallest social group or to the individual—of many important aspects of political decision making. Thus national or regional representative structures are likely to be superseded by networks that are both more local and more global in their scope.

Traditional Culture and the Electronic Revolution

Compared to industrial and agricultural societies, both traditional and post-industrial societies are relatively affluent. In most traditional societies, nature provided in enough abundance that the people could be described as living in "subsistence affluence." In post-industrial societies, advanced electronic technologies should also be able to provide goods and services in abundance with minimal need for attention from most humans. I cannot speculate on the way in which these goods and services will actually be distributed in the future, however. I hope they will be distributed freely and equitably among all those who desire them—as was more or less the case in traditional societies—and that the hierarchical and grossly inequitable systems of the present will not be artificially perpetuated. This should mean that, as in traditional societies, humans can once again be freed from labor so they can turn their attention to relations with each other. Cultural and ceremonial aspects of life should once again take primacy over practical matters. People could be admired not for how much money they make or the possessions they acquire, but by other, more humane, characteristics, as is typically the case in traditional cultures.

Governance in many spheres may once again become more direct, less reliant upon representatives or dictators who pretend to act in the best interests of others. People, individually and collectively, should be able to exercise greater control over their own lives. This may not be the case if present or future power-holders manipulate resources or symbols for their own selfish purposes, as is done in some places at present. There is no reason to assume that power and power-holders will vanish, unless people recognize and seize the opportunities for greater freedom and responsibility the electronic revolution presents. Currently there seem to be more reasons for despair than for optimism about the liberating potential of the new technology; however, the moment is by no means past if action is taken carefully, wisely, and soon.

This touches on several ways that post-industrial societies may contrast not only with industrial but also with traditional societies. It would be
difficult to argue that individuals were free and self-actualizing in most traditional societies—most were defined by a rather tight web of social and family expectations and responsibilities. Their circle of friends and associates was drawn tightly around them. Newcomers were seldom encountered; strangers were rare and to be avoided. People seldom strayed from the closely knit geographical and social community of their birth or marriage—horizons were severely bounded.

These conditions are much less characteristic of the lives of many in industrial societies and not likely to be the case at all for most people in the post-industrial future. Because of the possibilities for long-distance electronic communication as well as physical mobility, friends and neighbors will increasingly be spread all over the globe—and soon all over the universe.

This increase in geographically (and hence culturally) diverse contacts also implies that many values and behaviors quite natural to traditional societies will be increasingly difficult to sustain in the future. People become free most readily by experiencing freedom. It is difficult for them willingly to follow the dictates of small, stable, local values when they daily experience diversity on a worldwide scale.

Clearly, then, while certain important characteristics of traditional societies will be more easily sustainable in an electronically networked society, others will be eroded by it. The changes and continuities must be discussed and understood as decisions are made about the use of electronic technology in the immediate future.

Education and the Electronic Revolution

The double focus encountered in contemplating the relationship between electronic technologies and education requires consideration of two things: (1) how the new technologies might alter the structure and content of the current educational system, and (2) what the present educational system should be doing now to help people understand the likely consequences of the emerging electronic revolution.

Contemporary educational systems were established to give people the skills, attitudes, and information necessary for them to be successful members of industrial societies. Schools also had the related mission of eliminating the skills, attitudes, and behaviors found in traditional societies. Hence, educators and schools have been important weapons in the battle for development and modernity. The values, lifestyles, and possessions of schoolteachers were expected to differ from those of traditional leaders. Teachers were to be living examples of what it meant to be a modern person.

It was in schools that what Alvin Toffler calls the "code" of industrial society was learned—"the set of six interrelated principles that programmed the behavior of millions" (The Third Wave, p. 62). These principles are standardization, specialization, synchronization, concentration, maximization, and centralization. These must now gradually be unlearned if we are to make the most of the opportunities afforded by the electronic revolution.

Thus, the educational system faces a difficult task. Many aspects of the six principles of the industrial code still have substantial utility, and much
of our present society continues to operate in accordance with it. Students must understand the importance of those values in the present and be able to manifest them appropriately. However, young people should not make these values absolute as they did previously. They must understand that it is likely that these values will be dysfunctional (or at least less necessary) at later stages in their lives. They should be willing and able to discard them when that is desirable.

There is an additional difficulty. Because schoolteachers were expected to be role models of industrial lifestyles, most have internalized the industrial code to such an extent that they are often unable to be sufficiently flexible themselves. They are uncomfortable in other roles, tending to behave and teach according to the old code even when that is not their intention.

This observation provides a transition to the question of how the electronic revolution might change the structure, as well as the content, of the present educational system. The structures of modern school systems, like other social institutions, were largely determined by the technological level of the surrounding society. Many of the characteristics of modern school systems developed not necessarily because they were the best way to perform the relevant function but because they were essentially the only way to do so. For example, it was important to teach reading and writing and to see that books and magazines were available, not because there is any inherent value in these skills and objects but because that was the most efficient way to store and retrieve information. Prior to reading, writing, and books, information had to be stored and retrieved directly in human memory and passed on by speech, song, dance, and mime. Reading, writing, and books were great technical improvements over memory and the oral tradition. Of course, we did not stop remembering and talking when literacy was invented, but we certainly did develop a different educational system as a consequence. Different skills and attitudes became paramount.

It also became necessary to have all "equal" students assemble at the same place at the same time. Hence, synchronization and centralization were of importance. If each individual student began formal schooling at roughly the same age and proceeded at the same pace through the same curriculum, the extent of a person's knowledge could be assumed by knowing how many years of formal schooling she had been exposed to. The industrial code of specialization, standardization, and concentration emerged. However, none of these characteristics—having everyone assemble at the same place and time to march lock-step through the same educational material—are especially laudable. It was just the best that could be done with the technology available at the time.

Electronic technology now enables the provision of more individualized educational experiences for people to be able to learn what they want in the sequence and at the speed they wish. We need not march in unison any longer. It is still desirable that people learn how to be human by inter-relating with other humans, but much of the educational experience of the past and present can be provided more easily, cheaply, and interestingly by machines than by humans. This should free humans to do human things instead of things machines can do better—an option that was not available with industrial technology.

Thus, the present labor- and time-intensive (and insensitive) educational system will be greatly modified by electronic technology. People will be able
to learn—often, as in the past, without realizing it—in much more decentralized, personalized, and interesting ways. At least this will be an option; as with so many other aspects of the electronic revolution, significant areas of choice still remain.

THE BIOLOGICAL REVOLUTION

The electronic revolution is well underway, and many of its consequences can already be discerned. There is nothing inevitable about its occurrence, of course. Although it is highly unlikely that these developments can willingly be stopped, there are many potential catastrophes—both human-made and natural—that might postpone or prevent the emergence of an electronically driven post-industrial society.

The profoundly transformative power of the electronic revolution has already been indicated, but an even more transformative technological revolution is in the early stages of development. This is the biological revolution, which will not begin to reach the present stage of the electronic revolution until the early twenty-first century. Although its full social consequences cannot be postulated as clearly as those of the electronic revolution, some fairly well-informed guesses may be hazarded.

The biological revolution is being led by direct genetic engineering—the purposeful manipulation of human and other genetic material. Certain kinds of genetic engineering are not new. Since humans discovered how to domesticate animals and plants we have been manipulating their genes for specific purposes. Previously this always had to be done through selective breeding or environmental constraints, but now, through a rapidly growing understanding of the coding of life in genes, humans may be at the brink of assuming responsibility for all future biological evolution. This power dwarfs anything currently envisioned for electronic technology. Only the ability to destroy human and most other life through nuclear or biological warfare may rival its profundity.

Intervention in life processes at the most fundamental level is now possible. The applications of this capability are enormously varied. Agriculture will be transformed as humanly designed crops make food production possible in ways and places previously impossible. New organisms will be created, leading to new animals and plants. Medical practice will be altered by the creation of new drugs and methods of healing, including the possible regeneration of damaged or diseased bodily parts. Many diseases that have a genetic basis may be eliminated. Indeed, the human body—or that of any other animal—may be redesigned. Genes capable of increasing the potential for any desired human trait or of suppressing undesirable ones, as well as those permitting new behaviors, might be developed.

The expanding knowledge and application of genetic engineering may result in the creation of choices and options in many areas where they did not exist before. In the past there was only one way to produce human babies: sexual intercourse between a man and a woman was necessary. Now there are a growing number of test-tube babies (although these are not the true test-tube babies of the future). Currently human sperm and ovum are still needed for conception to take place, but the fertilized egg may be brought to maturity in places other than the natural mother’s womb. As the knowledge of genetics and experience with genetic manipulation increases, the old-fashioned method of reproduction
may become a rarity. What is certain is that other methods of conception and birth will occur, even if they are outlawed, and will eventually become accepted as normal. Choice will have replaced inevitability.

Simultaneously, control is being gained over sickness and aging. The normal, healthy lifespan of humans may greatly increase. Some experts foresee most humans being able to live vigorously to the age of 120 years, 180 years, or beyond. Some scientists are beginning to view death as a curable disease rather than an inevitability; others think it is highly unlikely this will ever happen. The ability to clone, or make genetic copies of, ourselves seems possible and, if possible, is an option some will exercise.

These possibilities lie beyond the reach and concern of most of us today, but serious and successful scientific work is being undertaken in all of these areas. The changes, though often reported in newspapers and on television in a sensational way, are being undertaken in subtle, personal ways—individuals are simply exercising micro-options that will have macro-social consequences.

Lively discussion of the pros and cons of genetic engineering has begun in some countries at the highest governmental levels. In other countries, although certain individuals or groups (especially religious ones) have begun to study and take specific positions on genetic engineering, the public generally has not been adequately informed and involved.

High-level, government-sponsored, carefully organized discussions on these issues should begin in Pacific Island communities as soon as possible. The deliberations will be lively and probably very emotional. It may be an uncomfortable—indeed, blasphemous—topic for many people, and some will make seemingly wild and extravagant claims (somewhat like the ones I have made in this paper), which others will declare to be misleading, dangerous, or a waste of time.

As with electronic technology, there are questions related not only to the likely consequences to society if these biological technologies are used but also to what role society should play in developing and producing them. They are, after all, products that can be made and sold—there is economic potential. There are researchers, developers, and entrepreneurs to be trained or introduced from the outside. Should the Pacific Island communities attempt to be in the forefront of development of advanced biotechnologies, or is it beyond their capacity? Would it be a waste and senseless diversion of resources to try or a valuable opportunity lost if they do not? These questions should be asked and answered.

**FUTURES STUDIES FOR THE PACIFIC ISLANDS**

It would not be appropriate to define in detail here what futures studies is or to delineate the specific theory of social-technological interaction underlying the analysis and conclusions herein. However, it does seem desirable to indicate the possibility and necessity of including futures studies as an indispensable and integral part of any planning and decision making that Pacific island leaders might undertake.

The combined impact of the acceleration of history, the exponential
growth of knowledge, the rapid advance of technology and the
information explosion on sociocultural values cannot be seriously
assessed and much less tackled through ad hoc decision making and
rudimentary linear planning which do not attempt to take into account
the various transformations and mutations which are in the making.
Futures studies are not simply a method of approach and study—first
and foremost they are a state of mind which calls for an integrated
demarche and a long-term vision of alternative choices with an
awareness of their respective implications.

Elmandjra described several meetings, initially in Dakar, then in Monro­
via, where African leaders first began, seriously and together, to assess their
likely futures. He stressed the attributes necessary for that undertaking:

Sound analysis, detachment from prevailing mental structures, intuition, creativity, imagination, vision, proper concern for cultural
identity and social relevance, intellectual honesty, the breaking away
from political opportunism, the overcoming of the short-sightedness
which characterizes most decision makers, the non-use and abuse of the
"future" as a cover for the failures of the present, a sense of
commitment, the ability to think in terms of alternative futures, and
the concern for the widest possible participation in the design of the
future, are all essential prerequisites for futures studies.

This is an important statement, combining as it does the recognition that
attitudes toward and conceptions of the world must be changed to avoid being
captured in short-run or political social traps.

Elmandjra also stressed the role of values in futures studies.
Acknowledging that there is no such thing as a value-free science under any
circumstances, he stresses that futures studies must not be viewed as a wholly
objective, value-free endeavor. This does not mean there are no objective,
dispassionate aspects to the study of the future—there most certainly are—but
the overall utility and character of futures studies must lie in the frank
interrelation between its objective and value-laden dimensions. He spelled out
some of the political and practical implications of this:

This point cannot be sufficiently overemphasized in an area like that
of futures studies which is overwhelmingly conditioned by sociocultur­
al value systems because it deals with social change. Africa is most
vulnerable in this sphere. Its past has not yet been liberated as
most of its history has been written by non-African hands and with a
particular bias, its present is marked by an excessive extroversion in
its models of development and in the behaviour of its elite which
suffers from cultural alienation. Africans embarking on futures
studies have to rediscover their past through their own eyes and free their present through the assertion of their cultural identity before they can attempt to reclaim their future which has already been partly mortgaged through research projects carried out by non-Africans.

Most concepts and methods of futures studies have emerged and evolved in sociological environments quite different from those prevailing in Africa. It is up to the African researchers to transform them, to adapt them, or to discard them in the light of their own systems of values and of their economic and sociocultural options. One of the most exciting and challenging aspects of futures studies is the fact that it is an open system where the only certainty is uncertainty. Hence the need for imagination and creativity as well as intellectual humility.

The methods of futures studies are merely tools which become socially relevant only if they are preceded by a thorough understanding of the existing situation, an analysis of the causes of their evolution in a given direction, and of the factors of change which may or can intervene to bring about given futures. This is why the study of the future, as technical as it may become, will always remain an intrinsically political exercise—in the widest sense of the term—if only because it deals with values, visions, options, and choices.

Among other things, Elmandjra is here referring to what I call "the colonizing of the future." One reason for the urgency for Pacific island leaders to take futures studies seriously and to seriously undertake their own study of alternative futures is that whether they are contemplating their futures seriously or not, others are. There are many forces at work attempting to colonize the future of the Pacific island region. Time can be colonized even more easily and powerfully than geographical space. Serious leaders, truly concerned about increasing the options of their successors—citizens as well as future leaders—would want to be active in assessing and protecting their future.

Elmandjra quoted the African leader, Joseph Ki Zerbo: "Africa has begun to take its future seriously because it does not want its future to be simply the past of others." Thus Elmandjra recommended that "students in African universities should be exposed to the methods of future studies and encouraged to write theses in these fields." He gave several examples of what he considers to be inappropriate assessments of the future made by outside agencies, such as the World Bank.

Elmandjra warned against becoming too insular in examining the future: "The future is nonetheless a most propitious area for international cooperation because, despite the diversities which constitute the richness of mankind, the fate of humanity is indivisible even if its roles in its making are blatantly unequal today."

He concluded by stressing the necessity of leaders' commitment to the study of the future as an integral part of policy and planning capabilities. "A good part of the resources spent on futures research in Africa comes from international organizations. UNDP has been an active supporter in this area. The time has come for decision makers in Africa—particularly those responsible

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for planning—to provide some modest financing from national sources for future research."

I would reinforce Elmandjra's position, and strongly urge its adoption by Pacific island leaders. Failure to undertake futures studies seriously will expose individuals and communities to the colonization of the future by others who are making plans for the future.

Futures studies are possible and necessary for each Pacific island community and for the region as a whole. These studies require a different mindset from the usual short-run planning and policymaking because they are concerned with values—their differences as well as points of agreement. There are also objective technical aspects.

Scholars and researchers from the Pacific island area should seek systematic training in futures studies (such as that available from the Alternative Futures Option of the Department of Political Science of the University of Hawaii). They should be especially sensitive to the value-laden aspect of all futures studies, which, in spite of the work of the members of the World Futures Studies Federation, still has a largely Western industrial-nations bias.

Futures studies can and should be a local, intraregional, and international activity. Assistance is available from international agencies, and should be sought, but firm financial and political commitments to serious futures studies should also be made by each community and by the region as a whole.
Urban and Rural Life
UNDER PRESSURE:
POPULATION GROWTH AND URBANIZATION
IN THE PACIFIC

by John Connell

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii
JOHN CONNELL is senior lecturer in geography at the University of Sydney and former director of the South Pacific Commission/ILO Labor and Migrations project.

The Pacific Islands Development Program is publishing this report as background material for the 2nd Pacific Islands Conference, August 1985 in the Cook Islands, and for general use by Pacific island governments. To ensure maximum dissemination of the material contained in the report, it is not copyrighted and island governments are encouraged to copy the report or portions of it at will. PIDP requests, however, that organizations, institutions, and individuals acknowledge the source of any material used from this report.
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GENERAL CHARACTERISTICS

Pacific island populations have grown rapidly in the postwar years. Government family planning programs have rarely succeeded, but migration beyond the Pacific has provided some respite from increased population pressures. Urbanization, the search for education and employment, and growing population densities have resulted in increased unemployment, shantytowns, and social and environmental problems that are beyond the capacity of small countries to resolve. Policies to minimize rural urban migration have been few; although an emphasis on rural development has provided some solutions, economic problems may worsen unless this emphasis is increased.

The populations of Pacific island countries tend to be either widely dispersed over large islands with rugged topography or scattered throughout many small islands often located at considerable distances from the metropolitan centers of commerce and power. The transformations in society and economy that accompanied Western intrusion into the area caused major changes in the growth and distribution of populations. Generally, population growth and movements are a response to the incorporation of the Pacific region into the global economy. These changes have often emphasized the distinctive characteristics of the Pacific nations: their small size (both in population and area), limited natural resources, isolation from one another (and from major markets and supplies elsewhere), and a relatively short experience of monetary exchange economies. Historic interests in the Pacific (for settler colonialism, and the establishment of plantations, mining, and trade) on behalf of traditional colonial nations—Australia, United Kingdom, the United States, and France—have given way to a more demanding economic intervention and the further extension of links between Pacific island economies and those of their Pacific Rim neighbors. All of these influences have resulted in considerable economic change, a degree of diversification, and, above all, increasing variations in economic development from place to place as societies and nations have shifted from subsistence to cash economies.

POPULATION GROWTH

With a few exceptions, the populations of Pacific nations are now as large as they have ever been. Despite recent declines in fertility, growth rates in most countries still remain at high levels; the current rate for the Pacific as a whole is approximately 2.5 percent per year. Until recently, the demographic pattern in most countries has been one of high birth rates and declining death rates. This demographic transition has produced a situation characterized by rapidly growing populations in many areas, especially Melanesia and several parts of Micronesia. Although in Polynesia the natural increase is also high, in most countries (except Wallis and Futuna) this natural increase is
effectively siphoned off through high levels of emigration, which is regarded as a safety valve in many countries.

Higher life expectancy has followed a drop in infant mortality, and the overall decline in mortality generally has been accompanied by a change from infectious and parasitic diseases to chronic noncommunicable diseases. Several countries in the region have responded to high fertility levels with family planning policies and programs; Fiji achieved such a substantial reduction in fertility levels in the 1970s that its program (along with that of Singapore) was regarded as a model of achievement in the Third World. In recent years there have been indications not only of increasing fertility levels but also of considerable resistance to existing programs, especially in Melanesia. Thus, a critical issue in the future development of the region is that of maintaining, let alone improving, the existing standards of living, given the rapid population increases and the intensified competition between economic growth and welfare objectives in development policies.

MIGRATION AND URBANIZATION: THE POPULATION IMPLOSION

The movement of people within and among islands has intensified in volume, increased in distance, and become more complex in pattern and purpose over the past century. In many of the small Pacific nations, internal and international population flows are now the major regulators of demographic change. With the development of modern transportation, the opportunity for migration has increased in a region that historically has been characterized by high mobility. This has led to both an increase in the migratory flows and a change in their patterns. Whereas in the past these movements tended to be circular or repetitive (often seasonal and usually over short distances), permanent and relatively long-distance migration has in recent years become a more general feature. A number of general trends emerge in the population movement throughout the Pacific, although not all occur in every country. First, international migration beyond the Pacific appears to be increasingly important (although data are inadequate to test this assumption); second, small islands are being depopulated as people move to large islands; third, mountain populations are moving to lowlands, usually along the coast; and, fourth, urban populations are continuing to grow.2 In recent years these trends have intensified.

International migration is primarily a Polynesian phenomenon, the principal destinations are urban areas in New Zealand and the United States (also Canada). This kind of movement is resulting in urban concentrations of Pacific islanders on a scale that is scarcely paralleled in the Pacific. Auckland is the largest Polynesian city in the world, containing (as of 1981) some 58,500 Polynesians of Pacific island origin (excluding Maoris). Twice as many Niueans are in Auckland as in Niue, and more Cook Islanders reside in Auckland than on any of the Cook Islands. Honolulu has more than 20,000 Pacific islanders (including 14,000 Samoans), Los Angeles has more than 15,000 islanders, and Vancouver has more than 12,000 Indo-Fijians. More islanders from Tokelau, Pitcairn, the Cook Islands, Niue, and American Samoa live outside their countries—most of them in urban areas—than within them. This recent, extraordinary, and growing phenomenon has had a significant effect not only on the welfare of the migrants but also on their attitudes and contribution to development in their home countries. Most of this migration is channeled through the capital cities of the Pacific, sometimes as "step-migration." However, its major influence on urbanization is in the return migration of

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those who have been overseas and have become urban folk—unwilling to step back into a rural environment and culture.

Within the Pacific the effects of urbanization are considerable and are emphasized by other population trends. Depopulation of small islands appears to be ubiquitous in the Pacific to the extent that in a number of countries some atolls or small islands have been completely depopulated, although some, e.g., Pitcairn Island, have retained a population beyond the time when depopulation appeared imminent. In all multi-island nations the larger islands are gaining in population relative to the smaller ones. This trend is especially true for those states of Micronesia where a high island center dominates an atoll periphery, but it is also apparent in Fiji, the Cook Islands, New Caledonia, and French Polynesia. The reasons for this are straightforward: employment opportunities and services (especially education and health) are concentrated in the urban centers. In the small island states of the Pacific, where labor and capital are often limited, such urban concentration is inevitable at some scale; hence rural to urban migration inevitably follows.

In some cases this movement has not affected either agricultural or marine resource production because it has been a movement of "surplus" population. But the usual patterns of labor migration have entailed substantial production losses, so that the development of outer islands and especially atolls has become a problem in many Pacific countries. The depopulation of small islands is paralleled by a movement from mountains to coasts, although this is obviously significant on only those large islands where mountains exist, especially in Melanesia where this movement is ubiquitous. Once again the same movement to potential jobs and services is apparent, although the incentive of potentially increased and more profitable cash crop cultivation and better transportation facilities is usually even more influential than in other parts of the Pacific. The result is increased pressure on coastal land and water resources.

The most significant population movements are rural to urban migration and urbanization, the crude rates of which are indicated in Table 1. This table illustrates the relatively low level of urbanization in Melanesia and parts of Polynesia (although recording urban Polynesians overseas would give a very different picture) measured as the proportion of the national population within urban areas. Calculations of urban growth rates are extremely difficult to make with any accuracy and thus are not attempted here. However, in the case of Melanesia, evidence exists that urban growth rates may not have increased in the 1970s and that in Papua New Guinea they have been actually falling.3 Micronesian data are sparse, but the evidence suggests that urban growth rates have slowed even though urban populations are generally high. The urban boundary problems of Polynesia prevent drawing clear conclusions.

Perhaps the most encouraging fact about the population movement in the Pacific is that there is little evidence that urban growth rates are generally increasing. However, towns and cities are nevertheless continuing to grow throughout the Pacific, not only in the large countries but also in the smaller countries like Kiribati and Tuvalu, through both natural increase and immigration. Throughout the Pacific there has been a process of what P. Hauser has called, in an Asian context, "a population implosion,"4 the increasing concentration of the population in urban centers, which has been underscored by rapid population growth and the limited impact of family planning. The population implosion increases population densities in urban areas and reduces
Table 1. Population, land, and urbanization

<table>
<thead>
<tr>
<th>Countries</th>
<th>Estimated population (mid-1982)</th>
<th>Estimated annual growth rate</th>
<th>Land area (km²)</th>
<th>Population Density (persons/km²)</th>
<th>Estimated urban population</th>
<th>Percentage urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Samoa</td>
<td>33,900</td>
<td>1.9</td>
<td>197</td>
<td>172</td>
<td>11,399 (1980)</td>
<td>34</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>16,900</td>
<td>-1.8</td>
<td>240</td>
<td>70</td>
<td>3,664 (1981)</td>
<td>22</td>
</tr>
<tr>
<td>Federated States of Micronesia</td>
<td>82,400</td>
<td>3.4</td>
<td>700</td>
<td>118</td>
<td>19,300 (1980)</td>
<td>23</td>
</tr>
<tr>
<td>Fiji</td>
<td>658,000</td>
<td>2.0</td>
<td>18,272</td>
<td>36</td>
<td>218,495 (1976)</td>
<td>38</td>
</tr>
<tr>
<td>French Polynesia</td>
<td>158,800</td>
<td>2.2</td>
<td>3,265</td>
<td>47</td>
<td>78,618 (1977)</td>
<td>51</td>
</tr>
<tr>
<td>Guam</td>
<td>108,400</td>
<td>2.0</td>
<td>540</td>
<td>200</td>
<td>108,400 (1982)</td>
<td>100</td>
</tr>
<tr>
<td>Kiribati</td>
<td>61,200</td>
<td>2.2</td>
<td>690</td>
<td>89</td>
<td>17,921 (1978)</td>
<td>29</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>32,800</td>
<td>3.2</td>
<td>180</td>
<td>182</td>
<td>15,296 (1980)</td>
<td>47</td>
</tr>
<tr>
<td>Nauru</td>
<td>8,400</td>
<td>2.8</td>
<td>21</td>
<td>400</td>
<td>8,400 (1982)</td>
<td>100</td>
</tr>
<tr>
<td>New Caledonia</td>
<td>145,000</td>
<td>1.3</td>
<td>19,103</td>
<td>8</td>
<td>76,205 (1979)</td>
<td>53</td>
</tr>
<tr>
<td>Niue</td>
<td>3,150</td>
<td>-3.5</td>
<td>259</td>
<td>12</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Northern Marianas</td>
<td>18,400</td>
<td>4.4</td>
<td>470</td>
<td>39</td>
<td>14,565 (1980)</td>
<td>79</td>
</tr>
<tr>
<td>Palau</td>
<td>12,400</td>
<td>0.3</td>
<td>495</td>
<td>25</td>
<td>7,642 (1980)</td>
<td>62</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>3,126,600</td>
<td>2.2</td>
<td>462,243</td>
<td>7</td>
<td>395,713 (1980)</td>
<td>13</td>
</tr>
<tr>
<td>Pitcairn Island</td>
<td>60</td>
<td>-5.0</td>
<td>5</td>
<td>12</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>243,000</td>
<td>3.4</td>
<td>28,530</td>
<td>9</td>
<td>18,314 (1976)</td>
<td>8</td>
</tr>
<tr>
<td>Tokelau</td>
<td>1,580</td>
<td>0.1</td>
<td>11</td>
<td>144</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Tonga</td>
<td>98,000</td>
<td>0.2</td>
<td>700</td>
<td>140</td>
<td>25,589 (1976)</td>
<td>26</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>7,700</td>
<td>2.0</td>
<td>26</td>
<td>296</td>
<td>2,191 (1979)</td>
<td>28</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>125,600</td>
<td>3.7</td>
<td>11,800</td>
<td>11</td>
<td>15,102 (1979)</td>
<td>12</td>
</tr>
<tr>
<td>Wallis and Futuna</td>
<td>11,900</td>
<td>5.0</td>
<td>255</td>
<td>47</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Western Samoa</td>
<td>157,000</td>
<td>0.7</td>
<td>2,935</td>
<td>53</td>
<td>32,099 (1976)</td>
<td>20</td>
</tr>
</tbody>
</table>

Total 5,106,190

a No urban population is calculated for the small island countries where "urban" appears to have little meaning, although every country has some inhabitants in the administrative centers who work for wages and rarely consume local food. Formal definitions of "urban" area are extremely variable; issues are discussed elsewhere. National populations have been estimated for mid-1982, but urban populations have been recorded from the most recent census data (because of difficulties in estimation); hence, calculated urban proportions are invariably smaller than the real urban proportion.
the opportunities for urban agriculture (either in gardens or in the urban periphery which becomes even more distant).

These pressures are not confined to the urban areas. In a number of areas where movement has been from the interior to the coast (for example, in West New Britain in Papua New Guinea or in Makira in the Solomon Islands), pressure on available land has become intense. The usual results are less agricultural land per capita and a marked reduction in food crop production due to cash cropping. The trend toward cash crop production is often a trend toward monocultures; ecological diversity decreases because habitats are destroyed and because natural and man-made hazards are not as easy to cope with. In the conflict of interests between specialization for short-term economic efficiency and diversification for long-term ecological survival, "specialism" in the Pacific is slowly triumphing. As Hauser suggests, in an Asian context, if this trend towards population concentration continues, it will be followed by a "population dispslosion," that is, the breaking down of societies. Some researchers fear this already may be happening in the Pacific.

THE URBAN PACIFIC

It is no longer possible to regard Pacific islanders as solely rural people; only Melanesia and the very smallest nations (all of which have large urban populations elsewhere) have less than a quarter of their populations living in towns or cities, and at least five states have more than half of their populations in urban areas. There were few towns in the Pacific islands before the twentieth century, while even as late as 1960 only Suva and Noumea had populations of over 25,000. H.C. Brookfield and D. Hart observed about Melanesia: "The rapid growth of towns equals in significance any of the changes that have swept across Melanesia since World War II. In its consequences for the integration of colonies into new nations, it may even be the most far-reaching of all changes, yet these places are still essentially communities of migrants."

The reasons for this rapid expansion are well known: (1) rapid postwar and postindependence expansion in government activity and spending, (2) the resulting boom in bureaucratic job opportunities, primarily for the educated elite and skilled workers, and (3) consequent growth in service employment. The speed of urban growth in the past two decades indicates that migration has played the most important part in contributing to that growth. There is little doubt that the major motive for migration is economic, even though social objectives are significant. Most Pacific migrants move in order to seek and secure wage employment when suitable opportunities are not available at home.

A major influence on migration has been social change and therefore radical changes in expectations over what constitutes a satisfactory standard of living, a desirable occupation, and a suitable mix of accessible services and amenities. Aspirations almost always involve some imported food and other goods (clothes, vehicles, oil, etc.) and access to schools and hospitals (and possibly modern entertainment), all of which demand some cash income. Concurrent with changing aspirations and the increased necessity to earn cash, agricultural work has been losing prestige throughout the Pacific and thus the relatively limited and declining participation of young people in the agricultural economy is widespread. Changing aspirations are not the sole province of the young. In Tonga, as Feleti O. Sevele points out, "One often hears parents..."
expressing the wish that their children will 'work at something better than agriculture' even though they themselves are farmers. This 'something better' invariably refers to white-collar jobs which carry with them a lot of prestige.\textsuperscript{7} V. Naidu states that in Fiji youths "are taught to value white-collar occupations and detest farming."\textsuperscript{8} Expectations are steadily rising at the same time as urban unemployment becomes more widespread. Rapidly growing national populations, inflation, stable (or even falling) commodity prices, and the declining availability of land in some areas are increasing the gap between aspirations and reality. This increasing gap is one of the critical problems of development in the Pacific islands.

The economic rationale for migration is strongly influenced by social (and also political and psychological) variables. A major influence on migration is education. The generality of this education bias, despite the relatively short history of formal education in parts of the Pacific, suggests that it is likely to continue. Moreover, as access to the few new white-collar jobs becomes more difficult, the "diploma disease" worsens, while the qualifications required for jobs increase. In Yap (Federated States of Micronesia) for instance, truck drivers are expected to be high school graduates—although the high schools do not provide education in truck driving. These trends have prompted much discussion of the value of developing an appropriate educational curriculum, oriented toward a more vocational content in a local cultural context, and locating secondary and tertiary educational facilities away from the towns and capital cities.

Glaring economic and social differences, both between the islands and those countries bordering the region and between remote islands and urban centers, have an important role to play in influencing population movements in the region. Although economic motives are dominant, there is a strong social element in migration. Even if the "bright lights" are only a limited attraction in most countries of the Pacific, services are overwhelmingly concentrated in the main cities. Access to these services is a substantial incentive to migration. Above all, migration is a response to social and economic inequalities, and reduction of inequalities is likely to lead to a reduction in migration. But since inequalities can never be removed in their entirety, some migration is inevitable (and indeed necessary). If current imbalances are redressed and reshaped, migration can be contained within manageable proportions or redirected so that urbanization will be attenuated. What is significant about these movements, and all forms of migration, is their selectivity. Migration almost always results in the loss of the more energetic, skilled, and innovative individuals. And this loss, which may reduce rural political bargaining power, business expertise, and so on, is not compensated either by remittances or by other trickle-down effects from urban and national development.

Factors that discourage permanent urban populations are increasingly being offset by economic criteria such as higher urban wages and the decline in new and existing income-earning opportunities in some areas (especially where cash cropping has "frozen" the land). Evidence from most places in the Pacific indicates that circular or return migration is becoming of less relative importance and that much rural to urban migration is permanent or at least long term. When children are born in towns, this permanence is enhanced. For example, one quarter of the children born, for example, in the large towns of

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Port Moresby, Lae, and Rabaul in Papua New Guinea have never visited their home villages. If they were to do so, they would find acceptance difficult.

It is in this context, above all, that the towns of the Pacific are increasingly becoming more like those in other parts of the Third World, as second (and even third) generations of urban dwellers emerge with, at best, only tenuous ties to rural areas. This development is significant not merely because it implies the breakdown of traditional social organization but also because it effectively ensures that short of learning unknown agricultural techniques (and sometimes languages) and gaining access to increasingly scarce rural land, these second-generation migrants are essentially destined to remain and raise families in urban areas.

Widespread concern over increasing urbanization and its apparent permanence is caused by several issues: (1) rising urban unemployment levels; (2) "ghettoization," especially the growth of shanty towns; and (3) increasing urban crime rates and other social problems, such as alcoholism, vagrancy, moral decline, and deculturation. These problems were eloquently addressed by Papua New Guinea Prime Minister Michael Somare who asked: "Do we really want to become a country of big cities? In all the 700 languages of our country we have never needed words for slums, for unemployment, for air pollution. Do we really wish to build the kind of country that needs those words?"

In recent years the environmental aspects of urbanization have received greater prominence as urban housing no longer meets the rigorous and sometimes draconian standards of colonial times, as traffic problems worsen, and as the rivers, streams, and open spaces of urban areas become polluted with the wastes of the consumer society. In extreme cases, as in Tarawa lagoon (Kiribati) and Truk lagoon (Federated States of Micronesia), the disposal of sewage in areas where shellfish are an important food source has precipitated two recent and severe outbreaks of cholera. There are grave fears that other cases may occur, especially in areas like Ebeye in the Marshall Islands. At the same time these pressures on the immediate urban environment have resulted in gardening occurring at greater distances from urban centers and the depletion of firewood resources in some areas, particularly around Port Moresby, the capital of Papua New Guinea, where there is a rapidly emerging "poor person's fuel crisis." This depletion of bush and timber around urban areas in some cases has contributed to serious soil erosion, a problem that is becoming epidemic in some parts of the region. It is in this way that the development problems of the Pacific are beginning to mirror those of other parts of the Third World.

Most of the towns and cities of the Pacific region are not growing because of an increased demand for industrial labor; nor is their growth fueled by an increasingly productive agricultural sector. Urban growth is principally stimulated by increased government expenditure on infrastructure and administration and the centralization of the bureaucracy. The financing of this expenditure depends in part on profits from the sale of commodities but more often relies on external aid and loans. This weak economic base has placed urban managers (and they are few) in a desperate race to cope with uncontrolled squatter settlements, to mount an increasingly expensive search for water and fuel (again, especially in Port Moresby), and to adjust to a growing dependence on imported food and energy. Consequently, there is little time for the consideration of the long-term effects of economic planning decisions on the physical environment and the stability of the towns.
There are few parts of the region where planning exists, let alone where it has begun to come to grapple with long-term social and ecological issues, despite the unusually complex and wide-ranging nature of environmental problems in the region. Only Fiji, one small part of the region, has confronted these issues in detail, but no country has translated the resolution of environmental problems into effective policy.

Underlying many approaches to urban growth in the Pacific is a deeper concern that the Pacific way of life is a rural way of life and that urbanization, or at least its negative connotations, is not part of the Pacific way, even though the rhetoric of development sometimes stresses both tradition and modernity. Data on urban unemployment in the Pacific are notoriously difficult to assess, are rarely comparable, and depend on concepts such as "seeking work" that are hard to quantify. However, where data do exist, specifically in Fiji and Papua New Guinea, the evidence is that urban unemployment has increased significantly in the past decade and that youth unemployment is far in excess of that of other groups.

In recent years the rate of job creation has been declining in the urban areas of the Pacific. After the growth and localization of bureaucracy, especially in the 1970s, and the establishment of some import-substitution industries, there has been little expansion in wage employment. Domestic markets are small and extremely fragmented in these island nations, export markets are protected, and domestic urban wage levels are too high compared with those of Southeast Asian countries to establish manufacturing industries without local resources. These trends might have been expected to result in the expansion of the "informal sector," especially as towns have continued to grow, but this has not occurred. There is little evidence that urban unemployment will decline in the near future, and the rising level of unemployment, especially of young people, is now of genuine concern in large parts of the region. In rural areas such trends may be paralleled by unstable commodity prices and rising import prices, thereby reducing the incentives for people to remain in full-time agricultural production and encouraging them to move away from agriculture.

In addition, crime rates have increased in the past decade in both rural and urban areas. But few serious examinations have been made of the relationships among crime rates, urbanization, and modernization. While crime rates are higher in urban than in rural areas, the extent to which criminal activity is a function of location, employment status, migration status, alienation, or any other factor is generally unknown in the Pacific (although there is evidence, primarily from within Port Moresby, that the highest crime rates are in more established urban areas).

While it is conventional to stress the negative aspects of migration, it is necessary to note that migration may have a number of positive features. Migration enables individuals to obtain higher educational and technical training, reduces population pressure on scarce resources (especially in atoll economies), contributes to natural resource development (by providing labor) and urban development (by providing an administrative cadre), and, through remittances, results in flows of cash and goods to rural areas. These features may be counteracted by negative aspects, such as a decline in agricultural production, increased dependence on imported commodities (thus worsening the national balance of payments), the emergence of urban elites (sometimes
resulting in policies that overwhelmingly favor urban rather than rural areas), urban unemployment (which may be associated with higher crime rates), and health and nutritional problems. The general concern is that within the Pacific the level and type of migration manifest more negative than positive effects. Thus countries must understand the rationale for migration in order to devise strategies to minimize or redirect some migration streams, while encouraging others to generate a more appropriate form of development.

TOWARD AN URBAN FUTURE?

Perhaps the most visible effect of rapid urbanization is the emergence of shanty towns (or squatter settlements), nowhere more apparent than in Port Moresby. Here migrants contribute to their own economic and social welfare through self-help in the provision and improvement of housing. In the early stages of urban development, however, such shanty towns have often been regarded by long-term urban residents as a form of visual pollution and have influenced government decisions either to discourage such settlements or to provide some basic facilities through "site and service" schemes. This "accommodationist" policy found acceptance in the 1960s and 1970s and was in keeping with early concern over the social, rather than the economic, aspects of urban growth. However, while the provision of amenities for migrants enables a reduction in visual pollution and eases the transition of rural to urban migration, it has the inevitable, perhaps paradoxical, effect of stimulating further migration (especially because virtually rural areas do not receive similar benefits).

The more that people's basic needs are satisfied in urban areas, the greater the incentive is for others to move into towns. Together with the accommodationist approach there was the "last resort" strategy whereby migrants were "persuaded" to return to their home villages, where it was perhaps assumed that basic needs were adequate. While some attention was given to employment, these approaches to the problems of urbanization were limited because they were directed toward the effects of migration rather than to the causes.

The assumption that urban growth was inevitable necessarily limited any approach to development policies that might have slowed migration and hence urbanization. This was only to be expected in a period when urban and its accompanying industrial development were seen as important and essential development strategies. Increasingly, the past decade has demonstrated that although some industrial development is possible in the larger towns, it rarely goes beyond import substitution industries, and when this does occur it is usually through various preferential schemes. In short, urban economic development has failed to keep pace with the rate of urbanization; hence social and environmental problems have multiplied. As a consequence in recent years greater attention has been directed toward enhancing rural development and to reversing the direction of migration.

Population migration policies depend on the economic potential of alternative development strategies. While the countries of the Pacific are becoming increasingly urban, the principal exported goods—and consequently the basis of economic growth—continue to come from rural areas (although the mineral production in Nauru, New Caledonia, and Papua New Guinea may be regarded as an urban activity). All of the evidence suggests that the expansion of manufacturing will be extremely limited in the foreseeable future. While the relationship between agricultural production and population increase

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is extremely difficult to evaluate, it has been argued that for seven of the larger Pacific countries (Fiji, French Polynesia, Papua New Guinea, Solomon Islands, Tonga, Vanuatu, and Western Samoa) over the period 1965-78 only Papua New Guinea actually increased food production at a greater rate than population increase, and all (except Papua New Guinea) were far behind world averages. Among many reasons, one is the migration to urban areas of the agricultural labor force, ultimately resulting in static or falling production and increasing food imports. The implication is that development policies that favor the rural sector may slow migration, reduce the rate of urbanization, contribute to agricultural development, and reduce a worsening trade and balance of payments situation.

Most development plans in the Pacific say little about population change and the influence of planning on population distribution; priority has generally been given to economic growth. Not all of the countries have development plans, and some plans are no more than lists of projects. Because most governments have not identified long-term social and economic goals, firm planning is consequently absent for the most part. Those countries, like Fiji and Papua New Guinea, which have recognized problems of population distribution, have not yet developed policies (other than settlement schemes) that influence this distribution. However, at least three countries have made attempts to reverse migration patterns. In French Polynesia, the Fonds d'Aménagement et de Development des Iles de la Polynésie Française (FADIP) is an integrated development scheme for remote islands (including agricultural development schemes and financial assistance for those wishing to return). Kiribati has attempted to allocate existing employment more equitably by restricting government employment in Tarawa and rotating workers on Nauru; in this way access to employment, but not population movement, is tightly controlled. Some provinces in Papua New Guinea have considered the introduction of passes or identity cards; in more than one province unemployed migrants have been repatriated to their home provinces. These direct approaches to population distribution are relatively rare in the Pacific, but their increasing numbers show a recognition of the growing seriousness of urbanization.

Generally, two related policies oppose increased urbanization: stress on decentralization and establishment of rural settlement schemes. Although almost every development plan in the Pacific identifies decentralization, just as they also stress self-reliance, there are few places where the rhetoric resembles reality. Invariably the shortage of capital and skilled labor and the inertia of the private sector and the bureaucracy have hampered efforts to decentralize. Settlement schemes however, have been established in a number of areas of Melanesia to open up new land for agricultural export production rather than to decentralize population. Nonetheless, especially in Papua New Guinea and also on Vanua Levu in Fiji, they have achieved some success in both these aims although, in the Pacific as elsewhere, settlement schemes are extremely expensive to establish. In Fiji, the Solomon Islands, and in the special case of Kiribati, emphasis is increasing on the development of new growth centers so that development is spread away from the existing urban centers (which are often the only towns in the country) and to ensure that people in rural areas have better access to urban services.

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CONCLUSION

Although the effects of increasing urbanization are often seen as social problems, it is increasingly apparent that their causes are economic: the result of emerging inequalities between urban and rural life. Urban problems often spring from rural roots. In Papua New Guinea where urban and rural income differences are perhaps the greatest in the region, opportunities for rural development are extremely limited in a number of highland areas (which are the principal source areas of migration) so that income and welfare inequalities are perhaps greater there than elsewhere. Urban problems have also been closely linked to rural development. In 1981 Jacob Lemeki, then PNG's minister for labour and employment, stated:

"As the government believes that the major determinant of rural-urban drift is due to rural-urban imbalance of wages, incomes and services, the government believes that one of the most effective means of getting people to remain in rural areas is through rural development. Less developed rural areas are given special attention in this process: cultural, forestry, and mining projects are intended to create employment opportunities in rural areas, apart from other considerations. Development of rural transport infrastructure, provision of health, education and agricultural services are some of the central areas of the government's rural development strategy. Family planning is another long-term policy where provision of services is exercised in Papua New Guinea. A lower birthrate of course means less pressure on the land and so less of a "push" for people to migrate to urban areas." 

Such long-term development strategies, oriented primarily to rural areas and to the causes of migration but also involved with decentralization and family planning, may reduce if not solve urban problems. Policies to control rural-urban migration are much more likely to be effective if they deal with the causes rather than the symptoms of migration. In most countries of the Pacific this involves a greater emphasis on rural development for two reasons. First, it can slow migration. Second, because the bulk of the population live in rural areas and rural people are usually the poorest of the poor, agricultural development seems to offer the greatest opportunities for development. In the larger countries, strategies favoring the growth of small towns may be more important. However, many development policies in the Pacific exhibit an "urban bias" that hampers rural development; hence genuine rural development demands a change in attitudes of policymakers. Rural development is complex and requires an integrated approach; when policy is partial or oriented to only one rural group, migration and urbanization may increase.

Throughout the Pacific islands towns are growing faster than villages. The Pacific has an urban future, and cities and towns are essential to social and economic development. But it is not inevitable that urbanization be unmanageable; that urban, social, economic, and environmental problems should worsen; and that the population implosion must arrive. Development strategies that emphasize integrated rural development and that stress both economic development and social services will be most effective in association with more direct attempts to reduce or redirect migration (such as Kiribati's innovative approaches to employment). These strategies are important not merely to minimize urban problems but also to improve the agricultural output that, along
with fisheries, is the core of economic development in most Pacific countries and a key element in any attempts to achieve self-reliance. Moreover it is in the villages where basic needs are the least satisfied, where most of the poor live, or from where they have already migrated.

The task will be difficult. In Fiji, for example, as urban employment has also increased, migration from the eastern islands has increased. It has been argued that this is essentially because agricultural work has been losing status and prestige and because the small islands are "beautiful but no place to live." As more children are born in towns and remain there, more urban jobs will have to be found. And as long as urban employment appears more prestigious and urban life is perceived as being of higher quality than rural life, the population pressures in urban areas and on the small island nations of the Pacific are likely to increase. The economic future of the Pacific depends to a great extent on how successfully these problems can be solved.
REFERENCES


THE IMPACT AND PLANNING
OF LARGE RESOURCE DEVELOPMENT PROJECTS

by Sam Pintz and Jim Rizer

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii
SAM PINTZ is a research associate with the Pacific Islands Development Program and Resource Systems Institute at the East-West Center. Before joining the Center, he worked for the Papua New Guinea government and was directly involved with the evolution of the Ok Tedi mining agreement. He has worked for and advised several developing countries on minerals policy and development.

JIM RIZER is a research fellow with the Pacific Islands Development Program at the East-West Center. He has conducted planning studies for several large resource development projects in the Pacific region. Before joining PIDP, he worked for the government of Fiji and the University of the South Pacific.

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OVERVIEW

Introduction

Over the next 20 years, hundreds of millions of dollars will be invested in leading growth sectors in the Pacific islands region. These commercial investments will either be directly or indirectly tied to large resource projects. While these investments will provide many benefits to island nations, there also will be major costs from, for example, the opening of a mine, logging, or tourism. These costs can affect the environment, the small economies, and the structure of the societies themselves.

This paper (1) reviews the past and future of large resource projects in the Pacific, (2) discusses some of the broad changes which could result from future projects, (3) indicates problems in planning large projects, and (4) concludes that new methods are needed to maximize benefits and reduce costs. The paper presents the complex and often unclear and conflicting issues that are associated with large-scale resource projects. It does not attempt to say that there is a clear, orderly pattern to either plan for or develop a large project.

When Big is Not Small

Most Pacific island governments have internal planning procedures or access to good planning guideline documents. These documents and procedures are perfectly adequate for 80 percent of the planning and project preparation undertaken by public authorities. But what happens when those infrequent, large projects occur? What do governments do when experience offers no guide to an appropriate response for the simple reason that there is no relevant experience upon which to draw? A major mine, large timber project, or tuna cannery may come only once or twice each generation and if the opportunity presented by such investments are not fully exploited, the nation may lose important benefits or, alternatively, be forced to live with unnecessary costs. Pacific people cannot afford a business-as-usual response to major projects.

Large projects are not simply small projects which are expanded in scope—they are different in several ways. First, size implies a more than proportional increase in complexity. This complexity often spans several development sectors; a project that generates significant government revenue, foreign exchange, or new trade relations may affect the entire nation's economic prospects. Secondly, large projects will, of necessity, affect much larger and more diverse regions of a country. The reconciliation of regional diversity is a major problem in itself but becomes even more acute when it involves the creation of new urban settlements in rural areas. Third, large
projects often outstrip local human resources and necessitate the migration of workers from other regions of the country. This migration disrupts the developing area and creates dislocations in the home area as well. Fourth, large projects have infrastructure needs which are often nationally important, but which have never been anticipated in national infrastructure plans. Suddenly new roads, ports, or power stations appear and seem to serve only the project with little or no connection to the rest of the nation. Fifth, large projects inevitably tend to occur quickly. Due to the substantial sums of money involved, schedules are accelerated and the timing and sequencing of events leaves little time for reconsideration or second thoughts. In short, large projects are the nemesis of traditional government planning. When the green light flashes, those not well in front of the steam roller are likely to find themselves either beneath it or left in the settling dust.

Table 1 indicates the complexity of large development projects. Analysis must differentiate between impacts at the national, sub-national (e.g., province, district), and local levels. The analysis also has to differentiate between a project's direct and secondary effects. As the table indicates, there is a wide range of issues which require an equally wide range of expertise. The table does not reflect the time factor. For example, employment issues vary considerably from the project's construction phase to its operating phase; it is not uncommon for a project to require two separate work forces with different sets of skills, and one work force may be twice as large as the other. Thus, the complexity is intensified by often dramatic fluctuations.

A FRESHENING BREEZE:  
THE PAST AND FUTURE OF LARGE RESOURCE PROJECTS IN THE PACIFIC

Before considering what planning measures may assist in preparing for major projects it is worthwhile to review the Pacific islands region's history of and prospects for major projects. Given the recent political independence of many countries in the region, the historical record is heavily dominated by the colonial experiences of island administrations. It is important to learn from these experiences as preparation for the future rather than to simply reject the colonial legacy as inappropriate.

The Past

From the 16th to the 18th centuries, the Pacific islands were "discovered" by Europeans. Missionaries, traders, and beachcombers followed during the first part of the 19th century. Although all of these groups had lasting impact, the traders brought a new form of resource use.

Before the arrival of traders, Pacific island villages were essentially self-sufficient with some limited trade occurring, for instance, between a coastal village with salt and an inland village with timber or pigs. The traders came seeking products such as beche-de-mer and sandalwood. In return, items such as firearms, metal tools and fish hooks, cloth, and mirrors were received. On the heels of the traders came settlers. Plantations, primarily copra, were established which led to conflicts over land with the traditional landowners. The plantations required labor which was often in short supply as a result of depopulating diseases such as measles. Manpower shortages led to the infamous labor traffic known as "blackbirding," which was the forced migration of people between islands and island groups.

II-B.2
Pacific Islands Development Program
Table 1. Possible framework to assess development projects

<table>
<thead>
<tr>
<th>Parameters for Analysis</th>
<th>Levels of Analysis and Origin of Effects:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National (Macro-Assessment)</td>
</tr>
<tr>
<td></td>
<td>Direct (Project)</td>
</tr>
<tr>
<td>Employment</td>
<td>X</td>
</tr>
<tr>
<td>Revenue</td>
<td>X</td>
</tr>
<tr>
<td>Foreign Exchange Earnings</td>
<td>X</td>
</tr>
<tr>
<td>Export Diversification</td>
<td>X</td>
</tr>
<tr>
<td>Population Movements</td>
<td>X</td>
</tr>
<tr>
<td>Environmental</td>
<td>X</td>
</tr>
<tr>
<td>Training</td>
<td>X</td>
</tr>
<tr>
<td>Political</td>
<td>X</td>
</tr>
<tr>
<td>Local Government Finance</td>
<td></td>
</tr>
<tr>
<td>Local Business Development</td>
<td>X</td>
</tr>
<tr>
<td>New Industries</td>
<td>X</td>
</tr>
<tr>
<td>Land Use &amp; Agriculture</td>
<td></td>
</tr>
<tr>
<td>Urban Planning/Housing</td>
<td>X</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>X</td>
</tr>
<tr>
<td>Health &amp; Nutrition</td>
<td>X</td>
</tr>
<tr>
<td>Education</td>
<td>X</td>
</tr>
<tr>
<td>Traditional Agriculture</td>
<td></td>
</tr>
<tr>
<td>Traditional Leadership/Decision Making</td>
<td></td>
</tr>
<tr>
<td>Values and Social Organization</td>
<td></td>
</tr>
<tr>
<td>Use of Money</td>
<td></td>
</tr>
</tbody>
</table>
Aside from copra plantations, the colonial period brought (1) other new types of resource use, such as mining and commercial logging; (2) the introduction of new crops, such as sugar and coffee; (3) new technologies, such as permanent cultivation; (4) the establishment of towns to cater to the demands of settlers, whalers, and a growing expatriate civil service; and (5) the presence of large companies, such as the Colonial Sugar Refining Company and Burns Philp. These changes were designed by the colonials for their benefit. Thus, a dual economy emerged that was characterized by colonial-controlled export and commercial activities, which were more closely linked to places like Sydney, Boston, or London than to the rest of the country; and the indigenous subsistence sector, which operated in a traditional but isolated environment. Hence, until the 1970s when many island countries gained independence, we find a pattern of resource use which was largely not beneficial to the indigenous societies. In certain countries there were benefits such as improved transportation and health care systems. However, these were by-products of the colonial system rather than of resource projects.

One might argue that the benefits derived from the colonial system were a result of the colonial powers' interest in economic resources such as timber and whales, but it is necessary to consider a more direct relationship between resource use and the benefits received by the local population, who were often the resource owners. This is necessary because there have been recent incidents when local landowners have rejected resource projects, such as the threatened succession and subsequent moratorium on minerals exploration on Bougainville and the opposition by Rennell Islanders to a proposed bauxite mine. The positions taken by these landowners reflect a perception that they would not receive a net benefit from the particular resource project.

The Present

Pacific governments have not been indifferent to this historical pattern of resource conflict. Indeed, in recent years imaginative policies have begun to emerge as part of the larger adjustment to self-government and independence. Within this context of indigenous policy innovation there are two main policy questions: (1) whether or not lessons have been learned from the past so that more benefits can accrue to the nation and rural residents, and (2) is it possible to have a more equitable relationship with a developer? To both, the answer is a qualified yes. Responses to these policy questions are illustrated by a few examples from leading growth sectors for the Pacific region.

Minerals. Papua New Guinea has used an excess profits tax formula whereby the government as the resource owner is able to share in periods of high profits that previously accrued only to the developing company. In order to stabilize for periods of reduced earnings, a government revenue stabilization fund has been established. At the recently opened Ok Tedi mine considerable attention was given to involving local land owners in the mine's development so that they have now captured many spin-off business opportunities.

Timber. Fiji's Native Land Trust Board (NLTB) has recently adopted a policy which heavily curtails log exports and the production of rough sawn timber. The policy emphasizes forward-processing (e.g. band saws, kiln drying) which adds value to the benefit of both the nation and the land owner. The Fiji Pine Commission has had a policy which enables land owners to become shareholders in processing companies.
Tourism. The Native Land Trust Board has adopted a policy which ties land rents to gross turnover. This change has resulted in certain land owning groups receiving 50 times more cash than they had under earlier untied or tied-to profits agreements.

Fishing. Through the Forum Fisheries Agency (FFA), governments are sharing information on potential investors. This has facilitated negotiations which have brought higher returns from foreign companies wanting to harvest tuna stocks. This has also put a stop to the practice of playing one country off against another to the benefit of the foreign company.

These examples, while not exhaustive, indicate major initiatives to correct past errors and omissions. Unfortunately, even though the above information is available and governments seem willing to share it, successful policies are not always used and/or considered in other countries. While all nations must adapt their policies to their own special problems, it is tragic that they continually "reinvent the wheel" and, in the process, come out with less either for themselves or the indigenous land owners.

The Future

Today, one often hears the twenty-first century described as "the Pacific era." Closer examination of the term "the Pacific era" reveals that the area described in both popular and academic journals refers to Japan, China, Asia's newly industrialized countries (NICs), and the ASEAN nations. Hardly a mention is made of the Pacific island nations. The Pacific islands region is ignored because it is confronted by the myth that these small nations are poor in resources. Although it would be foolish to argue that the Pacific islands have the variety and size of the resources found in, say, Australia or the United States, there are major commercial resources in the Pacific islands. The "problem" is that people are just now "discovering" these resources.

Described below are the types of commercial resources that could be developed over the next two decades and the implications of their development. Implicit to the discussion is that having the myth of being "resource poor" has both advantages and disadvantages.

What are the resources and where are they located? The economic forecasts for 1985 that were made in 1965 contain several noticeable omissions. No one forecast the huge increases in oil prices, the phenomenon of "stagflation," or the "world debt crisis." Clearly, the star-gazers of 1965 missed comets, the disappearance of constellations, and the birth of whole new solar systems. We will not claim to be any more exact than our 1965 colleagues. But we can present what we feel are basic trends for the next 20 years.

Our prediction of the leading growth vehicles for the Pacific islands region to 2005 is based on examination of national five year development plans, selected resource assessment data, certain long-term commodity forecasts, and the assumption that the best available technology will be used. Our analysis can only be termed a "crude guesstimate," but it indicates certain basic trends that will have major impact on development in the region. We believe that the following sectors will lead the Pacific over the next 20 years:

Pacific Islands Development Program
- fishing (and fish-processing)
- timber
- non-fuel minerals—specifically gold
- tourism
- agro-industries
- manufacturing
- services

Growth in these sectors is either directly or indirectly tied to the commercial exploitation of natural resources.

Table 2 estimates growth in these sectors in respect to each country. As the table indicates, the larger countries (e.g. Papua New Guinea and Fiji) can expect more growth in more sectors. Similarly, some of the smaller countries will experience major growth in only one or two sectors. A limitation of the table is that growth levels are compared to a nation's base in 1983. Hence, we find that two nations might both have major growth potential in tourism, for instance, even though one of the nation's 1983 base might have been ten times greater than the other. However, it is the concept of "major growth" that is important and one which we will return to below.

Based on available data, we have not been able to quantify investment levels for all of the sectors for all of the countries. However, we believe that between $5 to $10 billion dollars will be invested in these sectors over 20 years. (This estimate does not include investment figures for petroleum or gas because the potential remains largely unknown. However, with the recent discovery of petroleum in Papua New Guinea, it is possible that mineral fuels could also be a leading sector for certain countries.) This suggests annual investment levels in these key sectors of 5 to 10 percent of current regional gross domestic product (GDP) over 20 years. Excepting certain nations belonging to the Organization of Petroleum Exporting Countries (OPEC) and Asia's newly industrialized nations, this level of investment over such a long time period is virtually unheard of.

Why these resources, and why now? Why are these resources going to be developed over the next two decades? There are a number of answers, which taken together produce a whole greater in sum than its parts:

- First, there are resources in the Pacific which have not been developed while stocks in other producing countries are running out. For example, a single forest in Papua New Guinea has more commercially exploitable indigenous timber than all the forests of Thailand combined. Similarly, Indonesia and the Philippines will be net importers of timber by the end of the century. Thus, the highly valued resources of the Pacific will attract investment because previous suppliers will have had their resource depleted.

- Second, new assessment techniques and knowledge have been developed. Recently, exploration for and discovery of gold deposits has increased substantially. Previously, geologists had been looking for the wrong type of deposit.

- Third, global technologies and markets have changed. For example, more fuel-efficient passenger jets coupled with increased demand for foreign travel will help the Pacific islands become major tourist destinations.
Table 2. Estimated potential leading growth sectors to 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Fishing &amp; processing</th>
<th>Timber</th>
<th>Non-Fuel Minerals</th>
<th>Tourism</th>
<th>Agro-Industries</th>
<th>Manufacturing</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Samoa</td>
<td>+++</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>?</td>
<td>+++</td>
<td>0</td>
<td>+++</td>
<td>+++</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Federated States of Micronesia</td>
<td>+++</td>
<td>+</td>
<td>0</td>
<td>+++</td>
<td>?</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Fiji</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>French Polynesia</td>
<td>?</td>
<td>+++</td>
<td>0</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
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<td>0</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Kiribati</td>
<td>+++</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>?</td>
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<td>0</td>
<td>+</td>
<td>0</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Nauru</td>
<td>+++</td>
<td>0</td>
<td>0</td>
<td>+++</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>New Caledonia</td>
<td>?</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Niue</td>
<td>0</td>
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<td>0</td>
<td>+</td>
<td>+</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Northern Marianas</td>
<td>?</td>
<td>0</td>
<td>0</td>
<td>+++</td>
<td>+</td>
<td>0</td>
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<td>0</td>
<td>+++</td>
<td>+</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>?</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>++</td>
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</tr>
<tr>
<td>Tonga</td>
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<td>0</td>
<td>0</td>
<td>++</td>
<td>++</td>
<td>+++</td>
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<td>Vanuatu</td>
<td>+</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>?</td>
<td>+++</td>
</tr>
<tr>
<td>Western Samoa</td>
<td>+</td>
<td>+++</td>
<td>0</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
</tr>
</tbody>
</table>

**KEY:**
- +++ Major growth compared to 1983 base (for specific nation)
- ++ Moderate growth compared to 1983 base
- + Slight growth compared to 1983 base; therefore, implies some expansion of existing facilities rather than additional facilities.
- 0 No growth compared to 1983 base
- ? Unknown/data not available
Fourth, some Pacific countries have created or imported resources. For example, pine and eucalyptus plantations are current resources; high-value, low-volume spices are potential resources.

Fifth, there is human resource potential. Generally, there is a literate and trainable labor force. Wage rates may be higher than in many developing nations but the education levels on which training is based are also higher. This implies a productive workforce.

Sixth, general overall economic performance has been positive, although the small open economies are highly vulnerable to commodity price fluctuations. Euromoney (1984) ranked 100 countries based on economic performance between 1974 and 1984. Singapore received the highest ranking (99), but Fiji (68) was just behind Switzerland (69) and ahead of Norway (66) and Australia (56). Papua New Guinea (53) was rated much higher than Spain (32), Nigeria (29), and Chile (11). This rating combined with international credit ratings presents the Pacific island nations as having well-managed economies, recognizing the vulnerability of smallness as well as its advantages.

Seventh, the Pacific islands are politically stable. There are no coups. War and the threat of war is absent. Political changeover is conducted peacefully. Corruption is relatively minimal.

Combining these reasons, the Pacific islands region appears as an attractive place to invest, to develop commercial projects that have 20 to 30 year payback periods, and to search for further opportunities. Compared to many other developing and industrialized nations, the region clearly emerges with a promising future.

Will these projected investments occur? This analysis of the Pacific islands' investment potential over 20 years has not been conducted as an idle exercise. Rather, it is based on experience with and knowledge of the implementation of large resource projects, e.g., the hours and money required of government, the complex negotiations which sometimes breakdown, the realization that signing an agreement only begins a relationship with a large corporation, and, the understanding that a company's objectives are usually much clearer than a government's—and that lack of clarity can result in a loss of benefits to the country.

Although investors currently perceive the Pacific islands as a sound destination for investment, this could change over time if administrative and developmental bottlenecks occur. For example, the Solomon Islands National Development Plan, 1980-1984 (not adopted) stated that lack of planning and implementation capacity was one of the major constraints to development. Planning and implementation capacity in Papua New Guinea has been cited as a problem by the World Bank. Fiji's recent Employment Mission noted a deterioration in the civil service machinery. These comments concern day-to-day responsibilities in respect to national development and say nothing about the special problems of planning for large resource projects.

These special problems can be overwhelming. Consider that in Papua New Guinea from 1976 to 1980 a major share of the government's policy making capacity was consumed in negotiating the agreement on the large Ok Tedi mining project. With a new large gold mine likely to begin construction by the end of
the decade and several small yet substantial deposits also in the offing, what resources will be left to facilitate the development of an indigenous mining industry? Furthermore these mines employ people who need housing, health clinics, roads, schools, and food. When minerals projects are combined with timber, fishing, and large agricultural projects, what resources are left for national development programs?

With a planning and implementation capacity that is already overextended, a series of large projects could very well paralyze the development program. The crude estimates on potential leading growth sectors have been done because, to our knowledge, no one else is doing it. Failure to develop administrative capacity, policies, and procedures adequate to cope with these large projects can result in more than an over-extended planning system, it can also easily lead to a drop in confidence by potential investors and literally suffocate the goose that lays the golden egg.

Currently there are resources and an investment environment attractive to investors. Investments may not take place if that environment changes. In some cases, this may mean that a resource is never developed. For example, a bauxite mine on Rennell Island would have been profitable in 1975. Today that mine would not be economic and it is unlikely to ever regain viability.

ASPECTS OF CHANGE: THE EFFECTS OF LARGE PROJECTS

If a specific project or even a sector is considered in isolation, attention tends to focus on environmental and cultural effects. However, if all the projects and sectors are taken collectively, we can discuss much broader social, economic, and political impacts, ones which portend major changes to definitions and concepts that are fundamental to a particular society.

We have described the historical process of resource use in the Pacific islands, which clearly indicates that the benefits received by the (foreign) investors have often outweighed those accruing to the nation and its people. We have also demonstrated that there are methods to increase national benefits, including those to traditional landowners. In a later section we will discuss how planning for large resource projects can be improved. Below, we will develop a context for these improvements, a context which reflects the broad trends affecting the social and political environments.

Dimensions of Political Change

The first effect to be addressed deals with international political implications. To begin, the development of large projects in the Pacific islands will involve, regardless of ownership, a substantially increased presence of large transnational corporations. Transnationals are not ideology-free; rather, they are closely linked to major western powers. Thus, there is a strong possibility that the Pacific islands will have an increased involvement in global politics—a role considerably different from the current sending of peace-keeping forces overseas or support of human rights initiatives in international fora. We cannot pretend to know what this role or its effects will be, but based on the experience of African, Asian, and Latin American nations that have not clearly defined their role or the role of outsiders, we can state that international integration will increase, with possibly negative effects.
Aside from the increased role of transnationals and increased integration into the global political system, one commodity, gold, will place the Pacific islands in a different political role. We foresee more new investment in gold in the Pacific than in any other region in the world over the next two decades. The Pacific may well become a leading gold exporting region. Gold is a primary source of foreign exchange for the Soviet Union and is a cornerstone of the South African economy. The political implications of these facts are not insignificant.

International trade competition will also be a major factor in relations with other producers of commodities such as timber. As Indonesia becomes a net importer of timber during the 1990s (whereas it has been a major net exporter), it will be losing one of its largest non-oil exports and foreign exchange earners. Competition for markets during this transition period could be intense as Indonesia strives to retain access to the best markets. Increased timber production also suggests increased competition with processors in, for instance, Australia. Historically we find log exports or rough sawn timber exported to Australia for further processing and increased value-added accruing to Australia. New technologies, greater timber production levels, and basic economics indicate that higher processing levels can and should be undertaken in the Pacific. This may result in conflicts with special interest groups in Australia.

Major development projects in the Pacific can have substantial domestic political consequences in two ways. First, the projects are often accompanied by major population changes. This population shift is commonly associated with the establishment of a new urban center in a rural area and will reflect migration from within the area as well as from outside. Changing political alignments and concerns will follow this population shift. Secondly, and of equal importance, a major project represents a new focus of economic activity in the nation. Disruption or support of this new economic focus becomes a matter of vital national political interest. The classic example of the interaction of population changes and economic concentration is the political influence which has been exerted by Bougainville on the post-independence domestic policies of Papua New Guinea.

Dimensions of Social Change

We believe that future large-scale development projects will have major social consequences for Pacific societies. The most important policy question is not whether cultures and social conditions are changing—for they certainly are—but rather on how the local people can assimilate the rate and depth of the forces being brought to bear on their traditional lifestyles. With large development projects the rate of change is abrupt and the changes being imposed on the culture are of a profound nature. It is fairly clear, that two major social elements will come under heavy, often abrupt pressure in the course of undertaking large projects. These social elements are: threats to indigenous cultures caused by the influx of outsiders, and the attitude toward land ownership and compensation. It is to these social issues that we now turn.

An early and almost inevitable consequence of development is an increase in contact with non-kinsmen. This contact takes many forms and, in the Pacific islands, has resulted in different types of social change. Contact almost always results in an increase in sophistication as one society has increased
access to the collective wisdom of other societies. If the contact is too abrupt, the indigenous culture becomes overwhelmed and suffers in the process. A similar result occurs where development and contact leads to a rapid redistribution of population in an area with the result that local people and values are numerically submerged by outsiders. A distinct but related form of cultural submersion occurs with the rapid accumulation of economic power by an outside group over an indigenous group. Such sudden economic dominance can result in disruption of marriage and courtship patterns and the deterioration of traditional family responsibilities, such as the care of older clan members.

Even with the most traumatic and sudden forms of development-induced cultural change, a new social equilibrium will eventually be established. This new equilibrium will reflect a realignment of political interest as well as a redistribution of population and economic power. Pacific island leaders must share a primary responsibility for insuring that the local people are the beneficiary and not the victim of this process. For large resource projects there are no easy answers for dealing with this responsibility but there are a few promising avenues for thought.

Although a great deal of attention has been given to land questions in the Pacific, much of this attention has focused on the question of compensation. Without minimizing the critical role that compensation schemes play in the resolution of land issues, it is also worth considering other dimensions. Indeed, the compensation issue is more properly related to an economic rather than social discussion and will clearly be influenced by other financial or employment benefits which may flow to local residents.

In many parts of the Pacific, land by traditional definition includes not only physical space but also the trees, wildlife, water, and spiritual presence on it. In the past, compensation for land use has included affixing a dollar value to, say, a tree, but this western concept has not adequately reflected the relationship between land and people. We must consider that land in the Pacific means a commodity which cannot be bought or sold; land ownership is a relationship that must be maintained, in perpetuity, for future generations. However, this does not preclude land use. But land use compensation clauses, in a mining agreement for instance, tend to neglect not only the current relationship between land and people but also that relationship in respect to future generations. The failure to reflect this future relationship is one reason why land use rents are sometimes inadequate.

Fundamental to assessing the social implications of the lands issue is an appreciation of what a change in land use patterns may mean for traditional sociocultural relationships. The usual pattern of land use policy relies, almost subconsciously, on acceptance that land for major projects must be solely dedicated to the uses of the project. While this may sometimes be true, we believe that the social impact can be lessened by planning for multiple uses (e.g., the project use plus some traditional uses). Even where exclusive use is ultimately necessary, careful scheduling of land development activities may, at times, provide an extended period over which social adjustments can occur.

Dimensions of Economic Change

Major projects are most sought for the economic benefits that they promise to the nation. Employment, taxes, foreign exchange, linkage industries, and
regional infrastructure are but a few of the economic benefits which are associated with large projects. In evaluating these benefits, it is important to differentiate between economic benefits that are wholly compatible with one another and benefits which may be mildly incompatible. For example, in a capital intensive activity like mining, the maximization of government tax receipts may be mildly incompatible with the maximization of employment. As many developing nations are belatedly realizing, the substitution of labor for capital often takes its toll on profits and taxes. Similarly, pursuit of high employment agricultural projects like oil palm or sugar may be highly desirable but contribute relatively little to the national treasury. On the other hand, both agriculture and mining are major foreign exchange generators. The point here is that economic expectations must be geared to developmental realities. The development knot cannot be untied with a single successful economic sector.

Planners and theorists are fond of talking about development in terms of people moving from traditional subsistence activities to cash-generating activities. While there is a great deal of truth in this notion, it is far from clear that the movement is as beneficial as might be supposed at first glance. Take, for example, a large project in a rural area. As land rents could be low, wage employment is a reasonable alternative. There are also costs associated with wage employment which reduce its attractiveness. Jobs mean cash income—but the question is cash income for what purposes. As new wage earners are usually unskilled, they receive low wages. To earn these wages they have to drastically curtail their subsistence production, which means that part of the wage packet goes to purchase relatively expensive processed food. Often, wage earning landowners have to relocate, which also involves increased cash expenditures. Thus, the wage earner has little cash and time left for investment in his family, community, and the economy as a whole.

The above examples are not exhaustive. Rather they indicate possible directions of major changes. Whether playing a different role internationally or seeing shifts in national politics as one region or group replaces another, the effects of these large projects could prove substantial. Although there are a range of possible options to deal with any of these effects so that they can become positive, the opposite can also occur. Externally induced change is difficult to assimilate under any circumstance. The magnitude of the changes described above suggests that unless increased attention is given to planning for certain changes then the negative effects will become dominant.

PLANNING PERSPECTIVES: HOW GOOD INTENTIONS CAN PRODUCE NEGATIVE RESULTS

Development Objectives

Development activities can be conveniently separated by their objectives. A simple classification of development objectives involves separating those projects whose primary motivation is to increase community or individual welfare from those projects designed to stimulate economic activity. While such a classification is obviously wrought with problems it does represent a useful conceptual distinction in the formulation of development strategies.

The specific goals of "economic" projects might involve the creation of employment, the expansion of the tax base, the generation of foreign exchange, or the growth of rural incomes. Historically many Pacific island economic
development programs have failed to recognize the secondary implications of the primary activity. Some of these secondary implications can provide pleasant surprises, such as, for example, where a primary activity stimulates supporting industries or growth. On the other hand, secondary implications of economically motivated development can sometimes have unanticipated and traumatic social and environmental consequences. In general, projects whose primary objective is economic will occur more rapidly and with less attention to social effects than will projects whose objectives are to increase welfare.

The perception of social change associated with either "welfare" or "economically" motivated development programs is often seen over a short time frame and is measured by the amount of negative social (and often political) backlash which is generated. However, it is not clear that over the long term the effects of "gradual" welfare programs are, in fact, less profound than the "abrupt" consequences of economically motivated projects. The difference in social impact may simply be the period over which social or cultural adjustments have time to take place.

**Development Costs and Benefits**

Typically a large resource project provides employment and training, taxes, foreign exchange earnings, and industrial and/or regional diversification. These benefits have to be compared to costs such as potential inflation, environmental destruction, and social conflict. Table 3 lists some of the common major costs and benefits. For example, in a number of the small open Pacific economies, the import content of inflation varies between 50 to 75 percent. It has been estimated that the postponed Namasi copper mine would have increased Fiji's inflation rate by roughly 4 percent (to nearly 16 percent in 1980). Thus a large project can exacerbate a nation's vulnerability while at the same time causing internal disruptions.

The most important question to ask in considering project costs and benefits is to clearly define the affected groups. For example, in a typical mining or forest project, benefits in the form of taxes or foreign exchange flow mainly to the government or general economy while project costs (e.g., in the form of pollution or cultural disruption) are concentrated on the members of the local rural community. Under such circumstances it is clearly necessary to transfer some of the benefits from government to those people forced to bear the costs (e.g., local residents). While such a transfer is seemingly obvious it is amazing how often such transfer mechanisms are omitted from project proposals or, more insidiously, simply assumed to take place as a result of some vague national policy. An example will illustrate this general point. In several Pacific countries, it is quite common to require employers to give preference in employment to people from the local area. While such policies are obviously well intentioned they often have only minimal social impact since many rural residents are unable to meet basic health or education criteria. Here, the presumption that employment preference will increase local benefits may not produce the desired results. Arguably, where fundamental barriers to participation exist, it may actually be worse to hold up the unattainable promise of employment since this will only raise expectations. When these expectations are frustrated they may be replaced by backlash and resentment.

Another point not shown in the table is that total costs (including the induced effects) can exceed total benefits. For instance, during periods of
Table 3. Common major benefits and costs of large resource projects

<table>
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<tr>
<th>BENEFITS</th>
<th>COSTS</th>
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<td>jobs</td>
<td>inflation: wages, prices, land values</td>
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<td>government revenue</td>
<td>production bottlenecks</td>
</tr>
<tr>
<td>foreign exchange earnings</td>
<td>dependence on commodities vulnerable to severe price fluctuations</td>
</tr>
<tr>
<td>economic diversification</td>
<td>increased presence of large multinational corporations</td>
</tr>
<tr>
<td>training</td>
<td>concentrated growth and inward migration</td>
</tr>
<tr>
<td>infrastructure development</td>
<td>resource use conflicts (e.g., mining vs. forestry)</td>
</tr>
<tr>
<td>increased internal linkages</td>
<td>environmental degradation and destruction</td>
</tr>
<tr>
<td>increased rural investment options</td>
<td>adaption of western consumption patterns (and leakage of earnings)</td>
</tr>
<tr>
<td>potential to increase regional distribution</td>
<td>altered lifestyles, which cause community conflict and social problems</td>
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<td></td>
<td>labor displacement/dislocation</td>
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</table>

low commodity prices, increased government revenues could be less than increased government expenditures, especially when major infrastructure programs are involved. Implicit here is that there can be substantial hidden costs and subsidies given to the developing company.

Of particular importance to the Pacific islands which emphasize increased "distribution of the fruits of development," is that large projects can facilitate the opposite. Increased rural income does not necessarily mean a better lifestyle. Rather, a high proportion of the increased income can leak to urban areas and/or overseas. Familiarity with urban lifestyles can facilitate urban drift. Urban relatives can reduce remittances as they see increased cash flowing to the rural areas. However, what is important here is how the project can and will be used for national development. Too often this question is not asked except from the perspective of how many jobs the project will create; even less often is it answered.

If socio-economic costs are often disguised, then potential benefits are even more elusive. For projects that generate national benefits, the bookkeeping is usually—but not always—fairly reliable since project transactions are monetized. On the other hand, benefits and costs which accrue to local residents are less easily taken into account. Clearly, the creation of rural employment that is actually taken up by someone from the local region is a quantifiable plus. Similarly, transfers to local resource owners for land or
minerals or timber or fishing rights are unquestionably gains in local benefits. But other types of supposed local gains are less certain.

It is often suggested that a basic benefit of rural development is to slow down the drift of unemployed migrants to the towns. But this logic would seem to deny the fact that people sometimes migrate for social reasons such as escaping from village authority systems or to see the "lights of city" (e.g., to broaden their life experiences) or to get a better education for their children. Furthermore, given the importance of urban remittances to rural areas in the Pacific, it is not necessarily true that urban migration is always bad for rural areas. Indeed, in many regions of the Pacific such remittances are absolutely essential to maintenance of the quality of rural life. Furthermore, it is far from clear that people who migrate from rural to urban areas are irretrievably lost as rural resources. For example, at the massive Ok Tedi mining project in Papua New Guinea, the government found that many local people from the Western Province were quite prepared to return "home" to take advantage of the employment opportunities provided by the mine. This is not to suggest that a rural development strategy should not be pursued, but rather to demonstrate that, from the point of view of rural residents, concepts of developmental costs and benefits are often two-edged swords.

A final, almost ironic twist of the rural-urban question is the fact that large projects almost invariably bring with them the establishment of new urban areas in rural regions. Thus, within the large project context, urbanization is the consequence of successful rural development. When viewed from this perspective, the planning dilemma is really to find a satisfactory complimentarity between the two patterns rather than to see them as opposing developmental goals.

The View from the Bottom

When looked at through the eyes of the local residents, the allocation of costs and benefits is particularly exasperating. In practice they are asked to give up their land, to endure environmental pollution, and to tolerate an influx of aggressive outsiders for the good of the project or nation. In many cases these development costs often carry with them the recognition that the government has failed to prepare residents for the project. An extreme but common expression of local resentment is the often heard criticism that "before you wanted our resources you did not pay any attention to our needs."

A further aspect of this unfortunate situation is that the government is viewed with increasing suspicion by the very people it is supposedly trying to represent. Often the consequence is that the proponents of development (e.g., outside investors, local politicians, migrants from elsewhere in the country, and the government) become adversaries of the local people and culture.

In considering new projects it is easy to overlook the costs on residents since they are seldom the focus of government attention. As implementation of the project unfolds it consumes more and more of the government's administrative capacity and generates a momentum which is often deaf to local concerns. In the press of a multimillion dollar project nobody has time to pay attention to a few banana trees that may be a primary food source for a rural family.
At the other end of the spectrum, well-meaning planners may attempt to compensate for local costs based on some inappropriate generalization. For example, if we return to the previous employment preference case and assume that everything goes according to plan and that the maximum jobs go to local residents, then we might find that we have depopulated the surrounding region of young men and totally disrupted traditional village culture. To paraphrase an old medical addage, "The (employment) operation was a success but the (village) patient died." Beyond questions of development strategy and tactics, large projects can pose direct challenges to government sovereignty in an area.

An easily overlooked aspect of large projects is the effect that they can have on local administrative and political control. Particularly, if a large development scheme is undertaken in a remote area, the project company may exert far more influence on local affairs than the provincial or national government. This privatization of public affairs is often the direct consequence of government policies which require that large enclave development projects should be self-supporting. The self-supporting thesis is usually based on the assumption that new projects should not be a drain on the national treasury. This assumption leads logically to requirements that developers should make provision for health, education, and worker housing investment. Such investment requirements are unquestionably the correct policy starting points, but the next extension of the self-supporting principle is wrought with potential problems.

When confronted with required social investments, the investor must answer two related questions: at what standard should facilities be built, and what should be the source of the service provided. The response to these design and operational questions is strongly influenced by the desire of the project company to look after its employees. As a result, both design and operating assumptions are likely to be substantially above national levels. At this point, the usual government-investor dialogue often reflects an unwillingness on the government's part to staff or operate facilities above national standards and the common investor attitude is to "top-up" social services to "employee" standards.

At this point, it is worthwhile to step back and view the situation from the perspective of the local resident. First, any development induced social service is likely to be better than what existed previously and the company will get credit for "making something happen." Second, the company is, of course, paying for the new facilities and this fact will be locally recognized. Third, the company is seeking more and better facilities and services while the government is making the seemingly incomprehensible demand for inferior facilities and service standards. Fourth, the company is apparently willing to pay, from its own funds, for better standards. Give the company four gold stars and tie a ribbon on the company image. In local eyes, is there really any question about who is looking after the public interest in the project area?

RESPONDING AND THE SEARCH FOR SOLUTIONS

Anticipation and Sequencing: Key Timing Considerations

Preparation for large projects is a time consuming, often frustrating exercise. All the attributes of bureaucratic behaviour and planning suggest that field activities are much more likely to come too late rather than too
early. Indeed, planning to alleviate the particular problems of a specific project is almost certain to be undertaken too late. This occurs because the inherent social impact problems take a considerably longer period of time to solve than is available between, say, the presentation of a positive feasibility study and the commencement or completion of project construction. But the situation is far from hopeless and several Pacific nations have recently begun to undertake long-term strategic plans in key growth sectors. One step was recently taken in this direction by the Papua New Guinea National Planning Office which began to consider health, nutrition, and education programs in remote mineral rich regions through a system of preparatory milestones tied to certain events in the minerals sector. If successful, the Papua New Guinea scheme will remove many of the barriers to local participation which have hitherto characterized minerals projects in that nation.

If long-term anticipatory planning is essential to preparing for major projects, then it is equally important to understand the problems associated with improper project sequencing. The problem of sequencing social programs with economic development schemes is compounded by the involvement of private investors, and particularly, foreign multinationals. In a typical private investment, implementation plans are drawn up by the investor with little reference and only intermittent liaison with public servants or local residents. The reasons behind this insular system are neither malevolent nor sinister. Rather, the investor is simply trying to get his project into operation in the shortest and cheapest way possible. As a result of this closed system the government is often groping around in the dark, uncertain of where the investor is in the overall scheme or exactly what the government should be doing.

Of course, the government might simply push ahead with its social programs at the most rapid feasible pace and hope that all is well, but such a strategy may prove wasteful and even counterproductive. Take a typical construction project for example. There is a clear contradiction between removing local people from the labor force for formal education and providing them with construction employment. You simply cannot have it both ways. Or similarly, as some that a technical education project begins turning out skilled timber mill operators several months before the timber mill is completed. It would seem highly probable that such operators would drift off into other occupations and never be available to use the skills on the jobs for which they were trained. Such sequencing dilemmas are so common to major project development that they are almost the rule rather than the exception.

What can be done about such problems? First, the host government must be willing to take certain risks in preparing for major projects if impacts are to be minimized. By and large, these risks relate to the possibility that the project will be abandoned, rescheduled, or modified and the government's social expenditures wasted. Such a possibility is not an inconsequential contingency and must be weighed very carefully against the costs of doing nothing and being caught unprepared. Second, obviously, better investor-government liaison is necessary, but in most cases this will not solve the problem. While investors have vital interests in implementation decisions, in many cases they do not actually undertake detailed design or construction programs. They are, so to speak, "one step removed from the action," which, in reality, is in the hands of an engineering firm or construction company. Similarly, to simply monitor construction and attempt to match social programs is only likely to be
partially successful. The real key to the whole implementation monitoring issue is direct government involvement with design decisions. It may well be that a small road alignment adjustment around (or through) a rural village can make an enormous difference in social impact at almost no cost; or perhaps a logging plan can emphasize development of one area of forest in preference to another area for agricultural reasons. These are design decisions. Simply, waiting for the investor to advise the government on the status of construction activities undertaken two weeks earlier, for instance, will certainly result in lost opportunities.

Design decisions can be used to shape the project and soften the social impact. Clearly, there are limits to how much design influence the government can exercise before imposing unacceptable costs on development, which leads to the next point. The government must be willing to use its own resources in conjunction with the finance provided by investors. Examples of such concurrent expenditures are the construction of feeder roads to link to a primary project road or, perhaps, construction of a few wharfs to extend the project's ocean transport system to nearby coastal towns. But, again, such concurrent decisions must be based on anticipatory planning linked directly to project sequencing, and they must be part of the project design decision making.

Absorptive Capacity—Nurturing the Framework

A key ingredient in successful anticipatory planning is a clear understanding of the government's and nation's capacity to undertake the necessary activities. Economists and development planners often refer to "absorptive capacity" when considering new developments but often fail to either properly assess existing capacity or to plan for growth or expansion. The casualty of this myopia is almost inevitably the local businessman or entrepreneur whose construction company, or raw materials supplier is bypassed in favor of imported sources.

What happens when the local businessperson loses out? If we take the case of timber imported for housing for the Ok Tedi project, one could easily say that Papua New Guinea has lost jobs and value added. However, that is only one part of the equation as nondevelopment can mean a lost opportunity to establish a long-term viable industry or to introduce more efficient technologies. Nondevelopment can also cause a drop in investor confidence (in the economy) and, in the case of certain resources, especially minerals, it could mean that a project is never developed. Again, the timing of initiatives is the key.

The planned growth of absorptive capacity is obviously something of a hybrid development strategy in that it could variously be considered as import substitution, increasing export value added or indigenous business development. Yet, to the best of our knowledge there is not a single planner in any Pacific island country whose primary concern is with assessing, monitoring, or expanding national participation in major projects. To relegate such functions to planners responsible for sectoral projects is to simply "close the barn door after the cow is out." Absorptive capacity planning cannot occur on the basis of single projects and will, of necessity, involve some longer term perspective of development strategy. To ignore the fact that benefits can only be maximized through nurturing of a supportive economic framework will tend to maintain the current import dependency.
Making Contact

While success or failure in dealing with the cultural consequences of economic development can only be measured in terms of local conditions, there are few reference points to look to for policy guidance. At the heart of any local sociocultural strategy must lie a concerted attempt to improve contact with the local community. For simplicity, three channels to the local community might be considered as appropriate consultative vehicles: (1) existing institutions (particularly churches and political institutions), (2) urban kinsmen, and (3) direct community education programs.

While such channels may not provide a complete communication link in every circumstance they do represent logical, convenient places to start dialogue with residents and preparation for the project. It probably goes without saying that to be meaningful the process should be truly consultative rather than a pro forma attempt to justify bureaucratic decisions which have already been taken.

Before proceeding to a detailed consideration of institutional, kinsmen, and community education programs it is useful to explore the link between public consultation and social impact somewhat further. At the outset it is worth suggesting that for many impact questions, the people themselves are—if properly advised of options and consequences—the best group for determining their communal and individual interests. A corollary of this bureaucratically startling premise is that community participation is the only way to be confident of community cooperation. Any solution imposed from the outside, no matter how farsighted or thoughtful, may simply be resisted.

In defining local consultation in these terms we are essentially recognizing that community involvement is a quasi-political process and that the normal bureaucratic impulse to bypass the local politicians (especially those who may be in opposition to the national government) will be wrought with problems. But direct political involvement is a two-edged sword since few politicians are able to resist the opportunity to use a direct role to their personal advantage and, indeed, one of the most perplexing questions facing political theorists is the degree to which politicians should or do reflect the views of constituents vis a vis their own viewpoints. Fortunately, Pacific island politicians generally are both democratically responsible and sufficiently close to grassroots communities to make this "representation" issue less controversial than in other regions of the world. With these preliminary comments let us return to the channels for rural consultations.

It is necessary to involve existing local institutions in the consultative process for the reason that outside government officials may simply lack credibility. Furthermore, if the institutional fabric which already exists can be sufficiently strengthened, cultural change may be moderated or channelled. Thus, both the process and the result of local consultation can be facilitated by a sincere commitment to work through rather than around existing local institutions.

Churches play an important institutional role in rural Pacific areas, which is both related to but distinct from the social organization of the community. They are institutions of trust and are led by people who generally have more education and greater life experience than the average villager.
addition they have substantial links outside the community with the church or
denominational hierarchy and function across rather than within clan or kinship
groupings. Thus, the churches are agencies of social contact that both enjoy
high prestige and are in a unique position to facilitate, moderate, or resist
the assimilation of developmental change. It is no great feat of insight to
suggest that it is preferable to have the churches directly (and positively)
involved in the consultative process than to have them indirectly (and most
probably negatively) involved.

A similar but distinctly different opportunity is provided by urban
kinsmen of the rural people. Urban migration among Pacific islanders is well
established but rarely considered as a positive vehicle to facilitate
development. Yet, if properly managed these people can provide valuable links
in the development process which can be useful both in preparing their rural
cousins for upcoming changes and in assisting with articulation of social
options and choices. Like churches, urban kinsmen often have a unique position
in the eyes of rural villagers. They enjoy high status as a result of their
substantial (by rural standards) urban income and the remittances that they
provide, and their broader life exposure and education. Generally urban
kinsmen are willing to assist both from a traditional sense of responsibility
and to maintain their status.

Another obvious but underexploited vehicle for moderating developmental
effects is through direct community education programs. Too often in the past,
Pacific community education has been confused with programs for the simple
dissemination of information. One important distinction between the two types
of programs is whether the substantive involvement of rural people is sought in
choices between development options. Thus, policy feedback is an important
characteristic of community education on the impact of development.

In essence then, these three channels point toward both the need and the
possible solution to providing people with more and better information. The
result of increased information is better decisions by communities, which can
be translated into reduced negative effects and increased benefits.

CONCLUSION

This paper has not attempted to present case studies or "how to do it"
recommendations. Rather, it has indicated and described a host of complex
issues associated with large resource projects. We suggested that projects
during the colonial era produced few benefits for the islands. Fortunately,
there were few large projects in the past, but that will change over the next
several decades. This change will have a major effect on the islands'
economies, social systems, and political relations.

The direction these effects will take is unknown. While we have
highlighted many negative examples, we have also described recent positive
policies and planning decisions. When we discuss the need for anticipatory
planning and increasing the involvement of local communities, we are attempting
to nudge the effects of large commercial projects in a positive direction. How
can we reduce negative effects and increase the positive? The answer may rest
in some of the impact assessment studies which have been conducted in the
Pacific islands region.
A number of studies conducted in the Pacific have assessed the impact of large development projects. Jackson et al. (1980) evaluated possible impacts of the Ok Tedi mine in Papua New Guinea, giving particular attention to how residents in the vicinity of the mine would be affected. Rizer et al. (1982) assessed potential impacts of the now-postponed Namosi mine in Fiji. Although the Namosi study had many similarities to the Ok Tedi study, specific emphasis was given on how the mine and its induced effects could be used for national and sub-national (Namosi and Serua provinces) development from a planning perspective. A further example is the comprehensive review of tourism and land use conducted by the Native Land Trust Board in Fiji. This study concentrated on the impacts of tourism and land use on indigenous landowners, resulting in a system of areas and sites designated and prioritized for development. Other examples include Meltzoff (1983) on the social and cultural impact of the Solomon-Taiyo fishing joint venture, and Ruthven (1979), who also dealt with socio-cultural impacts in discussing the effects and use of money received by Rennell island inhabitants during the period of exploration for bauxite.

Although these impact studies provided useful data to decision makers, many were "post hoc" exercises that were conducted after the project was operational (i.e., studies on the Bougainville mine and Meltzoff's fishing venture study in the Solomon Islands). Other studies of potential impacts were conducted after major project decisions had been made (i.e., Jackson et al. on the Ok Tedi mine). What is lacking are assessments which occur in conjunction with the evolution of a resource development project.

Development projects go through a series of steps before they begin operating. For example, before a mine begins operating, the minerals deposit has first been identified and evaluated for its ore grade and size, followed by an economic prefeasibility study, a detailed feasibility study, a construction period, and finally, its operation. These steps are of utmost importance to maximizing benefits. In Fiji, for example, if the construction industry had had to build all the houses for the Namosi mine workforce, the industry would have required at least 18 months notice prior to the beginning of the mine's construction. Similarly, the number of area residents working at Ok Tedi in semi-skilled and skilled positions could have probably been substantially increased if there had been schools and training programs established earlier in the mine's evolution. In this vein, Clark and Pintz (1984) utilized the stages of a project's development in respect to mineral resource assessment and development planning in Papua New Guinea. Their work focused on the education and health needs of a community, which if met would enable increased local participation.

There is increasing interest in utilizing the limited resources of the Pacific. In order to maximize all possible benefits accruing from the development of island resources and to minimize all associated costs, a set of policy and planning guidelines for resource development would be very useful. Although international agencies such as the World Bank and the United Nations have published such guidelines, their work has been written generally with larger countries in mind, not the island nations and territories of the Pacific. And few, if any, of these publications discuss socio-cultural aspects of development that are applicable to the Pacific. Moreover, these publications do not take into account the evolutionary development of projects (as described above), nor do they reflect the limited resources for analysis, which is a day-to-day work reality in the Pacific.
A policy research project could be mounted to study the social, cultural, and economic costs and benefits of development projects that would give Pacific island governments a clear picture of the impact of such projects. Such a study could include a range of types of projects (i.e., fishing operations, timber projects, tourism development, mining, manufacturing or small industries centers, and agricultural production and processing projects). The analysis could include the social, cultural, and economic costs and benefits at the national, provincial, and community levels. Emphasis could be given to prospective impact analysis, impact monitoring, and post hoc impact analysis. However, the research must also focus on what can be done to positively influence project design decisions so that governments are more able to ensure that development is in accordance with national goals and plans.

While the results of such a research project cannot guarantee the smooth and successful implementation of a large resource project, it would be a useful step in that direction. We can only stress that the prospect of investments worth hundreds of millions of dollars, creating tens of thousands of jobs, will necessitate new and different policies and planning strategies.
Health and Nutrition
PACIFIC ISLANDS' HEALTH AND NUTRITION:
TRENDS AND AREAS FOR ACTION

by R.R. Thaman

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii
R.R. THAMAN is with the School of Social and Economic Development, University of the South Pacific, Fiji.

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This paper is an analysis of the current state of health and nutrition in the Pacific islands. Sound health and nutrition must be among the development goals of any society, nation, or region. Health and nutritional improvement, however, is an exceedingly complex subject. On one hand, almost all developmental activity directly or indirectly affects the health and nutritional status of a nation. On the other hand, there are innumerable aspects of both health and nutrition (which are unfortunately too often treated as separate fields) that merit detailed analysis in order to do justice to the topic. Furthermore, the extreme environmental, social, and developmental diversity encountered in the region complicates the picture. Consequently, much explanatory material was necessarily left out and some major issues simplified.

A summary is provided in the first section of this paper; subsequent sections provide more detailed descriptions of major trends and findings and recommend areas for action. A "References" section is at the end of the paper.

As this is a general background paper, covering some areas outside my expertise, I have sought the opinions of a number of people, some of whom read drafts, and all of whom corrected many of my misconceptions and helped to improve both the content of the paper, as well as my understanding of the topic. Those who helped include Dr. Pat Lowry, health, population and nutrition advisor, American Embassy, Suva; Dr. Timoci Bavadera, assistant director of primary and preventative health services, Ministry of Health and Social Welfare, Suva, Fiji; Dr. C. T. Palmer, deputy representative, United Nations World Health Organization (WHO) Western Pacific Regional Office, Suva; Drs. Robin and Rosemary Mitchell, both general practitioners and family physicians of the Gordon Street Medical Centre, Suva; Mrs. Susan Parkinson, nutritionist, founding member of the Fiji National Food and Nutrition Committee, and consultant to the United Nations Food and Agriculture Organization (FAO) Root Crops Programme; Ms. Kathy Nast, country director, Foundation for the Peoples of the South Pacific (FSP), Madang, Papua New Guinea, and former FSP director in Kiribati; Mr. Tim Sniffen, country coordinator, Helen Keller International, Goroka, Papua New Guinea; Mr. Ron Texley, regional director, Helen Keller International, Suva; and Dr. Ed Charle, visiting U.S. Fulbright professor in economics at the University of the South Pacific (USP), Suva. To all, I extend my sincere thanks for their time, thoughtfulness, and dedication to improving health and nutrition in the Pacific region. Their help was invaluable. However, the discrepancies, misinterpretations, misconceptions, and other shortcomings of the paper are attributable only to me.

Finally, I wish to thank both Mr. Filipe Bole, director of the Pacific Islands Development Program (PIDP), East-West Center, Honolulu, who invited me to write this paper and his deputy director, Dr. Michael Hamnett, for their help. I have enjoyed the task. My only hope is that the paper meets with their satisfaction and that it will be of some use in bringing to the attention of Pacific island leaders some of the problems of, as well as the possibilities for, improving the health and nutrition of the Pacific people.

Randy Thaman
School of Social and Economic Development
The University of the South Pacific

III-A.iv
Pacific Islands Development Program
SUMMARY

Health, Nutrition, and Development

Good health and nutrition must be a priority concern, not only at the household and village levels but also at the national and regional levels. The well-known sayings, "health is wealth" and "we are what we eat," stress the importance of health and nutrition in national development. In many ways, "development" has made the Pacific people "wealthier" in health terms and "better" in terms of what they eat. Modernization, monetarization, and the introduction of transportation, agricultural, food, medical, and public-health technologies have apparently eliminated or reduced the incidence of many previously serious communicable diseases and have reduced infant and maternal mortality in many areas. Newly imported foods and agricultural technologies have theoretically brought it within the capabilities of governments to eliminate malnutrition once and for all.

Evidence of Poor Health and Nutrition

There remain, however, many critical health and nutritional problems, some old and some new, which seem to be making Pacific islanders less "wealthy" and "lesser" beings, culturally and physically, than they were in the past. There remain thousands of people in Melanesia, Micronesia, and Polynesia who suffer from debilitating diseases, who are unhealthy, who do not get the right amounts of the right kinds of life-giving foods, and who suffer the fate of premature death. The problem is most serious in western Melanesia, particularly among women, who have some of the lowest life expectancies in the world because of their extreme susceptibility to diseases, malnutrition, and birth-related mortality during their childbearing years. For such people, "development" is less meaningful. Moreover, they constitute a less productive sector of society and a major cost both socially and economically. The problems vary from the larger more recently urbanizing islands of Melanesia in the west to the smaller more urbanized Polynesian islands and densely populated low-lying islands of Micronesia to the east. In all cases, however, there is a critical need for active systematic food, nutrition, and health (FNH)-oriented development.

Communicable Disease Problems

Intensified efforts in health and medicine on the local, national, and international fronts have in many parts of the Pacific, through immunization and training programs and the development of nationwide networks of medical and public health facilities, drastically reduced the incidence of or eliminated many formerly devastating but preventable diseases, such as poliomyelitis, diphtheria, whooping cough, tetanus, chicken pox, measles, yaws, and leprosy.
Such developments, however, have not reached some of the more inaccessible areas of the Pacific, and preventable diseases such as measles remain major causes of morbidity (ill health) and mortality. In these areas, limited access to safe drinking water, inadequate sanitary facilities, cooking over smoky fires, poor health education, and overpopulation, among others, continue to be major health problems, contributing to the continuing high incidence of infectious diseases, such as influenza and other respiratory diseases (including tuberculosis), diarrhea and other intestinal diseases, eye and skin diseases, hepatitis and meningitis, and periodic epidemics of dengue and cholera. All of these remain significant causes of morbidity and mortality in the Pacific, especially in the densely populated low-lying atolls of Micronesia and on the larger islands of western Melanesia. Furthermore, transportation improvements, increased mobility, urbanization, increased sexual freedom, and social permissiveness are among the contributing factors to the dangerous, almost epidemic spread of sexually transmitted diseases, such as gonorrhea and syphilis, which are among the major causes of morbidity in some areas.

In Papua New Guinea, Solomon Islands, and Vanuatu, malaria remains a major health hazard and contributes both directly and indirectly to high rates of morbidity and mortality. Recent increases in the incidence of the disease and the development of mosquito vectors and malarial parasites resistant to insecticides used in control programs and to drugs used for treatment make the problem particularly serious. Even yaws and filariasis, which have been targets of successful immunization and treatment programs, could again become major health hazards if such programs are relaxed.

Noncommunicable Disease Problems and Other Causes of Mortality

Of particular concern in the more urbanized areas of Polynesia and Micronesia, as well as in Fiji and the more urbanized areas of western Melanesia, is the drastic increase, over the past 20 years, of noncommunicable degenerative diseases. Cardiovascular (heart) and cerebrovascular (stroke) diseases, cancer, and diabetes, rarely seen in mortality statistics in the past, are now major causes of morbidity and have replaced infectious diseases as the most common causes of death. Murder, suicide, and industrial and traffic accidents are also increasingly common causes of mortality in rapidly urbanizing parts of the Pacific.

Nutritional Deterioration

There is widespread evidence that a large proportion of Pacific islanders are nutritionally less well off than in the past. Most traditional Pacific island diets seemed to be nutritionally sound. Even in areas where protein and vitamin and mineral deficiency did exist, people were generally healthy and did not seem to suffer from noncommunicable degenerative diseases. Today, however, energy and protein malnutrition, especially among infants and children, is increasingly common. Iron-deficiency anemia is almost epidemic in some areas among pregnant and nursing mothers, infants, and school children, and there is increasing evidence of other vitamin and mineral deficiencies, especially in urban areas, but also among rural populations.

The drastic increase in noncommunicable degenerative diseases, including arthritis and gout, also seems to be very much related to the switch to an "urban" diet of highly refined or rich foods, which are high in sugar, salt,
saturated animal fats, food additives, and some known cancer-causing substances (including alcohol), but low in fiber, vitamins, and minerals. Dental disease, which is epidemic in many areas, is also causally related to a dietary change to foods low in fiber and high in sugar and to poor dental hygiene. Alcoholism and cirrhosis of the liver are serious problems in many towns, and the use of tobacco—a known major health hazard, a cause of lung cancer, and a factor predisposing people to cardiovascular disease and hypertension—is very high. High natural susceptibility of Pacific people to some communicable infectious diseases and to the noncommunicable degenerative diseases also seems to be a major contributing factor to the increasing incidence of many diseases.

**Increasing Food Dependency**

A major factor in nutritional deterioration is the decline of traditional food systems because of an overemphasis of export agricultural production, industrialization, and "white collar" education. This has led to decreasing consumption of fresh local foods and dangerously increasing nutritional dependency on imported foods. Many countries have greater food import bills than the total value of locally produced exports. Such dependence makes Pacific countries particularly vulnerable in health terms, to both reductions in a country's food supplies and decreases in a country's purchasing power.

Other major health hazards include natural disasters; indiscriminate use of pesticides, antibiotics, and other medicines; nuclear radiation; domestic air pollution from open fires; excessive and inappropriate food aid, and obesity and poor physical fitness. Collectively, these are directly or indirectly responsible for a significant proportion of the morbidity and mortality in the region and must be considered among the most dangerous long-term threats to health in the islands.

Great health and nutritional benefits have been derived from modern development and integration of Pacific island states into the global cash economy. There still exist, however, many serious health and nutritional problems, which threaten long-term political and economic stability in the region. Health and nutrition are closely interrelated. If people are malnourished, they will suffer more from disease, and if they are diseased, their malnutrition will be more severe. The two work together and are working together to constitute possibly the major obstacle to meaningful sustainable long-term development of the nation states and territories of the Pacific Ocean. Pacific policymakers and leaders need to address these problems now, at all levels—personal, household, village, island, national, and regional—if they hope to preserve some of the real progress that has been made in health and nutrition and to eliminate, or at least minimize, the negative developmental effects of many of the serious health and nutritional problems. In short, there is a need for an expansion of primary, secondary, and tertiary health-care services that place greater emphasis on improving environmental sanitation, personal hygiene, domestic water supplies, nutrition and immunization, and health and nutrition programs at the village level. There is a critical need for emphasis on improving preventive, as well as curative health care, and a need for food, health and nutrition (FNH)—oriented development, so that all the Pacific people will reach the World Health Organization's (WHO's) stated goal of "Health for All by the Year 2000."
Some of the major trends and findings arising out of an examination of the current health and nutrition situation in the Pacific islands that need to be addressed by island countries and regional organizations are summarized and grouped into four main categories: (1) State of Health and Nutrition-Oriented Development and Health Services, (2) General Health and Nutrition Situation, (3) Nutrition and Nutrition-Related Health, and (4) Other Health Hazards.

**State of Health and Nutrition-Oriented Development and Health Services**

**Unreliability of health and nutrition data.** The true health situation in the region is difficult to assess, owing to the nonexistence or unreliability of statistics on morbidity, mortality, nutritional disorders, and their economic costs to society. There is little systematic collection of data, lack of comparability between countries, and a high degree of incorrect diagnoses. Moreover, most diseases, health and nutritional problems, and mortality are grossly underreported, because most people do not go to clinical medical facilities for treatment.

**Developmental costs of poor health and nutrition.** Despite advances in medical and food technology, there are still large segments of the populations in all countries suffering from serious health and nutritional problems. The economic costs to the societies involved are inestimable. Moreover, the contribution of such people to and the benefits they receive from national development are minimized by their state of poor health.

**Overemphasis on curative medicine.** Despite the recent increasing emphasis on primary health-care (village and local level) activities, there is still an overemphasis on curative rather than systematic nation- and region-wide preventive medicine and nutritional improvement programs required for universal health improvement.

**Lack of access to primary, secondary, and tertiary health-care services.** Most rural and many urban people do not have easy access to secondary health-care facilities (e.g., specialist doctors, hospitals) or even primary health-care facilities (e.g., village health centers, maternal-child health-care workers). Most countries also lack sufficient tertiary specialist doctors (e.g., neurosurgeons, eye specialists) and facilities (e.g., specialist hospitals), commonly found in developed countries to which health-care personnel can refer serious, unusual, or specialty cases.

**Lack of regional manpower.** There is a need for indigenous health and nutritional manpower, especially specialist or tertiary-level doctors. Most countries, with the possible exception of Fiji and Papua New Guinea, which have their own medical schools, still depend on expatriate specialists, who often leave just as they begin to understand the local social, environmental, and health situation. There is, thus, a need for a strong regional medical school or food, nutrition, and health-oriented training programs in regional universities.

**Scarcity of nutritional training.** Although the number of trained doctors, nurses, and public health workers has increased drastically, there are still few persons in important planning and decision-making positions with technical
or practical training in nutrition. Moreover, few doctors receive substantial nutritional input as part of their medical training despite the obvious interrelationship between nutrition and infection.

Lack of food and nutrition committees and policies. Most countries do not have formal national food and nutrition committees or national food and nutrition policies (1) to deal systematically with the complexity of ensuring that all people receive adequate amounts of the right kinds of food and (2) to initiate and coordinate the most appropriate intervention programs when nutrition-related problems do exist. There is, however, increasing activity in this area with a number of active and recently founded committees playing major roles in increasing nutritional awareness and implementing nutritional improvement programs in their respective countries.

Increasing food dependency. Pacific countries are becoming dangerously dependent on other countries for their food supplies, while neglecting to develop their own local food-productive resources. This constitutes a major economic loss of foreign exchange, which otherwise could be used to purchase important capital goods. Food dependency makes such countries increasingly vulnerable to environmental, economic, and political factors beyond their control.

Need for food, nutrition and health (FNH)-oriented development. Because of the close relationship between food supply, nutrition, and health and their importance as indicators of the well-being of all strata of society, there is a critical need for food, nutrition, and health (FNH)-oriented development, with its major goals being the improvement or maintenance of food supply and nutritional and health status. Such an approach, which must be central to any preventive medical strategy, may yield greater returns in the long run than further emphasis on export-oriented development, given the limited national budgets of most Pacific countries and the rapidly increasing per capita yearly economic costs of curative medical treatment in the region, in terms of costs of hospitalization, outpatient treatment, drugs, transportation, training, and maintenance of health-care facilities.

General Health and Nutrition Situation

Morbidity and mortality rates. Adult and infant morbidity and mortality rates have been significantly reduced in some of the more urbanized islands of Polynesia and are now comparable with those of developed countries. Increased access to modern medical facilities (often on main islands or overseas) in times of emergency due to improved road, sea, and especially air transport in many areas has reduced previously high morbidity and mortality caused by serious diseases, major accidents, and birth-related complications.

In the less urbanized and more isolated areas of western Melanesia (which have endemic malaria) and in the geographically scattered and isolated atoll countries of Micronesia (with their high population densities), where there is often limited access to modern medical services, infant and adult morbidity and mortality rates are still high, and life expectancies (especially among women in western Melanesia) are low. Such high morbidity and mortality and low life-expectancy rates are indicators of serious health problems.
Causes of mortality. Communicable diseases, such as chronic tuberculosis and pneumonia, remain the major causes of mortality in the less developed parts of Melanesia and Micronesia and remain significant causes of death in other areas of the Pacific. Diarrheal diseases also remain major causes of death in Melanesia, Western Samoa, and the atoll countries, where environmental sanitation and water supplies are poor.

Other infectious diseases, which are significant causes of death, include hepatitis and other liver diseases, renal or kidney disease, whooping cough, tetanus, and meningitis. Malaria and measles, although sometimes not mentioned in mortality statistics, contribute much more than is realized to high mortality rates, due to their roles in lowering the body's natural resistance to other "opportunistic" death-causing communicable diseases.

The pattern of mortality in Polynesia and some of the more urbanized parts of Micronesia and Melanesia, more closely resembles that of developed countries, such as Australia and New Zealand. In these areas, noncommunicable diseases, including cardiovascular and cerebrovascular diseases (leading to heart attack and stroke), cancer, diabetes, and cirrhosis of the liver have replaced communicable diseases as the major causes of death in the past 10 to 20 years. Although these diseases were rarely among the mortality statistics in the past, some of the highest or most rapidly increasing incidences of these diseases are now found in the Pacific. The increasing incidence of these diseases seems to be closely correlated with an urban life-style based on imported foods, high tobacco and alcohol consumption, and declining physical activity. Because these are degenerative diseases, which develop over time, and because the "urban life-style" is now more common, the situation will undoubtedly deteriorate even further and, thus, represents a biological time bomb, unless conscious programs are mounted to reverse this dangerous trend.

Industrial and traffic accidents, suicide, murder, and violent crimes have become significant causes of mortality with increasing urbanization. Mortality and morbidity have increased drastically due to traffic accidents in most towns and in American Samoa, Fiji, French Polynesia, Guam, and Nauru. Death due to crimes of violence and murder has increased dramatically in Papua New Guinea, Fiji, American Samoa, and Guam; and suicide rates in the Federated States of Micronesia and Western Samoa are among the highest ever recorded.

Social breakdown, excessive alcohol consumption, lawlessness, and the inability of law-enforcement agencies to deal with these problems are among the major causative factors.

Poor health of women. High morbidity and mortality rates and low life expectancies for women, especially in western Melanesia, are indicators of both poor health and poor nutrition. Ill health in women not only leads to low birth-weight babies, higher rates of infant mortality, and premature death of women themselves, but also to decreased economic productivity and more widespread family nutrition problems because of critical roles women play in food production and preparation. As such, any improvement in the health and nutritional status of women should have high priority.

Environmental health and sanitation. The proportion of people with access to safe water and adequate sanitary and waste disposal facilities has increased in the Pacific. Most people, however, especially in Micronesia and Melanesia,
still lack access to sufficient unpolluted water and adequate sanitary facilities (including toilets, sewage, and garbage disposal facilities) and generally live in conditions of poor environmental health (e.g., yards unfree of mosquito-breeding sites, no mosquito nets or screens, poorly ventilated homes, excessive domestic smoke pollution from cooking over open fires). These combined factors contribute significantly to the high incidence of communicable disease, general morbidity, high crude death rates, and low life expectancies in the region.

Importance of improved health services and immunization. Improvements in public health and modern medical facilities, tracing of patients, disease diagnosis and treatment (including the use of antibiotics and other modern drugs), and nationwide immunization programs in many areas have drastically reduced the incidence of or eliminated many formerly devastating endemic communicable diseases (e.g., yaws, leprosy, and filariasis) and epidemic communicable diseases, (e.g., tuberculosis, measles, diphtheria, tetanus, pertussis [whooping cough], poliomyelitis, and mumps). However, these programs must be maintained to avoid resurgence of such diseases. Important communicable diseases and causes of poor health are covered in more detail in subsequent paragraphs of this section.

Malaria. Although absent in most countries of the region, malaria continues to be a major health problem and an obstacle to national development in Papua New Guinea, Solomon Islands, and Vanuatu. In Papua New Guinea and Solomon Islands, where the incidence of malaria has increased recently and where vectors and malarial parasites have developed resistance to insecticides and medication used in control programs, it remains the number one health problem and a major cause of morbidity and mortality.

Respiratory diseases. Respiratory disease influenza is still a major cause of ill health throughout the Pacific, especially in areas of poor environmental health and sanitation and high population density. Other respiratory diseases, including tuberculosis, bronchitis, and pneumonia, remain serious problems in some areas, such as climatically cold highland Papua New Guinea where cooking is done indoors over open fires and where fires are burned in dwellings to provide warmth at night.

Diarrheal and intestinal diseases. Diarrheal diseases, gastroenteritis, and intestinal parasites are common causes of morbidity and mortality throughout the region. There are dangerously high rates of infantile diarrhea, in particular, which is the number one cause of infant mortality of Micronesia. The incidence of these entirely preventable diseases is related to poor hygiene, food contamination, polluted water supplies, crowding, and, in infantile diarrhea, to declining breast-feeding.

Eye diseases. Communicable eye diseases, including conjunctivitis and trachoma, are common, especially in western Melanesia and the atoll countries. Without treatment, they can become chronic, and, in trachoma, can lead to blindness. The main causal factors seem to be domestic smoke pollution from cooking over open fires, insufficient unpolluted water for washing, and poor sanitary conditions, including high populations of flies.

The main cause of blindness in most areas, however, seems to be cataracts, which, as part of the aging process, seems to occur relatively early in life in
the Pacific. Blindness from cataracts can also be minimized if early treatment is sought.

Sexually transmitted diseases. The sexually transmitted or venereal diseases, gonorrhea and syphilis, have become almost epidemic in many urban areas and constitute one of the most worrisome and difficult-to-control health problems. The development of antibiotic-resistant strains of gonorrhea, problems in identifying disease sources, and lack of public awareness of the diseases, their diagnosis, and their treatment make it an exceptionally difficult problem to deal with.

Measles. This severe virus infection is still common in some countries and is especially dangerous among children who are poorly nourished or suffering from tuberculosis. Because of its long-term effects on children's immune systems, it often makes victims more susceptible to secondary complications, such as pneumonia, meningitis, and diarrheal diseases. Good nutrition and immunization programs are needed to minimize the impact of this major health hazard.

Other serious infectious diseases. Periodic outbreaks of serious diseases, such as cholera, infectious hepatitis, dengue, rheumatic fever, and meningitis, also constitute major problems in some areas where water supplies are contaminated, mosquito breeding places numerous, or where, in some forms of meningitis, the disease organisms are transmitted through unwashed or uncooked greens and prawns.

Food poisoning. Food poisoning, especially from food contaminated with Shigella and Salmonella, bacteria is also common. It is probably universally underreported and may be responsible for a much greater proportion of diarrheal disease in the Pacific than is generally realized.

Fish poisoning. Fish poisoning, particularly ciguatera poisoning, is a major problem, especially in smaller island countries such as Tuvalu, Tokelau, and French Polynesia where fish is a major protein source. Through improved education and screening of fish species, the number of serious cases could be minimized.

Stress-related diseases. There seems to be an increasing incidence of stomach ulcers, hypertension, and psychiatric disorders associated with rapid rates of urbanization, social pressures to succeed, and the general effects of social change.

Nutrition and Nutrition-Related Health

Nutritional disorders. There is considerable evidence of an increasing incidence of nutritional disorders throughout the Pacific. This is especially true in densely settled urban areas, where there is limited access to garden land and cheap, fresh local foods and an associated increasing dependence on highly refined imported foods.

Superiority of traditional Pacific island diets. Although there was undoubtedly some protein, vitamin, and mineral deficiency in pre-European contact times, traditional Pacific island diets based on staple tuber and tree crops, supplementary greens and legumes, fruits and nuts, and a wide range of
terrestrial, freshwater, and marine aquatic wild foods were nutritionally sound. Even where some deficiency did exist, there was little or no evidence of the major nutrition-related degenerative diseases and nutritional disorders of today.

Poor health due to decreasing consumption of local foods. The major factor in the high incidence of mortality and morbidity due to nutritional disorders (such as anemia and vitamin and mineral deficiency) and to noncommunicable diseases (such as heart disease, stroke, diabetes, and some forms of cancer) seems to be due mainly to a change from a traditional diet (which was high in fiber, vitamins, and minerals and low in animal fat, salt, and refined carbohydrates and sugar) to a "westernized diet" (which is poor in fiber, vitamins, and minerals and rich in sugar and refined carbohydrates, salt, and animal fats).

Energy deficiency. There is increasing evidence that energy deficiency (insufficient food calories), rather than protein deficiency, is the limiting factor in nutritional improvement in parts of Papua New Guinea, Solomon Islands, Vanuatu, Fiji, and Micronesia. Severe energy malnutrition or marasmus (starvation) among infants is also increasingly common in urban areas of Papua New Guinea, Fiji, and the American Trust Territory.

Protein deficiency. There is increasing evidence of severe protein malnutrition (kwashiorkor), especially among infants, and of various levels of protein malnutrition among young children and adults, especially in urban areas. This seems to be closely related to declining breast-feeding and the associated increased incidence of infantile diarrheal disease and overdependence on protein-poor diets of children and adults. Although the problem is particularly serious in Papua New Guinea and areas of the American Trust Territory, it is increasingly widespread in urban Kiribati, other parts of Melanesia, and Polynesia.

Low birth-weight babies. There is increasing evidence of low birth-weight babies in the Pacific. This is generally an indication of poor nutritional or health status of the mother, usually iron-deficiency anemia or protein malnutrition.

Adult and infant obesity. Recent studies indicate that urbanized Polynesians and Micronesians have some of the highest rates of infant and adult obesity in the world. There is also an increasing incidence of adult obesity in urban Melanesia. Increasing obesity is related to declining breast-feeding and dependence of infant-feeding formulas in infants, and to increasing consumption of energy-rich substances, such as refined carbohydrates, sugar, and alcohol, coupled with an increasingly inactive "white-collar" life-style in adults. Obesity has been referred to as the master disease, which leads to many other diseases in the long run, and both adult and infant obesity are indicators of potential future health problems, such as increased susceptibility to heart disease, hypertension, diabetics, and general ill health.

Vitamin, mineral, and micronutrient deficiency. There is increasing evidence, primarily in urban areas but also in rural areas, of vitamin, mineral and general micronutrient deficiency. Particularly common are deficiencies in iron; vitamin A, B and C; and, in some cases, iodine.
Iron-deficiency anemia is almost epidemic in urban areas and in many rural areas throughout the Pacific, with iron-deficient diets being the main causal factors. Malaria and intestinal parasites are also major causal factors in areas where they are prevalent. Vitamin A deficiency, which causes reversible night blindness, is reportedly very common in Kiribati, common in rural areas of Vanuatu, and present in other parts of Micronesia. Similarly, B-group vitamin deficiencies are reportedly common in western Melanesia, Kiribati, and the American Trust Territory. Iodine deficiency is reported from Fiji and Papua New Guinea, and although little data exist there are undoubtedly widespread deficiencies of other trace elements, such as potassium, calcium, magnesium, manganese, copper, cobalt, zinc, selenium, and flourine which combine in a myriad of ways to form the substances needed by humans for optimum performance.

In most cases, such vitamin, mineral, and general micronutrient deficiencies seem to be related to a dietary shift from fresh, micronutrient-rich local foods to highly processed imported foods.

Noncommunicable diseases. As stressed before, the high incidences of cardiovascular disease, hypertension and stroke, diabetes, some forms of cancer, as well as arthritis and gout, seem to be highly correlated with urbanization and the dietary change to a diet rich in animal fats, sugar, salt, and alcohol but deficient in fiber, vitamins, and minerals, as well as to decreased physical activity, cigarette smoking, and possibly to a relatively high genetic susceptibility of the Pacific people to such diseases.

Dental disease. Dental disease, including both tooth decay and periodontal (gum) disease, has become almost epidemic in many highly urbanized areas of the Pacific. Increasing consumption of refined sugar and other highly refined foods and poor dental hygiene, and possibly flourine-deficient diet seem to be the major contributing factors.

Alcoholism and alcohol-related problems. Excessive alcohol consumption and alcoholism are becoming increasingly serious problems throughout the Pacific. As an energy-rich substance, alcohol is a major cause of adult obesity and has been shown to be a causal factor in heart disease and cancer and is the major cause of cirrhosis of the liver. Its consumption by pregnant women also has a high correlation with low birth-weight babies and other birth-related disorders. Similarly, it has negative effects on work performance and the proportion of incomes that reach families in the form of nutritious foodstuffs. Finally, the incidence of alcohol-related traffic accidents is on the increase in most highly urbanized areas.

Declining breast-feeding. Declining breast-feeding has been shown to have high correlation with increasing incidences of infantile diarrhea, starvation (marasmus), protein malnutrition (kwashiorkor), anemia, and infantile obesity in the Pacific and elsewhere. The nutrient composition and anti-infective properties of human milk are of critical importance to the mental and physical development of children, as well as for long-term protection from diseases, malnutrition, and from proven higher incidences in later life of noncommunicable diseases, than nonbreastfed babies. On the positive side, however, recent drives to promote breast-feeding have reportedly reversed the trend in Papua New Guinea and Fiji.
Other factors. Lack of exercise, cigarette smoking, inadequate water supplies, personal hygiene, and environmental health are all part of the vicious circle feeding back into malnutrition, obesity, noncommunicable disease, and overall morbidity and premature mortality in the Pacific.

Other Health Hazards

Although not directly related to infectious diseases, nutritional disorders, noncommunicable diseases, or accidents, there are other serious hazards deserving mention, which contribute to the severity of these health problems and which are accounted for at least partially in existing statistics on morbidity and mortality. These include natural disasters, nuclear radiation, indiscriminate use of pesticides and antibiotics, excessive or inappropriate food aid, domestic air pollution, and decreasing physical fitness.

Natural disasters. Natural disasters, including tropical cyclones (hurricanes), tidal or storm waves, volcanic eruptions, earthquakes and seismic sea waves (tsunamis), droughts, frosts, and epidemic crop and animal pest infestations, have long contributed both directly and indirectly to morbidity and mortality in the Pacific. Their indirect long-term effects on food and cash-crop production, housing, sanitation, and water supplies often have more far-reaching effects on health than do the more direct effects during the disasters.

In all cases, preplanning and disaster preparedness, warning, and rehabilitation capabilities must be developed by Pacific nations to minimize both the impact of natural disasters on health and nutrition.

Pesticide poisoning. Indiscriminate use of pesticides and the absence of enforceable pesticide legislation have made pesticide poisoning a major social and health problem in the Pacific islands. This includes dramatic deaths due to acute poisonings, as well as chronic occupational poisonings to applicators and pickers and possibly poisoning of consumers. Together, these constitute a serious long-term health problem, given the continuing importation of pesticides banned or restricted in use in producer countries, coupled with widespread nonavailability and nonuse of recommended safety equipment and procedures. Both are major contributing factors to a high rate of pesticide poisoning in developing countries, which is some 13 times greater than in developed countries, despite greater pesticide use there.

Indiscriminate use of antibiotics and drugs. The indiscriminate prescription of drugs, particularly antibiotics, often before diseases have been properly diagnosed, or for diseases that they do not cure, and often at the patient's insistence, poses a major health problem in most Pacific countries. Such indiscriminate use causes antibiotics, for example, to lose their curative effect, as disease organisms are allowed to develop resistance to the drugs. Moreover, antibiotics kill protective bacteria within the body, thus leaving the patient less protected from attack by other opportunistic diseases. Such practices could in the long run lead to the evolution of "super diseases" against which humans will be defenseless. The problem could become particularly serious in the Pacific where bacteria resistant to penicillin and other widely available antibiotics are increasingly common but where it will be difficult to obtain the more costly, newer antibiotic needed to deal with such multi-resistant bacteria.
**Nuclear radiation.** Possibly the most dangerous of all long-term health hazards in the Pacific is nuclear pollution. Numerous cases of nuclear pollution have led to high incidences of somatic (to tissues and organs of the exposed organism) and genetic damage. Certain types of cancer and birth defects, for example, are exceedingly high in the Marshall Islands where nuclear weapons were first tested in the Pacific. Although no concrete data exist, similar rates could be expected from the Line Islands in Kiribati and in French Polynesia, where more recent nuclear weapons testing has taken place.

More than 210 atmospheric and underground nuclear weapons tests have been conducted on Pacific atolls, all of which have been responsible for radioactive pollution of soil, water, plants, and animals. All attempts to resettle such islands in the Marshalls, despite multi-million dollar cleanup programs, have resulted in increased radioactivity in the bodies of resettlers and almost certain future increased incidences of cancer. Some research indicates, unfortunately, that there may in fact be no safe levels of exposure to radioactivity.

**Inappropriate food aid.** Many Pacific countries have become increasingly dependent on food aid. In most cases, this seems to have further strengthened the vicious circle of political and economic dependency, declining local food production, and the increasing incidence of malnutrition and nutrition-related degenerative disease. Such aid is often excessive or inappropriate. Nonlocal food rarely has components of self-help in encouraging people to produce replacement foodstuffs and often induces further dependence on or demand for similar food imports. The problem is particularly bad in the American Trust Territory, but increasingly serious in almost all parts of the Pacific.

**Decreasing physical fitness.** Although some of the lowest levels of physical fitness in the world are found in American Samoa and Nauru, the problem is also serious in urban areas throughout the Pacific. Apart from being a major causative factor in cardiovascular disease, hypertension, and diabetes, it contributes significantly to low work efficiency, both physically and mentally. It also keeps unfit persons from being physically active participants in development and its associated leisure-time activities. Whereas health is the mere absence of disease, fitness is the ability to perform physically.

**Domestic air pollution.** Studies in the Pacific and elsewhere indicate that smoke from open fires, used for cooking by an estimated 75 percent of all Pacific island households and for warmth in dwellings in highland areas, is a major contributing factor, especially among women, to the high incidences of respiratory and eye diseases throughout the Pacific. Many kitchens are improperly ventilated, and few, if any, Pacific island cooks have smokeless stoves or use cooking technologies that reduce domestic air pollution. In some areas of India, it has been shown that the level of smoke pollution experienced by women is equivalent to smoking 20 packs of cigarettes per day.
RECOMMENDED AREAS FOR ACTION

The following are recommended general and specific areas for action, which, if undertaken by Pacific governments, regional and international bodies and by people at the village or household level, could yield widespread long-term health and nutritional benefits to the people of the Pacific.

General Areas for Action

The following areas for action are seen as being of high priority in terms of bringing about systematic long-term reduction in the incidence of major communicable and noncommunicable diseases, nutritional disorders, and other health hazards in the region.

Improvement of health and nutrition statistics. Because of the nonexistence, unreliability, and lack of comparability of health statistics in the region, there is a critical need to improve national and regional statistical services and to encourage the collection and compilation of more comprehensive and comparable clinical and nonclinical health statistics upon which systematic health improvement planning and programs can be based.

Environmental health improvement and the control of communicable diseases. Systematic nationwide programs to improve environmental health at the household, village, and low-income urban settlement levels are critical to, and probably the most cost-effective means of, bringing about real long-term control of communicable diseases and health improvement in the region. Malaria, meningitis, hepatitis, diarrhea, and intestinal, respiratory, skin, and eye diseases will probably always constitute major health problems. Most of these, however, are preventable, and their contribution to mortality and morbidity could be reduced if adverse environmental health conditions (i.e., poor sanitation and hygiene, polluted water supplies, disease vectors and vector breeding sites, poorly ventilated homes, smokey cooking areas) are improved systematically.

Systematic immunization programs. To reduce the incidence of potentially damaging diseases or to avoid the resurgence of diseases currently under control, systematic nationwide immunization and inoculation programs, especially for infants and children, must be maintained, expanded, or, in some areas, initiated. Immunization against measles and tetanus is possibly of highest priority, given the major health problems (often due to secondary effects) caused by these highly contagious diseases. Measles vaccine, in particular, has been found to be more cost effective for decreasing morbidity and mortality than any other vaccine currently available. Immunization against diphtheria, whooping cough (pertussis), poliomyelitis, and tuberculosis all contribute significantly to the declining seriousness of these diseases. A major future breakthrough of highest priority would be immunization against malaria (when the vaccine becomes available, possibly within the next ten years).

Prevention and control of noncommunicable diseases. Due to exceedingly high rates of heart disease, hypertension and stroke, diabetes, cancer, arthritis, gout, and bronchitis, rigorous anti-noncommunicable disease campaigns are also of high priority, especially in rapidly urbanizing areas. Programs consisting of multimedia campaigns to reduce smoking and alcohol consumption and to encourage a return to a diet low in animal fats,
cholesterol, sugar, and salt but high in fiber, vitamins, and minerals would undoubtedly lead to vastly improved work productivity, through the reduction of morbidity, absenteeism, and premature mortality due to noncommunicable diseases among highly trained manpower. The South Pacific Commission pilot project on the "Prevention and Control of Diabetes and Other Non-Communicable Diseases," which started in the Cook Islands in 1982, is an excellent example of such a program. This project involves activities intended to reduce obesity, alter diet, reduce smoking, and increase physical exercise at the community level.

Health and nutritional improvement for women. Investment in health and nutritional improvement for women would seem to be a major priority. The role of women in all Pacific societies is critical, not only in terms of reproduction, childrearing, and family nutrition, but also in terms of their overall contribution to economic productivity. Nevertheless, in many parts of the Pacific, women are generally the most seriously affected by poor health and nutritional disorders (i.e., malaria; respiratory, diarrheal and eye diseases; iron-deficiency anemia). In Papua New Guinea, Solomon Islands, and possibly some parts of Micronesia, women have much lower life expectancies than men.

Local food production and consumption. Given the close interrelationship between the severity of both communicable and noncommunicable diseases, nutritional status, and declining local food production and consumption and increasing food dependency, greater emphasis must be placed on the encouragement of diversified subsistence and commercial local food production. The importance of dietary diversity and local food consumption in both rural and urban areas must also be stressed. Such a program should include family food production and nutrition education in all schools and the expansion or reorientation of agricultural research and extension activities including diversified local food production and supportive measures such as controls on inappropriate food imports.

Promotion of food, nutrition, and health (FHN)-oriented development. The inclusion in all development planning policy of components that recognize the importance of the improvement or at least maintenance of food supply and nutritional and health status within a country is perhaps the most systematic means of incorporating preventive health care and nutritional improvement strategies into the formal planning process from the top down. This would require, of course, either greater emphasis on practical health and nutrition input in all training programs for potential policymakers and leaders (regardless of whether they are economists, politicians, doctors, educators, scientists, geographers, environmental scientists, sociologists, accountants, or lawyers) or the inclusion of people with such training on the staffs of all relevant ministries or agencies.

Establishment of national food and nutrition policies and committees. Given the highly complex nature of maintenance of national food supplies and acceptable levels of health and nutrition, the drafting of formal national food, nutrition, and health policies or legislation and the establishment and strengthening of multidisciplinary national and subnational food, nutrition, and health committees in each country or territory is of utmost priority. Such committees must take a leading role in formulating and implementing national food, nutrition, and health policies, coordinating the input of relevant groups, and monitoring the food, nutrition, and health situation in the country. Such committees are ideally located in central planning offices,
although they have been successfully located in ministries of health, as has been the case with the National Food and Nutrition Committee (NFNC) in Fiji.

Training of regional health and nutrition manpower. In order to minimize dependence on expatriate higher level health and nutrition manpower, who often fail to understand the social and environmental conditions of the Pacific, priority should be placed on upgrading or reorientation of training programs in appropriate regional tertiary training institutions. The upgrading of the Fiji School of Medicine and making it more of a regional institution as it was in the past is one possibility. As for increased food, nutrition, and health-oriented training for planners and policymakers, regional universities could establish or strengthen programs in this area. In both cases, there would be a need for firm commitments by regional countries and outside funding agencies. To satisfy manpower needs and to strengthen primary health care at the village level, there is a critical need to expand tertiary training of primary health care and nutrition professionals and paramedics at both regional and national institutions. These could include short in-service paramedical or food, nutrition, and health-oriented development courses for planners, educationists, and religious and community leaders.

Specific Areas for Action

Some of the following specific areas for action (which overlap in some cases) could contribute significantly to improving overall environmental health; minimizing morbidity and mortality arising from communicable and noncommunicable diseases, nutritional disorders, and other health hazards; and increasing overall public awareness of the health and nutrition problems and the need for their resolution.

Improvement of water supply. Because most areas of the Pacific do not have access to "protective" pollutant-free water supplies, systematic programs for the improvement of both the quality and quantity of water have proven to be one of the most cost-effective means of lowering the incidence of the great range of preventable water-borne (e.g., hepatitis and diarrheal diseases) and water-washed (e.g., skin and eye) diseases, which plague most Pacific island societies. Particular focus must be placed on the improvement of rainwater catchment systems in the smaller low-lying islands and coastal areas, which have limited or nonexistent surface and ground water resources.

Improvement of domestic waste disposal. Because of the high incidence of diarrheal and eye disease, hepatitis, and other diseases transmitted through human or animal feces and by flies, there is a critical need, especially in densely settled urban areas and the low-lying atolls, to have strict and enforceable regulations controlling the disposal of domestic waste. Garbage should be buried or disposed of far from living areas; latrines or "toilet grounds" should be located so domestic water supplies do not become polluted, and sewerage system outflows should be located to minimize risk of pollution.

Vector control. Vector control is one of the most cost-effective preventive health care means of reducing the high incidence of malaria, filariasis, dengue fever, and other mosquito- and vector-related diseases. Vector control programs should include systematic elimination of rubbish, standing water, and other insect, rat, and vector breeding sites; use of mosquito nets, insect repellants, and rat traps or cats; and selective spraying at appropriate times.
(such as after heavy rains or hurricanes) of breeding sites and dwellings with pesticides of low mammalian toxicity.

Promotion of breast-feeding. The promotion of breast-feeding and discouragement of bottle feeding has shown to be one of the most effective means of reducing infant malnutrition, infantile diarrhea and infant mortality. In Papua New Guinea, where the bottle was "banned" except by prescription, infant mortality was reduced drastically. Similar programs in other parts of the Pacific, encouraging a return to breast-feeding, have resulted in improved infant nutrition, reduced mortality, and reduced economic dependence on imported infant-feeding formulas.

Oral rehydration training. Because most diarrhea-related deaths are ultimately due to dehydration, oral rehydration techniques must be taught and their importance stressed to all members of the society. Oral rehydration is one of the most cost-effective means of minimizing infant mortality and the severity of all diarrheal disease and other ailments, such as hepatitis and respiratory disease.

Minimization of domestic air pollution. Due to the high incidence of smoke-related eye and respiratory diseases, and possibly lung cancer, among the estimated 75 percent of all Pacific islanders who cook over open fires, the development of more efficient and "smokeless" (less smokey) stoves or better ventilated "kitchen" areas would undoubtedly have a positive effect on improving the health of millions of Pacific island people (especially women). Because of the increasing scarcity of firewood in many areas, such developments would also yield considerable economic, ecological, and nutritional benefits.

Control of sexually transmitted diseases (STDs). Active anti-STD campaigns must be commenced immediately to halt the almost epidemic spread of syphilis, gonorrhea, and other STDs (e.g., herpes and AIDS). These campaigns could include systematic formal and informal educational strategies, compulsory screening of prospective marriage partners before granting marriage licenses, improving tracing of and subsequent isolation of identifiable disease sources (contacts), and greater enforcement of compulsory reporting of all cases by medical practitioners. Such action would minimize widespread sterility, infant morbidity and mortality, and other long-term STD-related health problems.

Prevention of food poisoning. To minimize the incidence of food poisoning from contamination due to both substandard processing and unsanitary food handling and preparation, all countries need to develop legislation to improve food safety and to establish appropriate standards of food composition, additives, contaminants, pesticide residues, hygiene, and labeling. This could be expedited by joining the FAO/WHO Codex Alimentarius Commission set up in 1963 to protect consumers against health hazards. There is also a need for universal education to promote improved food hygiene in the home.

Prevention of fish poisoning. To minimize morbidity and occasional mortality due to fish poisoning, further research and public education are needed on the reasons for fish poisoning and the identification of species or parts of species most liable to cause serious poisoning. Through better species screening (possibly through legislation), by both subsistence and commercial fishers, it should be possible to minimize the number of serious cases.

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Antialcohol consumption programs. Programs to minimize alcohol consumption, using both formal and informal educational strategies and enforceable laws against drunkenness, must be introduced to reduce the increasing incidence of alcohol-related diseases and nutritional disorders, social problems, crimes of violence, and traffic accidents.

Antismoking programs. Programs to minimize cigarette smoking using both formal and informal educational strategies must be introduced. Given the proven role of smoking as a causal factor in the development of lung cancer, hypertension and stroke, cardiovascular and respiratory disease, and general ill health and poor physical fitness, such programs must be of high priority.

Physical fitness campaigns. Programs to encourage improved physical fitness, such as the successful "Life Be In It" national physical fitness campaign of Australia, should be started, especially in urban areas, given the high correlation between poor physical fitness and obesity and heart disease, hypertension and diabetes. Such programs must systematically stress the importance to the nation of having a fit rather than just a healthy (free from disease) population and should involve government and nongovernment bodies in all age groups and should encourage a range of activities including urban gardening, jogging, swimming, bicycle riding, hiking, yoga, dancing, and dancecrize.

Access to garden land. As a first and direct step to improving family nutrition and minimizing food dependency, systematic attempts must be made to give all households both rural and urban, access to at least small garden plots of land for subsistence home food production. This could be accomplished, where appropriate, by encouraging the cultivation of undeveloped urban lands by landless households, possibly through the establishment of either urban allotment systems (which have been successful in the British Isles) or community gardening programs (which have been successful in Hawaii).

Compulsory food, nutrition, and family health education. Food, nutrition and family health education should be introduced at all levels of formal education. Because of its critical importance to personal, family, and national well-being and development, it should be an eximinnable compulsory subject, such as English, as part of major examination (i.e., high school entrance and leaving certificates, and university entrance examinations).

Health-care handbook. There is a critical need in all countries of the region for the production of a basic but comprehensive health-care handbook written in the vernacular, so that those for whom medical centers are inaccessible can provide primary health care to themselves and their families. It might possibly be published with aid funding, and could be patterned after the well-known book, Where There Is No Doctor (Donde No Hay Doctor), which was first written in Spanish for farm people in the mountains of Mexico, and is now used in rural areas throughout Latin America.

Nutritional training for medical professionals. Because of the close and negatively reinforcing interrelationship between the severity and frequency of disease (infection) and poor nutrition, all doctors, nurses, and other public health personnel should be given increased nutritional training as a core subject in their formal training programs. Such training would undoubtedly lead to a greater emphasis in professional health-care services on preventive, rather than curative medicine.
Involvement of nutritionists in nontraditional activities. Regional persons need to be trained as practical nutritionists to work in central planning, education, and agricultural departments and other relevant areas to provide a greater food, nutrition, and health orientation to Pacific island development.

Consumer and supplier education. Systematic programs of consumer and supplier education must be initiated to improve the nutritional returns and benefits per cost for food purchased by Pacific island consumers.

Restrictions on food advertisement and counter advertising. Restrictions should be placed on the advertisement of nutritionally inferior imported and locally processed foods, drinks, and alcoholic beverages. Counteradvertising could also be introduced, possibly funded by governments or other bodies, to highlight the beneficial nutritional attributes of local foods. In Yap, for example, a multimedia campaign "championing" the coconut and stressing the negative nutritional attributes of a well-known soft drink was reportedly very successful in reducing the sales of the soft drink by 50% and increasing the consumption of drinking coconut milk.

Import restrictions. Restrictions (bans or quotas) could be placed on nutritionally detrimental items (i.e., soft drinks, alcohol, sugar, candy, ice cream, beef dripping) especially if locally available substitutes exist.

Food product quality and labeling legislation. Because of the high number of Pacific people who seem to be suffering from diseases related to consumption of low quality foods (i.e., high in sugar, salt, animal fats, and, in some cases, possibly carcinogenic food additives but low in fiber, vitamins, and minerals), it is in the best interests of all people to require that the composition and nutrient content of all food products be displayed on the label. All products failing to meet required health and nutritional standards should be banned.

Improvement of natural disaster preparedness and rehabilitation. Given the high incidence of natural disasters in the Pacific, there is an urgent need for improving national disaster preparedness and rehabilitation programs and education to minimize the detrimental health, economic, and social impacts during and after such disasters. Programs might include new housing quality regulations, crop diversification, food-surplus storage areas, and training of key personnel responsible for disaster preparedness and rehabilitation on the national and local levels.

Enforceable pesticide legislation. A comprehensive and enforceable national and regional pesticide legislation is urgently needed. This legislation must be drafted and implemented immediately to control the importation, distribution, and use of pesticides. A regional team should be established to determine the extent of pesticide pollution, poisoning, and use in the region of pesticides that have been banned or restricted in producer countries.

Legislation on the use and importation of antibiotics. Because of the major health problem arising from the development of multiple-antibiotic resistant bacteria in the Pacific, there is an urgent need to establish national and regional networks to regulate antibiotic import and use and to
educate medical personnel and the public to the dangers associated with antibiotics and their appropriate use.

Medical authorities must agree upon limited lists of antibiotics required for effective treatment of diseases in a country and emphasize that antibiotics be dispensed only on prescription by pharmacists and designated classes of health professionals. Manufacturers must also be required to supply information on their antibiotics to all countries, including generic (rather than brand) names, instructions for use, and side effects. The use of antibiotics in animal husbandry should also be restricted. Countries should prohibit the use in animals of all antibiotics of therapeutic value in humans. Similarly, the routine use of antibiotics in the absence of proven infection (which is common in large-scale livestock production) should be discouraged and not be used as a substitute for food hygiene in animal-rearing establishments.

Regional pharmaceutical supply networks. There is a need to establish a regional pharmaceutical or medical supply network to ensure that important strategic drugs of appropriate standard are supplied where they are needed at reasonable cost to governments and patients. This would necessitate establishment of distribution networks at the regional, national, and local levels.

Preservation of folk medical technology. Systematic programs for the promotion of the appropriate use, scientific studies, and the preservation of traditional medicinal plants and folk medical practices should be implemented. This could include the establishment of medicinal herb and plant gardens at appropriate places in villages, at hospitals and health centers.

Elimination of risk of nuclear pollution. All regional governments must work together to strive for a nuclear-free Pacific, or at least to ban the testing of nuclear weapons and the dumping of nuclear waste in the Pacific. The evidence of long-term detrimental health risks of exposure to even small doses of nuclear radiation can be clearly seen in the horrible experiences of the people of the Marshall Islands. Consequently, past and potential inhabitants or employees of these islands—or of the Line islands in Kiribati and French Polynesia where nuclear weapons testing has taken place—should be checked medically or refuse to work in these areas until there is conclusive evidence from reliable unbiased sources that these sites and their plants and animals are in fact uncontaminated.

Reduction of inappropriate food aid. Pacific countries must begin to be more selective about the types of food aid that are accepted, especially those types that could create even greater food, nutritional, economic, and political dependency in the long run. Food aid, which is unnecessary even in times of disaster and which includes no self-help component designed to develop national self-sufficiency in the area, should probably be rejected.
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HEALTH IN THE PACIFIC ISLANDS

by Richard Taylor

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii
RICHARD TAYLOR is an epidemiologist with the South Pacific Commission, Noumea, New Caledonia.

ACKNOWLEDGEMENTS:

Much of this paper is based on a review of mortality in Pacific island countries, c.1980, co-written by Nacy Davis Lewis (Department of Geography, University of Hawaii) and Sue Levy (South Pacific Commission).

The Pacific Islands Development Program is publishing this report as background material for the 2nd Pacific Islands Conference, August 1985 in the Cook Islands, and for general use by Pacific island governments. To ensure maximum dissemination of the material contained in the report, it is not copyrighted and island governments are encouraged to copy the report or portions of it at will. PIDP requests, however, that organizations, institutions, and individuals acknowledge the source of any material used from this report.
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HEALTH IN THE PACIFIC ISLANDS

by Richard Taylor

SUMMARY

Health is measured mainly by its absence: mortality (death) and morbidity (illness). The level of mortality is best measured by life expectancy (at birth or other ages); cause of death information can be extracted from death certificates or hospital statistics. Morbidity is measured by contact with the health care system (hospital admissions, dispensary visits, etc.), special disease registers (e.g., cancer registries), or population health surveys. In the Pacific region, information on health status needs to be analyzed as well as gathered. Examination of time trends and comparisons between different population groups is essential to this analysis.

A period of depopulation occurred in many Pacific island communities at the time of European contact as a result of the introduction of previously unexperienced infectious diseases. Populations stabilized, however, around the turn of the century, and gradually increased until the Second World War when an explosive growth occurred in many countries. Declining mortality was responsible for most of these population changes; the mortality decline following World War II was associated in many countries with a transition from infectious to non-communicable disease as the major cause of death.

The major infectious disease problems in the Pacific island countries today are malaria, pneumonia (and other acute respiratory diseases), tuberculosis, and intestinal infections (including parasitism). The major non-communicable diseases are high blood pressure, diabetes, stroke, and heart disease (non-rheumatic). Accidents, suicide, homicide, and poisoning are also prominent causes of morbidity and mortality.

Life expectancy data reveal that the Melanesian malarious nations (Papua New Guinea, Solomon Islands, Vanuatu) and Kiribati, Tuvalu, and Nauru have the lowest life expectancies at birth (under 60 years); certain United States-associated (Guam, Palau, Northern Marinas, American Samoa) and New Zealand-associated (Cook Islands, Niue) states have the highest life expectancies (>65 years). The nations with low life expectancies have a cause-of-death pattern characterized by prominence of infection and pneumonia; non-communicable diseases and accidents are the major causes of death in countries with high life expectancies. Other countries experience considerable premature mortality from both infectious and non-communicable diseases as well as accidents.

A study of the relationship of certain socioeconomic and geopolitical indicators to mortality among island countries has revealed that government expenditure per capita, aid per capita, imports per capita, exports per capita, doctors per capita, education, and urbanization are all positively correlated with life expectancy.
The main causes of hospital admissions in selected Pacific island countries are respiratory disease, infection, digestive disease, accidents, and conditions related to pregnancy and childbirth. Population health surveys of the past two decades in island communities have demonstrated the extent of endemic infectious diseases (such as tuberculosis, intestinal parasites, hepatitis B), and also the considerable prevalence of non-communicable diseases (especially diabetes and high blood pressure). The South Pacific Commission (SPC) cancer registry has collected data on the incidence of cancer in several population groups and provided information on the major anatomical sites involved (lung, breast, cervix, mouth, and liver).

The factors that have been responsible for changing health status in Pacific populations are both socioeconomic and individual—although both of these factors are closely interconnected. Development, urbanization, education, and monetarization have been associated in most countries with increasing life expectancy and a change from infectious to non-communicable diseases. Individual behavior has an important effect on individual health, although it is determined to a significant extent by the prevailing cultural and economic order.

Health policy should have a positive influence on health status; it needs to be concerned, however, with activities that are outside the traditional responsibilities of departments of health (e.g., food imports, housing, education, agriculture, and in some cases, water supply and sanitation, and rural development) as well as with continuing to strengthen the traditional roles of providing medical, preventive, and public health services.

Reliable data is urgently needed on the health status of certain Pacific island communities, particularly on mortality levels in the Federated States of Micronesia and the Marshall Islands. Sample surveys and population censuses are probably the most efficient ways to collect this data. More analysis of death by cause is also required so that the conditions responsible for premature mortality can be identified.

MEASUREMENT OF HEALTH STATUS

Although health is a positive quantity, defined by the World Health Organization as a state of physical, mental, and social well-being, health status has traditionally been measured in terms of illness or death. The measurement of health status through its absence, particularly in populations, is a useful way of assessing problems because it allows for quantification and for consideration of priorities.

Mortality (Death)

Although death is as natural as birth, premature death (before age 65, at least) means a loss of a productive or potentially productive individual to the community, and often personal tragedy to family and friends. Premature mortality is the most obvious, serious, and also potentially the most readily quantifiable measure of health status of populations. Furthermore, the more premature the death (particularly in adults) the greater the loss, and the more preventable the cause of death, the greater the tragedy.
Level of mortality. The level of mortality in communities is measured by the number of deaths per population (per year) for certain age intervals. Infant mortality, for example, is a commonly quoted statistic and is defined as the number of deaths under age one year per 1,000 live births. Death rates are usually computed for 5- or 10-year age intervals thereafter, as numbers permit.

The best estimate of the overall mortality in a population is the average life expectancy (at birth or at other ages) since it is computed from and summarizes the age-specific death rates, and is a standardized figure that allows for comparison with other populations that may have a different age structure.

The crude death rate (total number of deaths per year divided by the total population) is a particularly misleading statistic, reflecting more the age structure of the population than the premature mortality that is occurring in that population. For example, developed countries with a large proportion of old people have high crude death rates, whereas less developed countries with a large proportion of young people have lower crude death rates even though they may be experiencing significant premature mortality.

Death rates are usually computed from vital registration of deaths and from census information concerning numbers of persons at risk within each age category. However, vital registration systems in many Pacific countries are deficient, and calculation of death rates on the basis of data subject to considerable and undefined under-registration produces spurious results. Therefore, it has been customary in the Pacific to obtain estimates of life expectancy and mortality by indirect means, e.g., through censuses or surveys.

The following countries probably have accurate death recording systems, although they are at various stages of evolution: Guam, the Northern Marianas, Palau, American Samoa, New Caledonia, French Polynesia, Wallis and Futuna, Cook Islands, Niue, Nauru, and Tokelau. Migration of potentially terminal cases has, however, a serious but unquantifiable effect on death rates in several of the above island countries (especially Niue and Tokelau). The best estimates of life expectancy and mortality in the following countries are derived from censuses, since death registration is probably deficient: Papua New Guinea, Solomon Islands, Vanuatu, Fiji, Kiribati, Tuvalu, and Tonga. Vital registration is also deficient in Western Samoa, but mortality data are obtained by an excellent post-census sample survey. There is no accurate information available from vital registration or censuses/surveys to give a reliable picture of the mortality in the Federated States of Micronesia or the Marshall Islands—this situation needs to be remedied soon (see Table 1).

In some countries data on life expectancy are available from both vital registration and censuses/surveys. This enables an assessment of the accuracy of both methods through comparison, and is probably the most ideal situation for countries in the process of developing their health statistical infrastructure.

Cause of death. Cause of death is almost always a naive question. Even when only medical conditions are considered there is often more than one cause of death, and contributory causes are often more important than the immediate cause. For example, measles is frequently a "cause" of death in malnourished children. Alcohol intoxication is often the reason for a fatal motor vehicle accident. There are also more distant influences on causes of death, which
Table 1. Mortality information in Pacific island countries\textsuperscript{a}

<table>
<thead>
<tr>
<th>Countries in which mortality information is probably reliable</th>
<th>Countries in which mortality information is unreliable or suspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information available from census or surveys</td>
<td>Information not available from censuses or surveys</td>
</tr>
<tr>
<td>Guam</td>
<td>Papua New Guinea</td>
</tr>
<tr>
<td>Palau</td>
<td>Solomon Islands</td>
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<tr>
<td>Northern Marianas</td>
<td>Vanuatu</td>
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<tr>
<td>Nauru</td>
<td>Fiji</td>
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<tr>
<td>American Samoa</td>
<td>Tonga</td>
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<tr>
<td>Cook Islands</td>
<td>Tuvalu</td>
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<tr>
<td>Niue</td>
<td>Kiribati</td>
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<tr>
<td>French Polynesia</td>
<td>Western Samoa</td>
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<tr>
<td>Wallis and Futuna</td>
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</tr>
<tr>
<td>Tokelau\textsuperscript{b}</td>
<td></td>
</tr>
<tr>
<td>New Caledonia</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a} This classification is based on the opinion of the authors after examination of all available mortality information from the countries listed.

\textsuperscript{b} Death recording in Tokelau is probably accurate, but the small population (1,400) and considerable migration to New Zealand makes the mortality statistics difficult to interpret.


"Cause of death" is traditionally defined as the main "underlying" and obvious medical condition that led directly to death; this information must be obtained from death certificates or hospital records. In most countries cause of death data are inaccurate and incomplete, but the proportion of reported deaths from each cause nevertheless gives a reasonable picture of the major medical conditions leading to death. In some Pacific countries and territories cause of death information is available only on hospital deaths because of deficiencies in the vital registration system (e.g., Papua New Guinea, Solomon Islands, Vanuatu, Kiribati), or because cause of death is not required on the death certificate (French territories).

The years of life lost for each cause of death (assuming a life expectancy of about 65 years) is a simple way of emphasizing the major causes of death and weighing them for the amount of premature mortality that each causes. Such calculations enable direct comparisons between populations or countries because the technique involves standardization. For example, although cancer may contribute a large proportion of total mortality in a population and accidents a lesser proportion, the calculation of years of life lost for each cause will

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reveal that accidents are of greater importance (greater number of years of life lost) because, for the most part, they affect younger people; cancer leads to a lesser number of years of life lost because it tends to be an affliction of the elderly.

**Morbidity (illness)**

The measurement of illness is more difficult than that of death, and definitions are often blurred. The three main methods for measuring morbidity are (1) contact with the health care system, (2) special disease registers, and (3) population health surveys.

**Contact with the health care system.** Measures of the occurrence of illness through the health care system reflect access and willingness to use the system, as well as the occurrence of illness. Nevertheless, in most Pacific countries useful data on illness can be obtained through records of health service utilization.

Hospital admissions (broken down by age, sex, diagnosis, etc.) are the most important morbidity measures because they usually reflect the most serious illnesses, involve the greatest expenditure of funds, and are capable of the most accurate recording. All main hospitals in the Pacific keep admission registers. In countries with undeveloped health recording systems, a census of hospital inpatients by age, sex, and diagnosis can give immediate practical information on the major disease problems in the country.

Outpatient or hospital clinic attendances (by age, sex, diagnosis, etc.) are the next most important measure; most hospitals should be able to record and tabulate this data.

Information on attendance at primary health care facilities and dispensaries (by age, sex, diagnosis, region, etc.) is also very useful, but here the burden for recording is placed on the often over-burdened primary health care worker at the periphery, and the accuracy of such data may, for various reasons, be suspect. It is probably best to ask the primary health care workers to record only a few important events in the hope that they will record them diligently—birth and death are the events that must be recorded properly before an attempt is made to expand the data collection activities of primary health care workers.

**Special disease registers.** Most Pacific nations have a system for recording cases of notifiable infectious diseases. This surveillance system alerts authorities to epidemics early in their evolution so that appropriate control measures such as isolation, immunization, water treatment, and vector control may be implemented. Infectious disease notification systems are in various stages of development in Pacific countries; the South Pacific Commission publishes the collated returns annually as the SFEHS (South Pacific Epidemiological and Health Information Service). In some countries most cases of notifiable infectious diseases are reported and in others only a small fraction (for example, they may be reported only from hospitals or only from the main island). Thus, comparison between countries is inappropriate, but the figures in one country can be compared over time, and epidemics are usually obvious.
Cancer is another condition that requires a registration system for its proper surveillance, and the South Pacific Commission is cooperating with countries in the region to develop indigenous cancer registries and to centralize and compare data from the various SPC member states. Countries with functioning cancer registries (at present or in the recent past) are Papua New Guinea, Fiji, New Caledonia, French Polynesia, American Samoa, and Guam. Cancer registration is developing in Niue, the Cook Islands, the U.S. Trust Territory, and Vanuatu.

Population health surveys. Health surveys of cluster or randomly selected samples of Pacific populations have a long history in the region and supply detailed information on specific diseases that cannot be gathered in any other way. A health survey usually involves measuring the prevalence (number of cases per population) or the incidence (number of cases per population per time) of a disease or condition, and thus allows for an assessment of the magnitude of the problem in the sample studied. Comparison of the frequency of disease in various populations (e.g., urban versus rural, different ethnic groups, etc.) can lead to hypotheses of causality to explain observed differentials. Data on individuals in populations allow the correlation of diseases with individual biological, environmental, and socioeconomic factors that can lead to inferences about causality.

Once determinants of disease patterns are identified they can be tackled through socioeconomic and environmental programs, public health preventive campaigns, and medical services. It is often necessary to demonstrate causal influences of diseases repeatedly through several surveys, not only to reinforce the significance of the causal factors but also to generate the political momentum to have something done about the problem.

Analysis of Information on Health Status

Even in Pacific island countries that collect a significant amount of information on health status, the degree of analysis of the data is usually insufficient. For example, in many countries with reasonably complete vital registration systems, deaths are not related to the population at risk. Therefore, mortality rates are not available (because of small numbers, data from several years may have to be aggregated in these calculations). Also, morbidity and mortality information is often not disaggregated by sex, ethnic group, rural/urban residence, etc., so that it is not possible to make important comparisons.

It should be emphasized that comparison is crucial in the analysis of health statistics, for without comparison, data are meaningless. The main questions are: Is health status changing over time? If so, is it improving or deteriorating? Are there differences in health status between the main groups in the population, by gender, ethnic groups, areas of residence, etc.? If so, why? How does each Pacific island compare to its neighbors, and also how does it compare with the relatively low-mortality, more highly developed countries?

Most countries and territories in the Pacific region need to improve the analysis of routinely collected mortality and morbidity data. There is a considerable role here for regional and international agencies, since the work is specialized and intermittent.

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Historical Information on Changing Health Status

Information on the health status of Pacific societies prior to European contact is sparse, qualitative, and anecdotal. The impression from the reports of the early explorers is that those islanders observed were strong and healthy. However, it is likely that infant and early childhood mortality was considerable, and that in the absence of medical services certain illnesses and injuries were rapidly fatal.

Malaria must have been a problem in anopheline regions, and filariasis undoubtedly created difficulties; other infectious diseases must also have been prevalent. However, the smallness and isolation of the communities were formidable barriers to the spread of communicable disease. Accidents, drowning, and warfare must have taken their toll as well. Undernutrition would have been a continuing problem, especially on atolls, in remote mountainous regions, and in the aftermath of natural disasters, such as cyclones, droughts, or floods.

In many Pacific islands, European contact was associated with significant depopulation resulting from the introduction of previously unexperienced infectious diseases (tuberculosis, dysentery, measles, etc.). In 1874, for example, 40,000 Fijians died in three months as a result of a measles epidemic. There was also increased danger from warfare as a result of political destabilization and the use of firearms. In some parts of the Pacific indentured labor systems also resulted in considerable mortality.

Most of the depopulation in Pacific countries took place during the 1800s; by the turn of the century, population decline was arrested and stabilization returned. This new balance at a lower population level was still characterized by significant mortality, though, and epidemics of infectious disease continued to decimate Pacific populations during the early years of the twentieth century. For example, during the German administration prior to the First World War, epidemics of dysentery, polio, and respiratory disease swept through Nauru with the arrival of every shipload of indentured workers for the phosphate mines. It was estimated that in Western Samoa, 20,000 people (one third of the population) died during the 1919-20 influenza pandemic. The Cook Islands and Niue were regularly afflicted by "ship fever," with significant morbidity and mortality.

Between the world wars Pacific populations registered slow but steady increases, probably as a result of declining mortality attributed to increased resistance to infection, the application of public health measures to control communicable diseases, the provision of rudimentary medical services, and the availability of food supplementation in marginal areas and in cases of natural disasters (which averted mass starvation).

The Second World War brought privation to some who were directly involved in theaters of warfare, and affluence for others who provided services to military bases behind the lines. But certainly this period marked a change in the mortality pattern in many countries, and was a point at which quite dramatic drops in mortality began to occur. World War II was a great stimulus to public health since the requirements of stationing and moving large numbers of troops through the Pacific islands required detailed application of
effective sanitary measures. Malaria control operations—including residual spraying—gained momentum, although troop movements probably contributed to the introduction of malaria into the highlands of New Guinea, as well as to the spread around the Pacific of *Aedes aegypti*, the main vector of dengue fever. Thus, the period following the war saw a reinforcement of routine public health and sanitary procedures, as well as improved vector control programs. The 1950s also saw the introduction and use of powerful antibiotics and other chemotherapeutic agents, which had a dramatic effect on morbidity and mortality caused by certain infections (particularly pneumonia), and which, when used on a mass scale, interrupted transmission of infections such as yaws, filariasis, and tuberculosis.

Although infections were major causes of death in almost all Pacific countries through the 1950s the pattern changed in certain islands (e.g., Cook Islands, Nauru, Fiji, and Guam) during the 1960s when non-communicable diseases (e.g., heart disease, high blood pressure, diabetes, and cancer) and accidents emerged as the main causes of death.

Populations increased rapidly in most Pacific countries after the Second World War—mainly as a consequence of declining mortality—and data collection improved so that reasonably accurate measures of mortality and morbidity became available for the first time. Changes in life expectancy in selected Pacific countries are summarized in Table 2.

Table 2. Changes in life expectancy in selected Pacific countries: 1940–80

<table>
<thead>
<tr>
<th>Country</th>
<th>Life expectancy at birth (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1940s</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>32</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>42</td>
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<tr>
<td>Kiribati</td>
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</tr>
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<td>French Polynesia</td>
<td>44</td>
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<tr>
<td>Fiji</td>
<td>-</td>
</tr>
<tr>
<td>Tonga</td>
<td>-</td>
</tr>
<tr>
<td>American Samoa</td>
<td>48</td>
</tr>
<tr>
<td>Western Samoa</td>
<td>-</td>
</tr>
</tbody>
</table>

Overview of Present Health Problems

The main health problems in the Pacific islands can be summarized in three categories: infectious diseases, non-communicable diseases, and accidents.

Infectious diseases. Malaria is the main infectious disease problem in the Pacific island region, and is responsible for considerable morbidity and mortality, particularly in children. The situation has worsened during the last five years because of resistance of mosquitoes to DDT, difficulties implementing spraying campaigns, changes in mosquito behavior, and resistance of the malaria parasite to drugs. The increased incidence of malaria has been associated with a rising proportion of cases due to *P. Falciparum*, the severe form of that produces cerebral malaria.

Control of malaria through primary health care methods, including personal protection against mosquitoes, mass drug administration, control of breeding grounds, as well as indoor DDT spraying is probably the most appropriate approach rather than reliance on programs centered around DDT spraying alone.

The other major mosquito-borne diseases in the Pacific are filariasis and dengue fever. Filariasis is still endemic in many countries but does not constitute a major public health problem. Epidemics of dengue fever occur intermittently in the Pacific, and the disease is endemic in several countries (notably Fiji, French Polynesia, and Tonga); there have, however, been no major outbreaks of dengue for the last five years.

Pneumonia and other acute respiratory infections continue to be major causes of morbidity and mortality in most Pacific countries, but especially in those that are relatively underdeveloped and are characterized by poor living conditions. Acute respiratory disease (especially influenza) appears to be more important than diarrheal disease as a cause of morbidity and mortality in children in the Pacific—which is a different situation from that in most of Asia and Africa. Pneumonia is also a significant cause of premature death in adults in the Pacific region—similar to the situation that prevailed during the nineteenth century in the now industrialized countries.

Control of acute respiratory diseases involves environmental improvement (particularly improved housing), antibiotic treatment of severe cases, and immunization against common childhood infections such as whooping cough, measles, and diphtheria. Correction of undernutrition is also probably important as well in the control of acute respiratory infections.

Pneumonia can also be a common cause of death in old age, but it is often a terminal event and not really the underlying cause, which is usually general debility or chronic respiratory disease (such as bronchitis).

Tuberculosis is still a major problem in many Pacific countries and is related to poor living conditions and undernutrition. Tuberculosis is prevalent in Papua New Guinea, Solomon Islands, Vanuatu, Fiji, and Kiribati. Both New Caledonia and French Polynesia report significant numbers of tuberculosis cases, but this is a reflection of their well-developed reporting systems. Control requires general development and environmental improvement in conjunction with medical measures such as the detection and treatment of cases to reduce transmission.
Intestinal infections are a significant cause of morbidity in most Pacific countries. Episodes of viral gastroenteritis or food poisoning are the most common, but bacterial infections also occur and intestinal parasites are prevalent. Epidemics of cholera occurred in Kiribati in 1978 and in Truk (Federated States of Micronesia) in 1982-84. Truk was declared cholera-free in early 1985. Cholera was eradicated in both island groups by concerted efforts to improve sanitary facilities and water supplies. Diarrheal diseases are not major causes of death in the Pacific, as they are in Asia, but they still require attention. Improvement of water supply, sanitation, and personal hygiene are the most important aspects of control.

Non-communicable diseases. Non-communicable diseases include high blood pressure, stroke, heart disease (non-rheumatic), diabetes, chronic bronchitis, and cancer. They are the main causes of mortality and morbidity in those countries that have undergone significant modernization and urbanization. The increase of non-communicable diseases, combined with a decline in the infectious diseases and aging populations has made these conditions emerge as major health problems.

In many countries non-communicable disease is a significant cause of premature mortality. Control measures, including changes in way of life at a community level and detection and treatment of cases, need to be implemented.

Accidents. This category includes accidental injury, suicide, homicide, poisonings, and drowning. In modernized countries injuries are a prominent cause of hospital admissions and death, and are often related to motor vehicles and alcohol. Even in the less developed societies, however, injury (often related to alcohol use) is also a major problem. Suicide in young men is a problem in the Federated States of Micronesia (hanging) and Western Samoa (paraquat ingestion). Homicide is a problem in Papua New Guinea, Palau, and the Northern Marianas.

The control of morbidity and mortality from a motor vehicle injuries requires adequate law enforcement and control of drunken driving. Social problems that lead to suicide and homicide must be investigated, and the role of alcohol assessed. Medical services need to be available to deal with injury cases, not only to save lives but also to prevent deformity.

Current Patterns of Mortality

The most important measure of overall health is life expectancy; Pacific island countries can be classified into high, medium, and low mortality groups according to their most recent life expectancy estimates (see Tables 3-5). It can be seen that the Melanesian malarious countries (Papua New Guinea, Solomon Islands, Vanuatu), and Kiribati, Tuvalu, and Nauru have the lowest life expectancies (less than 60 years), and that certain U.S.-associated (Guam, Palau, Northern Marianas, American Samoa), and the New Zealand-associated (Cook Islands, Niue) states have the highest life expectancies (more than 65 years).
Table 3. Life expectancy at birth for both sexes in Pacific island countries (c.1980)*

<table>
<thead>
<tr>
<th>High (70 years or more)</th>
<th>Medium (60-69 years)</th>
<th>Low (60-64 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guam (75)</td>
<td>Niue (67)</td>
<td>Western Samoa (64)</td>
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<tr>
<td>American Samoa (70)</td>
<td>Cook Islands (67)</td>
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<tr>
<td></td>
<td>Palau (66)</td>
<td>Tonga (63)</td>
</tr>
<tr>
<td></td>
<td>Northern Marianas (66)</td>
<td>Wallis &amp; Futuna (63)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fiji, Melanesians (62)</td>
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<tr>
<td></td>
<td></td>
<td>Fiji, Indians (61)</td>
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<tr>
<td></td>
<td></td>
<td>New Caledonia, Melanesians (60)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tuvalu (59)</td>
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<tr>
<td></td>
<td></td>
<td>Nauru (55)</td>
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<td></td>
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<td>Vanuatu (55)</td>
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<td>Solomon Islands (54)</td>
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<tr>
<td></td>
<td></td>
<td>Kiribati (52)</td>
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<tr>
<td></td>
<td></td>
<td>Papua New Guinea (50)</td>
</tr>
</tbody>
</table>

* No current reliable data are available for Tokelau, Federated States of Micronesia, and Marshall Islands.

Table 4. Life expectancy at birth for males in Pacific island countries (c. 1980)*

<table>
<thead>
<tr>
<th>High (70 years or more)</th>
<th>Medium (60-69 years)</th>
<th>Low (60-64 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guam (70)</td>
<td>American Samoa (68)</td>
<td>Cook Islands (64)</td>
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<tr>
<td></td>
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<td>Wallis &amp; Futuna (62)</td>
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<td></td>
<td>Western Samoa (62)</td>
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<tr>
<td></td>
<td></td>
<td>Fiji, Melanesians (61)</td>
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<tr>
<td></td>
<td></td>
<td>Fiji, Indians (60)</td>
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<tr>
<td></td>
<td></td>
<td>French Polynesia (60)</td>
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<td></td>
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<td>Papua New Guinea (49)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nauru (48)</td>
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</tbody>
</table>

* No current reliable data are available for Tokelau, Federated States of Micronesia, Niue, New Caledonia (Melanesians), and Marshall Islands. For comparison: Australia, 71; France, 70; England and Wales, 70; New Zealand, 70; U.S., 70.

Table 5. Life expectancy at birth for females in Pacific island countries (c. 1980)*

<table>
<thead>
<tr>
<th>High (70 years or more)</th>
<th>Medium (60-69 years)</th>
<th>Low (60-64 years)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Wallis &amp; Futuna (64)</td>
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<td>American Samoa (75)</td>
<td>French Polynesia (65)</td>
<td>Fiji, Melanesians (64)</td>
</tr>
<tr>
<td>Cook Islands (70)</td>
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<tr>
<td>Northern Marianas (71)</td>
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<td>Nauru (61)</td>
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<tr>
<td>Palau (70)</td>
<td></td>
<td>Tuvalu (60)</td>
</tr>
</tbody>
</table>

* No current reliable data are available for Niue, Tokelau, Federated States of Micronesia, New Caledonia (Melanesians), and Marshall Islands. For comparison: Australia, 78; France, 79; England and Wales, 76; New Zealand, 76; U.S., 77.


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Examining the data for each sex separately we find that for males, only in Guam and American Samoa is life expectancy at birth over 65 years; whereas for females, life expectancy is over 65 years in the Cook Islands, Western Samoa, and French Polynesia (and probably Niue), as well as in Guam and American Samoa.

The differentials between the sexes parallel in general the actual levels of life expectancy, with those countries with the highest life expectancy also having the greatest sex differences (females higher than males). Those countries with the lowest life expectancy usually have the least sex differences, and only in Vanuatu do women have a lower life expectancy than men (Table 6).

In general, the more developed countries that are more involved in the cash economy have the greater expectation of life at birth. An outstanding exception to this generalization is Nauru, which has a very high mortality, especially in adult males, and a large sex differential in life expectancy.

Infant mortality rates (Table 7) follow the observed pattern of life expectancy: Vanuatu, Papua New Guinea, and Kiribati experience high levels (more than 60 per 1,000); Guam, American Samoa, and Niue have low levels (less than 26 per 1,000).

The main causes of death in Pacific island countries are shown in Table 8. These data show the proportion of total deaths for each cause for all ages and both sexes in each country. All data are from either vital registration or hospital statistics, and are affected by under-recording; however, this information provides a reasonable picture of the major causes of mortality in the Pacific islands around 1980. Countries that are relatively under-developed and have low life expectancies exhibit a typical pattern of death by cause, with infection and respiratory disease (mainly pneumonia) as the major causes of death. Perinatal conditions (diseases of early infancy) are also prominent as a cause of death when infant mortality is high. The more developed

Table 6. Female to male differentials in life expectancy (at birth) in Pacific island countries (c.1980)

<table>
<thead>
<tr>
<th>High (5 years or more)</th>
<th>Medium (3-5 years)</th>
<th>Low (Less than 3 years)</th>
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<tr>
<td>Fiji, Melanesians</td>
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</tr>
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<td>Tuvalu</td>
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</tr>
<tr>
<td>Papua New Guinea</td>
<td>2</td>
<td></td>
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</tr>
<tr>
<td>Wallis &amp; Futuna</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanuatu</td>
<td>-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a No current reliable data are available for Niue, Marshall Islands, Federated States of Micronesia, or New Caledonia (Melanesians). For comparison: Australia, 7; France, 9; England and Wales, 6; New Zealand, 6; U.S., 7.

countries with high life expectancies also display a typical pattern of death by cause, with cardiovascular disease, cancer, and accidents as the main conditions that lead to death. Respiratory disease (mainly chronic bronchitis) is also a significant cause of death in those countries with a large elderly population. These differences in patterns of death by cause are partly related to the ages of death, since cardiovascular disease, cancer, and chronic respiratory disease are conditions of late middle age and old age, whereas infection and pneumonia may also cause death in youth as well as other ages.

Table 7. Infant mortality (per 1000) in Pacific island countries (c. 1980)\textsuperscript{a}

<table>
<thead>
<tr>
<th>High (more than 60)</th>
<th>Medium (26-59)</th>
<th>Low (less than 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanuatu (94)</td>
<td>French Polynesia (57)</td>
<td>Tuvalu (39)</td>
</tr>
<tr>
<td>Kiribati (93)</td>
<td>Fiji, Indians (54)</td>
<td>New Caledonia, Melanesians (39)</td>
</tr>
<tr>
<td>Papua New Guinea (72)</td>
<td>Solomon Islands (53)</td>
<td>Tokelau (37)</td>
</tr>
<tr>
<td></td>
<td>Wallis &amp; Futuna (49)</td>
<td>Western Samoa (33)</td>
</tr>
<tr>
<td></td>
<td>Tonga (41)</td>
<td>Marshall Islands (31)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nauru (31)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Federated States of Micronesia (30)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>U.S. Trust Territory (29)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cook Islands (29)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palau (29)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northern Marianas (26)</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Infant mortality: deaths during the first year of life per 1,000 live births.

### Table 8. Main causes of death in Pacific island countries (c. 1980)
—proportional mortality in rank order (all ages, both sexes)

<table>
<thead>
<tr>
<th>Country</th>
<th>Cause of death (proportion of all deaths %)</th>
<th>Rank 1</th>
<th>Rank 2</th>
<th>Rank 3</th>
<th>Rank 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Samoa</td>
<td>Cardiovascular disease (31%)</td>
<td></td>
<td>Accidents (26%)</td>
<td>Cancer (17%)</td>
<td>Respiratory disease (10%)</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>Cardiovascular disease (35%)</td>
<td></td>
<td>Respiratory disease (19%)</td>
<td>Cancer (15%)</td>
<td>Accidents (8%)</td>
</tr>
<tr>
<td>Federated States of Micronesia</td>
<td>Infection (22%)</td>
<td></td>
<td>Accidents (16%)</td>
<td>Respiratory disease (14%)</td>
<td>Cardiovascular disease (12%)</td>
</tr>
<tr>
<td>Fiji, Melanesians</td>
<td>Cardiovascular disease (25%)</td>
<td></td>
<td>Respiratory disease (14%)</td>
<td>Cancer (13%)</td>
<td>Infection (10%)</td>
</tr>
<tr>
<td>Fiji, Indians</td>
<td>Cardiovascular disease (33%)</td>
<td></td>
<td>Accidents (13%)</td>
<td>Perinatal conditions (10%)</td>
<td>Respiratory disease (6%)</td>
</tr>
<tr>
<td>Guam</td>
<td>Cardiovascular disease (37%)</td>
<td></td>
<td>Cancer (23%)</td>
<td>Accidents (12%)</td>
<td>Respiratory disease (4%)</td>
</tr>
<tr>
<td>Kiribati</td>
<td>Infection (28%)</td>
<td></td>
<td>Respiratory disease (9%)</td>
<td>Accidents (8%)</td>
<td>Perinatal conditions (7%)</td>
</tr>
<tr>
<td>Wallis and Futuna</td>
<td>Infection (15%)</td>
<td></td>
<td>Perinatal conditions (13%)</td>
<td>Cardiovascular disease (12%)</td>
<td>Respiratory disease (8%)</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>Perinatal (20%)</td>
<td></td>
<td>Cardiovascular disease (17%)</td>
<td>Infection (14%)</td>
<td>Cancer (12%)</td>
</tr>
<tr>
<td>Nauru</td>
<td>Cardiovascular disease (23%)</td>
<td></td>
<td>Accidents (22%)</td>
<td>Infection (16%)</td>
<td>Cancer (9%)</td>
</tr>
<tr>
<td>Niue</td>
<td>Respiratory (36%)</td>
<td></td>
<td>Cardiovascular disease (23%)</td>
<td>Accidents (12%)</td>
<td>Infection (7%)</td>
</tr>
<tr>
<td>Northern Marianas</td>
<td>Cardiovascular disease (35%)</td>
<td></td>
<td>Accidents (23%)</td>
<td>Perinatal conditions (12%)</td>
<td>Respiratory disease (11%)</td>
</tr>
<tr>
<td>Country</td>
<td>Cause of death (proportion of all deaths %)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rank 1</td>
<td>Rank 2</td>
<td>Rank 3</td>
<td>Rank 4</td>
<td></td>
</tr>
<tr>
<td>New Caledonia (all groups)</td>
<td>Cardiovascular disease (24%)</td>
<td>Accidents (15%)</td>
<td>Cancer (12%)</td>
<td>Respiratory disease (11%)</td>
<td></td>
</tr>
<tr>
<td>Palau</td>
<td>Cardiovascular disease (27%)</td>
<td>Accidents (19%)</td>
<td>Cancer (18%)</td>
<td>Respiratory disease (13%)</td>
<td></td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>Respiratory disease (34%)</td>
<td>Infection (28%)</td>
<td>Cardiovascular disease (28%)</td>
<td>Perinatal conditions (7%)</td>
<td></td>
</tr>
<tr>
<td>French Polynesia</td>
<td>Cardiovascular disease (32%)</td>
<td>Cancer (20%)</td>
<td>Infection (10%)</td>
<td>Accidents (8%)</td>
<td></td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>Respiratory disease (25%)</td>
<td>Perinatal condition (25%)</td>
<td>Infection (24%)</td>
<td>Accidents (9%)</td>
<td></td>
</tr>
<tr>
<td>Tokelau</td>
<td>Respiratory disease (35%)</td>
<td>Cardiovascular disease (24%)</td>
<td>Accidents (10%)</td>
<td>Cancer (8%)</td>
<td></td>
</tr>
<tr>
<td>Tonga</td>
<td>Cardiovascular disease (26%)</td>
<td>Cancer (18%)</td>
<td>Infection (10%)</td>
<td>Respiratory disease (8%)</td>
<td></td>
</tr>
<tr>
<td>Vanuatu</td>
<td>Infection (23%)</td>
<td>Perinatal conditions (16%)</td>
<td>Respiratory disease (13%)</td>
<td>Cardiovascular disease (11%)</td>
<td></td>
</tr>
<tr>
<td>Western Samoa</td>
<td>Cardiovascular disease (32%)</td>
<td>Respiratory disease (11%)</td>
<td>Accidents (11%)</td>
<td>Cancer (10%)</td>
<td></td>
</tr>
</tbody>
</table>

Proportional mortality has been calculated from the most recent available data (around 1980) from vital registration or hospital statistics. "Ill-defined" and "other" categories have been excluded when calculating the proportions.

When countries are ranked in order of proportional mortality from infection (Table 9), it can be seen that the Melanesian malarious countries (Papua New Guinea, Vanuatu, Solomon Islands) and the two most undeveloped and disparate Micronesian states (Kiribati and the Federated States of Micronesia) have the highest values, and the low-mortality Micronesian and Polynesian countries have the lowest proportional mortality from infection. There is a linear relationship between life expectancy and proportional mortality from infection among Pacific island countries.

Unfortunately, available health statistics in most countries do not allow for an analysis of death by cause and by age. This analysis is important because, as a public health problem, it is premature death that requires the most attention, not deaths that occur after age 65 or 70.

A detailed study of the relationship of socioeconomic and geopolitical indicators of mortality in Pacific island countries is in progress at the South Pacific Commission. Preliminary findings suggest that government expenditure per capita, aid per capita, imports per capita (and food imports per capita), and exports per capita are all positively correlated with life expectancy.

Table 9. Proportion of recorded deaths due to infection in Pacific island countries (c. 1980)

<table>
<thead>
<tr>
<th>High (20% or more)</th>
<th>Medium (1-19%)</th>
<th>Low (Less than 5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High-Medium (10-19%)</td>
<td>Low-Medium (5-9%)</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>Nauru (15.9%)</td>
<td>French Polynesia (10.0%)</td>
</tr>
<tr>
<td>(27.9%)</td>
<td></td>
<td>Northern Marianas (4.4%)</td>
</tr>
<tr>
<td>Kiribati</td>
<td>Wallis &amp; Futuna (14.7%)</td>
<td>Fiji, Melanesians (9.6%)</td>
</tr>
<tr>
<td>(27.8%)</td>
<td></td>
<td>Ooak Islands (3.5%)</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>Marshall Islands (13.9%)</td>
<td>Western Samoa (9.0%)</td>
</tr>
<tr>
<td>(24.3%)</td>
<td></td>
<td>Tokelau (3.3%)</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>U.S. Trust Territory (13.3%)</td>
<td>Fiji, Indians (6.6%)</td>
</tr>
<tr>
<td>(22.7%)</td>
<td></td>
<td>Guam (0.9%)</td>
</tr>
<tr>
<td>Federated States</td>
<td>Tuvalu (10.2%)</td>
<td>Niue (6.5%)</td>
</tr>
<tr>
<td>of Micronesia</td>
<td></td>
<td>American Samoa (--)</td>
</tr>
<tr>
<td>(22.3%)</td>
<td>Tonga (10.0%)</td>
<td>New Caledonia (all groups) (5.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palau (5.0%)</td>
</tr>
</tbody>
</table>

Gross domestic product per capita does not correlate well with mortality indicators. Proportion of those living in urban areas and proportion of school-age children attending school also correlate positively with life expectancy, while total population is negatively correlated with life expectancy. Malarious countries and Melanesian states have lower life expectancies than other nations, and countries composed entirely of atolls have higher mortality than high islands or mixtures of atolls and high islands. States that are territories of a metropolitan nation or that have preserved a strong political link with a former colonial power have higher life expectancies than those countries that are fully independent. There are more doctors per population in the countries with high life expectancy than in the countries with low life expectancy, and the land/sea-area ratio is lower in the high life-expectancy states than in the low life-expectancy states.

All of the above socioeconomic and geopolitical variables are highly intercorrelated, and, moreover, are only indirectly related (in a causal sense) to mortality. Yet the continued study of these relationships should prove very valuable in our understanding of the relationship between development and health status. The correlations documented suggest that the smaller and developed countries with close ties to metropolitan states (American Samoa, Guam, Cook Islands, Niue, Palau, and Northern Marianas) have high life expectancy and a pattern of mortality that resembles that of western industrialized states. In these countries it does not appear that the emergence of non-communicable diseases (cardiovascular disease, diabetes, high blood pressure, and cancer) and accidents as major causes of death is associated with significant premature mortality at present. Perhaps this is because sufficient social and medical compensatory factors have been operating to control any increase in mortality as a result of the conditions.

On the other hand, there are countries that have a western pattern of mortality by cause and also a low life expectancy. The most striking example is Nauru, which has one of the lowest male life expectancies in the Pacific, due to considerable premature adult mortality from cardiovascular disease and accidents. Among Nauruan males, death rates were higher in the late 1970s than in the 1960s according to available statistics. This is an example of a country where the emergence of non-communicable diseases in association with (phenomenal) increases in cash income has led to high mortality. Other countries with a western pattern of mortality by cause but without a high life expectancy are Fiji, Western Samoa, Tonga, and French Polynesia. It is reasonable to assume that in these countries the emergence of non-communicable diseases has had an adverse impact on life expectancy due to significant premature adult mortality.

Thus it can be seen that a contemporary cross-sectional comparative study of health status in Pacific island countries reflects in many ways the historical change from high to low mortality, and the transition from a "traditional" pattern of death by cause predominated by infection to a "western" pattern with non-communicable disease and accidents as the major causes of mortality.

Current Patterns of Morbidity

The major causes of hospital admissions in rank order for selected Pacific island countries are shown in Table 10. Respiratory disease, infection,
<table>
<thead>
<tr>
<th>Country</th>
<th>Cause of death (proportion of all deaths %)</th>
<th>Rank 1</th>
<th>Rank 2</th>
<th>Rank 3</th>
<th>Rank 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federated States of Micronesia</td>
<td></td>
<td>Respiratory disease (24%)</td>
<td>Infection (23%)</td>
<td>Gynecological conditions and complications of pregnancy (12%)</td>
<td>Accidents (11%)</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td></td>
<td>Infection (19%)</td>
<td>Respiratory disease (17%)</td>
<td>Injury (11%)</td>
<td>Digestive disease (10%)</td>
</tr>
<tr>
<td>Western Samoa</td>
<td></td>
<td>Respiratory disease (36%)</td>
<td>Infection (14%)</td>
<td>Injury (11%)</td>
<td>Digestive disease (7%)</td>
</tr>
<tr>
<td>Vanuatu</td>
<td></td>
<td>Infection (33%)</td>
<td>Respiratory disease (14%)</td>
<td>Injury (5%)</td>
<td>Conditions of pregnancy and childbirth (6%)</td>
</tr>
<tr>
<td>Niue</td>
<td></td>
<td>Respiratory disease (26%)</td>
<td>Digestive disease (12%)</td>
<td>Injury (12%)</td>
<td>Obstetric conditions (10%)</td>
</tr>
<tr>
<td>New Caledonia</td>
<td></td>
<td>Respiratory disease (21%)</td>
<td>Digestive disease (14%)</td>
<td>Injury (13%)</td>
<td>Infection (8%)</td>
</tr>
<tr>
<td>Palau</td>
<td></td>
<td>Respiratory disease (12%)</td>
<td>Injury (12%)</td>
<td>Injury (7%)</td>
<td>Complications of pregnancy and childbirth (8%)</td>
</tr>
<tr>
<td>Tokelau</td>
<td></td>
<td>Infection (25%)</td>
<td>Digestive disease (14%)</td>
<td>Respiratory disease (12%)</td>
<td>Diseases of the (12%) reproductive and urinary systems</td>
</tr>
</tbody>
</table>

digestive disease, accidents, and conditions related to pregnancy and childbirth are the major causes of hospital admissions in the selected countries. There are differences between pattern of hospital admission by cause and pattern of death by cause; in particular, cardiovascular disease and cancer are cited much less frequently as reasons for hospital admissions than for mortality in Pacific island countries. Hospital morbidity consists mainly of acute self-limited conditions, rather than chronic fatal conditions such as cardiovascular disease and cancer.

Numerous population health surveys in the recent and distant past have documented the health status of island communities. Surveys of infectious disease have revealed that tuberculosis, filariasis, dengue fever, intestinal parasites, and hepatitis B are problems of some magnitude in many Pacific populations. These surveys help to establish the groups most at risk and to identify the mode of transmission of disease and the important vectors and reservoirs.

Population surveys of non-communicable diseases (such as high blood pressure, diabetes, and heart disease) have been undertaken in most Pacific island countries in the last two decades. It has been documented that these conditions are frequent in modernized populations and that urban/rural differentials exist within the same ethnic groups, with rural populations experiencing lower prevalence of non-communicable disease than urban populations. Although Polynesians and Micronesians are the groups most affected, non-communicable disease is certainly a problem among Fijians and New Caledonian Melanesians, and appears to be emerging in urban groups in Papua New Guinea.

These surveys of non-communicable diseases have incriminated obesity, reduced physical activity, and change in diet (particularly increased salt and sugar intake, and decreased in fiber intake) as factors responsible for the high prevalence of diabetes and high blood pressure, in particular, in urbanized Pacific populations.

The South Pacific Cancer Registry has assisted with the documentation of the magnitude of the problem of cancer in certain countries in the region, and the data produced has revealed significant differentials in cancer incidence among various groups, which require further study. Papua New Guinea, Fiji, New Caledonia, French Polynesia, American Samoa, Guam, the U.S. Trust Territory governments, Cook Islands, and Niue are all developing cancer registries, although they are at various stages of evolution.

Lung cancer in males, and breast and cervical cancer in females, are prominent in many Pacific populations, as they are in the industrialized nations. Certain cancers that are, however, relatively more frequent in Pacific island populations because of specific local factors, e.g., mouth cancer in Papua New Guinea, Solomon Islands, and certain Micronesian populations, probably related to betel nut chewing; and liver cancer in many Pacific populations, probably related to hepatitis B infection.

The considerable incidence of lung cancer in Polynesian, Micronesian, and New Caledonian Melanesian males is probably related, as elsewhere, to cigarette smoking. Alcohol intake may contribute to the excess of esophageal (gullet) cancer in males from New Caledonia (Melanesian and European), French Polynesia, and Hawaii (Polynesians).
FACTORS CONTRIBUTING TO CHANGING HEALTH STATUS IN THE PACIFIC

In many ways the factors that contributed to changing health status in each island country in the past are similar to those that contribute to the differing health status among island countries today.

Following the phase of disastrous epidemics at and around the time of European contact, mortality remained relatively high, but the populations stabilized and then slowly increased from the turn of the century on, although infection was still a major cause of death. In many countries malaria infection is a major problem, and the environmental and geographic factors that contribute to the continued and increased incidence of malaria are particularly difficult to control. The eradication of malaria is possible, but it requires an advanced state of organization and large resources. Both Australia and the U.S. have eradicated malaria from their tropical regions and maintain malaria-free populations despite the continued presence of the anopheles mosquito, but this has required enormous resources.

Factors that contribute to the continued presence of pneumonia, tuberculosis, dysentery, diarrheal disease, and other infections include undernutrition, poor housing and overcrowding, contaminated water supplies, and inadequate hygiene. The continuation of these basic problems in several countries in the region is reflected in a high proportion of deaths from infection, and low life expectancies.

Basic hygiene and nutrition problems are overcome only by development in the broadest sense of the word. Their control requires knowledge and motivation by the people themselves, and also large public works and health programs mounted by the central government. The history of the low-mortality Pacific countries exemplifies the above, as does a comparison amongst the Pacific island countries today.

In the countries with a "western" pattern of mortality (those in which non-communicable disease and accidents contribute to a significant premature mortality), the effect of modernization and the cash economy is a significant contributing factor. Changes in lifestyle, particularly in diet and exercise patterns, contribute to the development of non-communicable diseases, and the availability of motor vehicles and alcohol predispose to high accident rates. The most significant dietary change seems to be that people eat less traditional local food that is high in fiber and complex carbohydrates, and more imported and processed food that is high in refined carbohydrates, sugar, salt, and animal fats. This change in diet is generally a consequence of urbanization and monetarization of the economy. Although tastes and preferences in food have altered somewhat, the economics of food production and distribution are such that imported processed food is often cheaper than locally produced fresh food and costs less in both time and fuel to prepare.

Environmental and Socioeconomic Factors

The evidence available indicates that changing environmental and socioeconomic factors have had a significant impact on changing health status in Pacific island countries. Development, urbanization, education, and monetarization of the economy have been associated with a decline of infectious diseases as the major cause of illness and death and increases in life expectancy.
expectancy. This appears to have occurred because of an overall improvement in living conditions (food, housing, etc.), the implementation of public health programs (water supply, sanitation, immunization, etc.), and the availability of curative medical services.

In countries where the infectious diseases are under control, non-communicable diseases and accidents have become major problems. In some Pacific island countries these conditions are causing significant premature mortality, and are responsible for keeping life expectancy relatively low. Non-communicable diseases and accidents are also rooted in environmental and socioeconomic conditions, although the web of causality is less clear. Nevertheless, changes in way of life (e.g., diet and exercise) as a result of urbanization, education, monetarization of the economy, and increase in the service sector have been associated with the emergence of non-communicable diseases (high blood pressure, diabetes, heart disease, and cancer), and accidents as significant causes of morbidity and mortality.

It is important to grasp the role of structural factors in determining way of life because otherwise too much emphasis is placed on individual culpability as the cause of illness.

**Individual Factors**

Individual factors related to human behavior are of major importance in changing health status. The control of infectious disease (particularly intestinal infections) requires changes in habits related to personal hygiene, and many aspects of the control of vector-borne disease (protection against mosquitoes, control of breeding places, etc.) are also within the province of individual action. Adequate nutrition has always been an important determinant of health status, and is very strongly influenced by human behavior.

Individual responsibility for health is an important concept, and changes in individual behavior have been associated with dramatic changes in health status in the past. However, it is necessary to recognize that individual behavior is strongly influenced by custom and culture, and also by the prevailing social and economic environment. Although education (and health education, in particular) plays an important role in changing health-related behaviors, it should not be expected that most individuals will act in a manner contrary to accepted social mores or prevailing economic incentives.

**The Role of Health Policy in Changing Health Status**

The role of health policy in changing the health status of Pacific island communities is difficult to assess, especially because major determinants of health do not necessarily fall within the responsibility of departments of health. The history of each island country, and current comparisons between them, reveals that health status is closely related to development in the broadest sense of the word. In fact, health status indicators (in particular, life expectancy at birth and infant mortality rates) are important measures of development itself. Money, as measured by gross domestic product per capita, does not necessarily mean development or high health status (e.g., Nauru).

Even major public expenditures that have an important impact on health—e.g., housing, education, agriculture, rural development, and even in
some cases water supply and sanitation—are often out of the control of departments of health. In these instances health departments should try to advocate for health needs through inter-departmental committees and other means. It would be desirable to have health aspects considered in development projects and in the normal functioning of government.

Health departments in the Pacific are mainly concerned with the administration of medical services and preventive activities that relate particularly to medical measures (e.g., immunization or the control of certain diseases, such as tuberculosis). The policy emphasis on prevention in many Pacific island countries is laudable; however, the exigencies of the routine functioning of health services, and public demand, often lead to a situation where curative services receive disproportionate attention.

The incorporation of the requirements of health in government policy has certainly contributed in the past to control of infectious diseases in those countries where they are no longer a major problem. Governments need to increase their awareness of policy options that may help control infectious diseases in countries where the diseases are still prevalent.

Control of nutrition-related disorders (both undernutrition and overnutrition) have also been the target of health policy. National nutrition policies are being formulated and implemented in several Pacific countries; these aim to structure the food producing and importing system so that nutritional needs are considered along with economic factors and rural development.

CONCLUSION

Changing health status in Pacific island communities has been closely related to development, urbanization, and monetarization of the economy. Socioeconomic factors have been closely interwoven with individual behavioral factors as determining influences in health status changes.

Reliable data are urgently needed on the health status of certain Pacific island communities, especially on mortality levels in the Federated States of Micronesia and the Marshall Islands. Most Pacific island countries could benefit from more analysis of their health statistics, particularly from comparative studies of geographic and ethnic variation.


III-B.23
Pacific Islands Development Program

Our Young People: The Future of the Pacific
YOUTH IN THE PACIFIC:
AN AVAILABLE, UNTAPPED RESOURCE

by Samuela Vanini

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii
SAMUELA VANINI is regional director of the Commonwealth Youth Program, University of the South Pacific, Suva, Fiji.

The Pacific Islands Development Program is publishing this report as background material for the 2nd Pacific Islands Conference, August 1985 in the Cook Islands, and for general use by Pacific island governments. To ensure maximum dissemination of the material contained in the report, it is not copyrighted and island governments are encouraged to copy the report or portions of it at will. PIDP requests, however, that organizations, institutions, and individuals acknowledge the source of any material used from this report.
Youth programs in the Pacific have existed for many years. However, they are not achieving what was intended. Reasons vary, and range from the attitudes of planners and policymakers toward problems of the young to the absence of supportive policies, programs, and infrastructure for youth work.

The experiences of youth shape adult life, so island nations must be aware of what is happening to their young people and what the implications and future effects of this will be. The ever-growing number of Pacific youth and the new values they have adopted, along with the social consequences, are danger signals that no country can ignore.

Many Pacific island governments that try to include young people in development planning have established youth policies and programs with assistance from nongovernment organizations. These have been set up in the belief that young people will share the responsibility of development. Involvement of youth in nation-building policies and program varies from political ideology to leisure-oriented activities. However, many governments acknowledge the need for their young people to participate in all stages of development, e.g., decision making, planning, and implementation.

Young people can participate and contribute in all four levels of development: self, family, community, and nation. However, they should also benefit from their contribution to these development efforts. While young people often see themselves as participants only in national development, they need to realize that participation in the lower levels of development is just as important.

But can young people really contribute to the development of our island nations? To answer this question every government and nongovernment organization should review the development of their young people from their preparation, education, and training, to their participation and involvement in the development efforts of their nation.

It has been established that the youth in our island nations face similar issues and problems. Many young people have tried to persuade those in authority to provide some assistance in solving the problems that they have identified. Unless these problems are addressed, governments cannot expect their youth to contribute much to their countries' development programs.

To recognize the needs of young people, the United Nations has declared 1985 as International Youth Year, with the theme of "Participation, Peace, and Development." Youth can contribute to development programs. The challenge for
Pacific governments and nongovernment organizations is to review their policies and programs to identify ways of involving youth in development efforts.

**CHARACTERISTICS OF YOUTH**

Youth has been defined by the U.N. as the segment of a population from 15-24 years of age. Definitions of the age limits of youth vary from country to country. Some countries define youth as those in the age group 15-26 years; other countries define youth as anyone under age 40. For some, adulthood begins at 30. Pacific societies have their own chronological and sociological definitions of youth. However, there is no unanimous definition of youth in the Pacific. Some define youth as anyone who has completed formal schooling and is not yet married. Others define youth as anyone who participates in youth programs.

Improved nutrition and environmental conditions have brought on earlier puberty, and society must accept young people as adults much earlier than in the past. Furthermore, youth are in a state of socioeconomic dependency on their families and society. Because of the trend toward late marriages, families have to support young people for a much longer period than in the past. Parents are also expected to keep their children in school much longer, thus the potential to marry and become independent at a young age is reduced.

If the Pacific islands use the United Nations age-group definition of youth, then young people comprise a major proportion of their populations, varying between 15 and 20 percent (see Table 1). Under other definitions, youth represent as much as 25 percent of the total Pacific islands population. Given these figures, young people must be considered a substantial target group in Pacific island efforts. It is expected that the number of Pacific youth will be much higher in the future as a result of the natural increase in population, plus more years spent in school. The increasing trend toward late marriages will also increase the number of people falling into the category of "youth." This increase in the youth population is a factor that governments must take seriously, as it has significant implications in the planning and utilization of already limited resources.

Table 1. Youth population in Pacific countries: 1980

<table>
<thead>
<tr>
<th>Countries</th>
<th>Total Population, all ages (#)</th>
<th>15-19 yrs (#,%</th>
<th>20-24 yrs (#,%</th>
<th>Total 15-24 yrs (#)</th>
<th>Total Youth (#,%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook Islands</td>
<td>18,512</td>
<td>2,317(12.5)</td>
<td>1,051(5.7)</td>
<td>3,368</td>
<td>18.2</td>
</tr>
<tr>
<td>Fiji</td>
<td>588,068</td>
<td>73,168(12.4)</td>
<td>56,808(9.7)</td>
<td>129,976</td>
<td>22.1</td>
</tr>
<tr>
<td>Kiribati</td>
<td>56,213</td>
<td>6,734(12.0)</td>
<td>4,918(8.7)</td>
<td>11,652</td>
<td>20.7</td>
</tr>
<tr>
<td>Niue</td>
<td>3,334</td>
<td>454(13.6)</td>
<td>275(8.2)</td>
<td>729</td>
<td>21.8</td>
</tr>
<tr>
<td>Western Samoa</td>
<td>152,607</td>
<td>19,686(12.9)</td>
<td>11,904(7.8)</td>
<td>31,590</td>
<td>20.7</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>2,784,600</td>
<td>278,020(10.0)</td>
<td>23,330(8.4)</td>
<td>511,350</td>
<td>18.4</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>20,770</td>
<td>20,770 (9.0)</td>
<td>16,398(7.7)</td>
<td>37,168</td>
<td>17.5</td>
</tr>
<tr>
<td>Tonga</td>
<td>90,085</td>
<td>10,532(11.7)</td>
<td>7,529(8.4)</td>
<td>18,061</td>
<td>20.0</td>
</tr>
</tbody>
</table>

*Source: United Nations Year Book (1980).*

IV-A.2
Pacific Islands Development Program
The rapidly changing values of society and the adult expectations that traditional norms and rules must be followed is creating a conflict in lifestyle for young people. The expectation is that young people must be economically active, with monetary reward for their labor, and that they should be learning some skills for this purpose.

Both the characteristics and expectations of Pacific youth make this segment of the population a challenge to development, which has major implications for national manpower planning and usage. The extent to which the needs of youth can be met and to which young people can be absorbed into national development policies and programs is a big task for any government in the Pacific, especially when resources are severely limited and other priorities may have already been identified.

YOUTH ISSUES AND PROBLEMS

Many policies have been formulated and programs implemented by different Pacific island governments to address the issues of their young people. Nongovernment organizations (NGOs) have also worked toward improving the status of youth. The youth of the Pacific face similar issues and problems.

Unemployment and Underemployment

Technological changes experienced in the Pacific have reduced the need for human labor, and the first victims are young people. In addition, improved health services have led to a natural increase in national population, which further increases the labor surplus.

The problem of inappropriate youth skills within the available labor market is common in many Pacific island countries. Educational systems inherited from colonizers emphasized education oriented toward white-collar jobs. Other skills needed for total socioeconomic development were left out until governments realized the impact of the education system. Social expectations about the type of job an educated person should perform have contributed toward this mismatched-skill syndrome. The colonizers portrayed the desk jobs performed by administrators, doctors, and other professionals as the ideal, and Pacific islanders expected their children to aspire toward similar types of work.

The types of jobs available also contribute to underemployment. Employers give preference to those with experience, but young people are the last group to have such experience. Perhaps employers should be required to have an employment quota of youth as cadets to give them necessary experience.

The problem points toward the type of education system the countries have adopted. Are the training and education programs relevant to Pacific islands' needs? Many Pacific youth leave school at the end of their primary education. Are the primary school curricula adequate to train those who drop out to be economically productive citizens, or are these young people unable to cope with life after primary school? A majority of Pacific youth drop out while in secondary school, either because of economic reasons or failure of examinations. Are these youth taught subjects relevant to potential employment opportunities in the Pacific islands? In some Pacific islands vocational guidance is either not carried out or not given sufficient emphasis in primary
and secondary schools. While at school young people may have little idea of
career choice, especially those appropriate to their educational background.
Mismatched skills frequently result.

Few island governments promote nonformal education and programs for skill
redevelopment. Nonformal education is needed, since the formal education
system has produced a group of youth who, as school dropouts, are lost in a job
market that demands technical skills and knowledge. However, some segments of
our youth population are denied access to education for socioeconomic reasons.
On the extreme level, some governments have tried to integrate education and
manpower planning; this often results in a surplus of graduates with mismatched
skills for the job market. Changes in curricula and educational strategies
have to be studied carefully to prevent wastage of manpower and money, the
latter a very scarce resource indeed.

Unemployment and underemployment of young people also financially burdens
the economically active population. Accordingly, resources have to stretch to
support an inactive youth population. Further, the frustration of unemployment
often leads to antisocial activities, which result in higher costs for main­
taining law and order. The extra costs of larger police forces and associated
social services are a burden that many island governments can ill afford.

Rural-Urban Drift

Another serious issue facing young people is rural-urban drift and
migration. Some Pacific island countries are facing this trend on two levels.
First is the impact on urban centers, and second is the associated depletion of
smaller islands by its youth who seek opportunities on bigger islands, usually
where the towns are located. In other Pacific island countries, young people
have left for opportunities overseas.

Rural youth are trapped in a traditional system that demands on one hand
communalism and obedience to one's superiors, and, on the other, supports the
values of an education system that preaches individualism, stresses
competition, and encourages inquiry. Defiance of traditional authority is
inevitable in such a situation.

The trend toward rural-urban drift and migration has been attributed to
the disparity in standards of living between rural and urban areas, with the
latter providing better living standards and an attractive lifestyle. Basic
facilities such as housing, communication, and entertainment are relatively
accessible in urban areas. Educational opportunities in urban areas are often
better as well. In urban areas young people are beyond the demands of
traditional obligations, individualism is tolerated, and the freedom to find
one's own identity in a world of changing values is possible.

Many rural youth have no access to land, and if they do, many dislike
cultivation, seeing it as a boring form of employment where monetary returns
are slow compared to the returns from wage labor in the city. Restlessness
results, and rural-urban drift is inevitable.

The idea that the urban center, larger island, or overseas country has
potential to offer better and more diverse opportunities of employment attracts
young people away from smaller islands and rural areas. However, the
consequences of such high expectations on the migrant are not always pleasant. Much has been said about the effects of rural-urban migration in terms of mismatched skills for the available job market and the added strain on limited resources in the urban centers. Rural-urban migration can result in unemployment, homelessness, psychological stress, economic hardship, and personal despair. The unemployed migrant youth may end up roaming the streets in search of accommodations and fun. Many end up on the wrong side of the law. Others, who "strike gold" in the urban center feel obliged to send remittances back home for family needs.

Value Systems

Another major issue facing young people in the Pacific is the decline in traditional family, religious, community, and cultural values. Family links have disintegrated as children move away from their homes for educational or other purposes. The years spent away from home weaken their family bonds, respect for parental authority, and family values. Economic need forces many mothers to find wage-earning employment, which also leads to a breakdown in family life. Such family instability has contributed to increasing divorce rates in the Pacific. Finally, the growing impact of mass media consumerism often seriously threatens parental authority and family values. Many adults themselves are baffled and confused in making choices, due to the effect of present-day mass media and conflicting lifestyles.

Young people are caught in a climate of change where traditional values are forced on them by the family and the society on one hand, and the values of new lifestyles are forced on them on the other. Some young people may feel they cannot return to the traditional lifestyle, they are still dependent on their parents and the community for guidance and for basic needs. In such a no-win situation they may be forced into escapist activities in the hope of finding a suitable and acceptable lifestyle.

Health

Changing dietary practices and a modern lifestyle have taken a toll on the health of young people in the Pacific. The preference for and increasing consumption of store-bought foods have increased nutritional and health risks. Unemployment and underemployment, coupled with escalating food prices, seriously threaten the health of urban youth in the Pacific.

Another health problem that places Pacific youth at risk is the increasing prevalence of sexually transmitted diseases. With the relaxation of sexual norms, social permissiveness, changing values, and increased contact with migratory groups, these diseases are expected to spread and become uncontrollable in the Pacific.

Alcohol and drug abuse is another major health problem facing Pacific youth. Such abuse contributes to juvenile delinquency, increasing rates of crime, and other deviant and antisocial activities.

How Governments and Organizations Can Help

In an effort to treat problems faced by young people, some Pacific governments have tried to bring back traditional codes of ethics and values.
Other governments have tried stiffer criminal penalties or similar radical solutions. However, these governments deterrents are useful only as short-term measures; the problems are symptoms rather than causes. Such problems will continue to escalate until governments and nongovernment organizations identify the causes and adopt effective preventive strategies.

**Redefinition of Development**

Pacific island governments must redefine their concepts of development if these concepts are to benefit youth populations. Development must be seen as people-oriented and must improve the socioeconomic and cultural life of the population. Young people should be involved in development efforts in the Pacific, and through this involvement be helped to rediscover their identities in relation to their families, communities, and nations.

Policymakers need to understand and be sympathetic to issues facing young people. Governments should establish programs on a volunteer or semi-volunteer basis with remunerations for youth efforts. Such a scheme would enable young people to see themselves as meaningfully involved in their communities or in the national development effort. The involvement of youth in development programs should be an integral part of the system rather than just a token acknowledgment of young people.

**Review of Youth Policies and Programs**

Like other members of Pacific nations, young people must have the right to proper health, education, and employment opportunities. Governments should therefore formulate integrated development policies that meet the needs of the youth sector. Appropriate youth policies can motivate the young toward a positive contribution to development. Since youth make up about 20-25 percent of the nations' populations, the wisdom of such a policy is obvious.

Governments should take stock of all types of organizations dealing with young people and establish whether the organizations operate on a community, regional, or national level. This would be helpful in providing information about how young people's needs can be met. Forms of assistance offered to youth organizations could be in training, resource materials, or other necessary logistical support.

**Data on Youth**

Governments need to acquire comprehensive data on youth and on issues and problems facing them. Most island governments do not have the statistical information on youth that is needed for policy and planning purposes. Information is needed on youth population, education level, employment status, health status, and availability of leisure facilities.

**Training**

Governments need to review the relevance of their educational systems, not only for producing good citizens but also for providing young people with the skills they need for obtaining gainful employment and for improving their quality of life. Education should involve literacy training, appropriate technology, and practical skills. Governments should encourage advanced
training for youth workers and leaders, especially those in nongovernment organizations.

Training opportunities for both formal and vocational courses should be widely publicized. The costs of such training programs should be kept within reasonable limits so that the courses will be affordable to young people.

To better use existing resources, institutions that have unused facilities during the year (e.g. during school holidays or evenings) should make them available for youth training or recreational purposes. Extension classes on subjects of interest to young people are both a necessary and worthwhile investment. Such courses need to be planned in consultation with young people themselves if they are to be relevant in terms of vocational or skill improvement. Such courses also need to be advertised in a way that attracts the attention of the young.

**Employment Opportunities**

Governments need to adopt new measures and to strengthen existing employment policies in order to offer young people equal opportunities in employment. The provision of fair-paying jobs for young people should be seen as an integral part of any government's development effort.

New employment areas should be identified with special emphasis on self-employment and self-help activities. Governments can encourage or establish training programs on aspects of community development, income-generating skills, and small business management as an attempt to alleviate unemployment among young people. The potential to develop small-scale industry and cooperatives should be investigated and relevant training needs identified and implemented where appropriate. However, governments need to be aware of the danger of exploitation of youth labor in pursuit of wider developmental goals.

The majority of Pacific youth are rural dwellers who engage in some form of agricultural activity. Because of existing land tenure systems, many young people are not able to obtain adequate productive land for agriculture. Governments should investigate the problems of available land, and propose programs to encourage the acquisition of good land for young people who engage in agricultural activities.

Policies and programs should also be identified to slow rural-urban drift. Special emphasis needs to be given to rural development programs that attempt to narrow the disparity in basic living standards and employment opportunities between rural and urban areas. Rural youth need assistance to help them identify income-generating opportunities to supplement their present meager sources of income. Businesses worthy of investigation are handicraft workshops, small-scale tourist ventures, or entertainment services in rural areas. Such ventures would not only help meet economic needs but would also provide rural areas with some services that are otherwise found only in town.

**Land Tenure Systems and Rural Development**

Basic facilities and services also need to be provided if the disparity between urban and rural areas is to be reduced. Programs for better housing, water, sanitation, lighting, and appropriate cooking technology, must become a
priority. Better leisure facilities for the rural population are also required. Marketing facilities for rural products need to be identified and communication networks improved. Such improvements should make the rural area more attractive to young people and help to reduce rural-urban drift.

Health Promotion

Governments and nongovernment organizations can help each other in health education programs directed toward youth. Health workshops, seminars, and training programs should create an awareness among young people of the effects of food and lifestyle choices on health. Young people can assist in promoting primary health care in their communities. In some Pacific countries youth health workers already are recruited on a voluntary basis or supported by the government. Training for such programs could be initiated and coordinated by ministries of health with assistance from donor agencies. Young people can help gather information on health issues such as traditional medicine, food habits, and practices. By this process they learn something "new from the old" and at the same time help revive positive health-related practices.

Young people can also help governments promote "clean environment" campaigns. Such campaigns could be integrated into existing youth training programs. Youth projects in villages might focus on the provision of clean drinking water, for example, as a necessary health service for rural communities.

Nongovernment organizations can cooperate with governments in developing relevant programs for training young people on health issues. Governments and academic institutions should give special attention to research on health problems faced by youth (e.g., road accidents, alcohol-related accidents, and the needs of disabled youth) with the aim of proposing recommendations for further education and rehabilitation.

A comprehensive program of family planning also needs to be promoted. Such a program should provide information on available contraceptive methods and promote awareness about the health and socioeconomic implications of large nuclear families.

Government Policies and Administrative Structures

Pacific island governments should be encouraged to review legislative policies affecting young people, especially during the United Nation's International Youth Year when one of the major themes is participation. Involvement of youth in all levels of decision making should be encouraged and the inclusion of youth representatives in relevant decision making bodies should be implemented.

Those governments that lack an administrative structure to represent the needs of young people should consider the establishment of a youth secretariat or ministry with ready access to top-level government decision making. An "Office of Youth" could initiate and coordinate relevant youth programs and monitor policy matters with respect to young people. National Youth Councils, which already exist in some Pacific islands, can help coordinate youth programs and projects.
Pacific governments need to give more credit to youth leaders and workers and their efforts. Training for these young people is vital if the government is to help them meet the challenges and opportunities offered by the development process.

CONCLUSION

Young people are the Pacific's future. The quality of the Pacific's youth will determine the quality of its future parents, leaders, and citizens. Youth in the Pacific face a difficult dilemma: they are expected to cling to traditional values, while at the same time they are exposed to a system of education that questions those values. If population in the Pacific keeps increasing at the present rate, young people will comprise 30 percent of island populations by the year 2000. Youth problems will then be more complex than ever.

This paper has outlined the issues and problems facing young people and has made suggestions for programs to improve their quality of life. Such programs need support and political commitment from government leaders and those in decision making positions.

The U.N.'s International Youth Year theme is "Participation, Peace, and Development." The youth of the Pacific must participate at all levels of development. If young people in the Pacific are not at peace with themselves, their families, their communities, and their nations, their contribution to the development of stable Pacific nations is likely to be minimal.

During International Youth Year, each Pacific island government should review its policies and programs that relate to youth and identify priority areas. Governments and nongovernment organizations must accept the challenge to work with young people toward assuring peace, participation, and development for all who live in the Pacific.
IV-A.10
Pacific Islands Development Program
THE PROBLEMS FACING PACIFIC ISLANDS YOUTH TODAY

(Essays by Pacific Young People)

by Nutan Shalini Maharaj,
Gilbert Veisamasama,
and Lucy Savu

June 1985

Pacific Islands Development Program, East-West Center
Honolulu, Hawaii
NUTAN SHALINI MAHARAJ, GILBERT VEISAMASAMA, and LUCY SAVU are students at the University of the South Pacific, Suva, Fiji.

These essays were selected by a panel of judges in a competition of student papers on the theme "The Problems Facing Pacific Islands Youth Today." The competition was organized by the Pacific Islands Development Program in connection with the 2nd Pacific Islands Conference, August 1985 in the Cook Islands. The essay competition's purpose was to involve the young people of the Pacific in one of the major issue areas of the Pacific Islands Conference: "Our Young People: The Future of the Pacific."

Nearly 20 essays were submitted from students in educational institutions from the Cook Islands, Fiji, Guam, Papua New Guinea, and Tuvalu. The winning essays are presented here in rank order.

The Pacific Islands Development Program is publishing this report as background material for the 2nd Pacific Islands Conference, August 1985 in the Cook Islands, and for general use by Pacific island governments. To ensure maximum dissemination of the material contained in the report, it is not copyrighted and island governments are encouraged to copy the report or portions of it at will. PIDP requests, however, that organizations, institutions, and individuals acknowledge the source of any material used from this report.
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Pacific Islands Development Program
YOUTH: A TIME OF CONFLICT IN THE PACIFIC

by Nutan Shalini Maharaj

For many South Pacific youths, the biggest problem is that of the future and what it holds for them. Whoever said that "if wishes were horses, beggars would ride" could have more aptly put it as "if wishes were jobs, youth would survive."

All the South Pacific islands are still developing and certainly cannot boast about enormous industries or sophisticated technology. So when a youth finishes his formal education and steps out into the world, he finds himself in harsh circumstances and competition for jobs. He now sees that his world offers survival only to the fittest. Fittest for him now means the lucky person with the best qualifications and/or the best contacts. Where does this leave the youth who is just an average University Entrance Examination pass but who also has the desire to prove to his family that he can get a good job? The disgruntled youth probably, if lucky and not misled by his peers, goes back to the village and starts to work the land. Much to his dismay he may find that he is not good at farming anymore. He does not belong to either world; neither to the city which simply does not have any jobs for him, nor to the village because his education has kept him away from it for so long that he no longer is an able farmer or fisherman.

Many youths face problems when it comes to borrowing money to get started in life. For instance, in Fiji, which is basically an agricultural country, many youths might want to become farmers—not so much because it is the best choice but because there is no other choice. These youths need somebody to provide them with the finance to actually get the land and equipment. But nobody seems willing to invest money in them, as the general feeling is that there is no guarantee of a return. Mr. Tuisawau, Fiji's deputy commissioner of police, said during the 1985 Annual Fiji Principals' Conference that agricultural students did not get loans or land to farm after graduation and that many had to seek other jobs after studying agriculture.

In Fiji alone there are more than 9,000 school leavers each year, most of whom join the rising ranks of the unemployed. Professor Kaye of the University of the South Pacific has said that the examination system made students cram facts and gave them little training in thinking or cultural values. This makes one wonder whether our academically oriented examination system is the best way of testing the youth. I think Oscar Wilde (1854-1900) very aptly said, "Education is an admirable thing, but it is well to remember from time to time that nothing that is worth learning can be taught."

While on examinations, we come to another matter that seems to be eating into our island youths: "Will I pass this year?" This question not only bothers the lazy ones but also many of those who are conscientious and intelligent but weak in English. Some are weak in written English, others in
spoken English. Just because most islanders come from backgrounds with little or no English they have reason to worry about their examinations. Hence many youths—had it not been for English—would have outshone many of their classmates who are from good English-speaking backgrounds.

I know a Tongan youth who was in secondary school with me. He was a brilliant student but his English always pulled him down. Just because English was compulsory, his overall examination marks used to be lower than those of students who he could have easily beaten in other subjects. Finally he became so frustrated that he lost interest in his school work.

A number of youths encounter problems when it comes to communicating with their teachers. Islanders seem to become reserved once confused. Many teachers sometimes take this as a sign of disrespect. Also, certain mannerisms that might seem cheeky to teachers are considered polite by students. For example, a Fijian student may touch his hair when he is sorry or does not know whether what he is doing is right. A teacher would probably think that the student is being big-headed and so might treat him unfairly. As a result the student may feel inferior to his peers. This has wider implications than what appears on the surface.

Race prejudice can be the resulting problem. This problem is obvious at the University of the South Pacific. Some of the toilets have graffiti on the walls with abuse thrown at other island students. Just a few careless words here and there can lead to so much ill feeling and dissatisfaction.

There is an even bigger problem that our youths cannot ignore, try as they might. It is a problem that binds all the island youths together as one; a problem that looms in front of them all; a problem that they can see because they can read and understand; and a problem that their simple-minded grandparents are ignorant of. The problem is that of making our Pacific free of nuclear activities. The youth can foresee the adverse effects of radioactive testing in our peaceful waters. The youth's heart burns with hatred when he sees the enormity of this problem. He will not be pacified as long as nuclear testing continues. The question of nuclear testing already seems to have become an international problem.

Today more and parents send their children to school. It has become the standard procedure. So, now more children mature in an environment that may be miles away from the village surroundings. These children may not be as lucky as those who have their parents living in towns or cities. In the latter case, the parents have gradually changed with the changing times. Therefore, they will easily understand their children's priorities and ideals. But for a student who has come from a remote village, life will not be so easy. After finishing his education, he will return home, full of pride. His family will await him eagerly: a child transformed into an able young man is returning home having successfully enhanced his family name and his village name. He is coming home to help his people. After the rejoicing and feasting, when life resumes its normal form, the young man will discover that his ideas and the values which he holds high are different from other villagers' ideas. For example, to the surprise of his friends, he might not want to share the same towel with them for hygienic reasons. He sees that people do not understand him. If his problems were to end there, it would be a different matter. But no, people now start to misunderstand him. He is considered a stranger who has
had a touch of the western world. The young man finds his family to be inflexible and hateful.

But what can the youth do? He has been caught in a web. He has come back to make life better for his people but he cannot do that as long as they remain set in their ways and he is what he is. His education has given birth to a conflict between him and village people. Who is the spider? Who is the fly? But blaming anyone will not solve the problem. On the contrary, it is likely that the problem will exceed all proportions. We can only sympathize with the youth. We cannot help him as we cannot alter the circumstances, and that is the naked fact.

Another problem is that of identity. During the course of his education, the youth is exposed to so many new ideas and ways that he sometimes does not know what is beneficial and what is not. An intelligent youth should be able to filter what he experiences and adopt the good aspects. But this is where the problem starts. To what extent should the islander copy a particular aspect of the western world? He has to be careful that he does not lose his own identity in the process. Every youth is proud of his origin. But during the course of one's education, one has to behave as one's peers do. There is a desire to conform with your own group so that you do not become an outcast. Your manner of dressing, talking, and even thinking become similar to those of others of your own age—so much that you may no longer be the person you started off as.

Studies in various parts of the Pacific have shown that a few hours of work daily used to be sufficient to supply all one's subsistence needs. In the Pacific, nature was bountiful and food was plentiful. Under these circumstances cultures used to place emphasis on leisure activities. Sudden bursts of group effort were more common than consistent plodding. This was the Pacific way of life. But today, just a few hours of work will not earn you a drink, let alone your bread and butter. Although the conditions have changed, the people do not seem to have changed at the same pace.

In chiefly societies the common people had no power to initiate things, and to have done so would have been regarded as improper. The people had to wait until directed by their chiefs. There is still a portion of this tendency left in the Pacific way of life. Today our youths seem to have discovered this problem. They cannot ignore the fact that time well-planned for steady work has much more to offer them than anything else. Youths know that they have to carve their own future with their own hands. But this is not something easy to do as they have the inborn instinct that things will work out by themselves. Their instincts tell them that one cannot foresee the future and so should not waste time trying to. I sometimes have this fatalistic attitude, although I know that it is not the best way of facing life.

The Pacific people seem to take things much more easily than other people. For example, after a hurricane, when there was an urgent need for reconstruction of houses, Samoans played cricket without stopping. Another example is that of many unemployed Tongans. These youths refuse available jobs if they find the work boring. But they do not go hungry as cultural beliefs about hospitality force those who have resources to care for them. Today youths are aware that this way of things cannot last. But because they have been born and bred in the Pacific way they cannot change completely.

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It is only natural in any society that as children mature they get interested in the opposite sex. Relationships develop that in some cases continue for life and in other cases break off. But it is not so simple most of the time. Usually there is much heartache, envy, and loss of interest in other things, like education and sports. Some couples rush into things and in the end there is either an unwed mother or a broken marriage. The youths of the South Pacific are in no way free from such problems. At present, sexually transmitted diseases like syphilis and gonorrhea seem to be on the increase in the Pacific. A happy evening out may start off with a dance and end with sexual intercourse. Youths have to control themselves as one wrong move may lead to much grief and shame.

Sometimes the problem of race and color comes into picture. Two young people may fall in love only to discover that each is not acceptable to the other’s family.

There are other cases when a boy or girl does not know how to communicate with each other. This may be either due to language barriers or utter shyness. It is common especially when the individuals are from different island countries and are weak in English.

If an educated young man finally does find a wife and settles down, he finds new problems cropping up. How many children should he have? What should he feed them? In which ways can he give them the best comforts within his reach? If it were only he and his wife who had to decide on these things, it probably would not be so difficult. Unfortunately, the youth has to consider what his parents think, especially if they are all living together as an extended family. For example, a young couple may plan to have just two children so that they can give the children enough love and care and, at the same time, lead contented lives themselves. But the parents may strongly object, saying that it is customary to have lots of children to carry on the line. So we see that there is no end to the couple’s problems.

So far I have mainly concentrated on those youths who have had at least some degree of success in their education. There is another segment of youth that includes those who have dropped out of school. Probably due to financial problems, family problems, physical handicaps, or lack of interest, they have just faded out of the school system. Whatever the reason, these youths have a harder time than those who have passed their examinations. The drop-outs quickly become a disillusioned, demoralized, and bitter element of society. Many are disowned by their families and have to constantly worry about the next meal. Due to a lack of parental guidance, most of these unfortunate youths get support from others who are in the same boat. Consequently they follow the wrong road which will fling them behind bars. That is the only success that fate has in store for them, though I doubt if it is any consolation at all.

One just has to glance though the papers to become aware of the thefts, brutal beatings, and rapes that occur. Almost all such shameless deeds are done by youths, mainly while under the influence of liquor. Juvenile delinquents are seen smelling methylated spirits and puffing cigarettes. I have actually seen the former happening in the mangrove swamp some distance from our home in Nasese.

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I quote Dr. Malani, who has set up three workshops to help our youths: "Problems arise when unemployed youths do not feel loved or cared for. They are not given the opportunity to exercise some responsibility so that they feel they are part and parcel of a home and community. They are caught in a vicious circle, and because they are looking for recognition and some activity, they end up in crime." Such youths are still a part of our community and we have to help them. As it is, what does life hold for them? They have had more than their fair share of bad luck. They need a chance to reform. The Kadavu Provincial Council in Fiji has endorsed a suggestion that non-formal centers be set up in the province to train idle youths using resources available in the villages. Such constructive steps should be adopted all over the Pacific.

When a mother sees her child happily playing in the shade of a frangipani tree, she probably envies the child. She knows that the child has a happy, contented life without a care in the world. What she fails to realize is that her child will probably face more problems during youth than she ever did.

On the whole we can see that the youths in our part of the world have just as many problems (if not more) as other youths in other parts of the world. Over the decades many problems have persisted, only to become more complex. In addition, new problems that were never heard of a few years back have evolved. All these problems are of concern in the Pacific and we cannot afford to let them go unnoticed. This is the best time to sit up and think deeply about the problems of our youths and possible solutions. For after all, 1985 is the International Year of the Youth.

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IV-B.6
Pacific Islands Development Program
THE EFFECTS OF URBAN DRIFT ON PACIFIC YOUTH

by Gilbert Veisamasama

Young people make up a large portion of the total number of people in the Pacific today. Pacific societies do not understand the role that the youth play in the society and are often prejudiced against the members of this group. As a consequence of these misunderstandings Pacific youth face a lot of problems. In this short paper I am going to pick out some of the major problems common to all youth in the region and will put forward some general measures that could be taken to alleviate some of the problems.

Urban drift is common throughout the Pacific. People continue to migrate from the rural to the urban areas. There are various "pull factors" which enhance these migrations. The most important of these factors is education (Waga, 1977, p. 26). People move to seek further educational opportunities. This is because better educational facilities, schools, and teachers are available in urban areas. People shift to the towns, too, to look for employment. Many of these people, with the demand to pay for their children's school fees, move to seek paid employment. In other words, they move from a traditional economy of reciprocity and subsistence to a monetary economy.

In the rural areas, people share the goods that they have brought or gathered. No one is left without anything to eat, for all he has to do is ask for something to eat from his relatives. However, in the urban areas, people encourage individualism. It would be awkward in the face of others if you needed something and went to them to borrow it. Everything in the towns speaks money. If you do not have the money then you will not get what you want.

The urban areas also have more social entertainment and "bright lights." Rural youth, finding nothing worthwhile to keep them occupied in the village, move to the urban areas in search of fun and entertainment. They become slaves to drinking and smoking, which were often forbidden in their traditional societies. However, when they get drunk, they are tuned up for trouble. This is when they boast about themselves saying: "Who can fight me here? Anyone? 0' cowards, a couple of cowards you are! Can anyone fight me? Come here right now." They eventually end up being charged as "drunk and disorderly" and find themselves in gaol for a number of months.

Another problem common throughout the region is caused by the generation gap and misunderstandings between youth and their elders. Parents say that their children—because of their higher level of education—think themselves to be "too smart." On the other hand, their children say that they want to be independent from their parents' continuous nagging, they want to explore their surroundings so that they will be able to learn from them.

I personally experienced this during the midsemester vacation. I had gone home for the break and one afternoon I got up from my study table and decided
to go for a "stretch" outside. While passing a neighbor's house, they called me to join them in the games that they were playing. After being reluctant for a moment, I joined them. That evening I returned home and was immediately asked by my mother where I had been, and I told her. "Who told you to go there?" she asked. "No one," I replied. "I was just passing their house when they called me to join them in a game. So I joined in."

"When you were staying at home before, you never went when someone called you to play or chat with them," she said. "You know very well the majority of those people do not bother to go to school and the owner of that house does not appear to be a good man to me. He is still dating girls although he is married. Why did you go there? Do you want to be one of them? Or you just want to show them that you are a smart university student? Don't let me see you talking or playing with those people again. Understand?"

I nodded. I wanted to explain that I would not become one of them, that I just wanted to see what they were like. But my mother would not hear my explanations. All she wanted of me was not to join them again.

Most youths in the Pacific pick up new habits and modes of behavior in the urban areas. These new ideas often do not appeal to parents and lead to even more misunderstandings between youth and their elders. Parents usually say, "Where did you pick that up from? Have you been taught at home to do that? Why did you do it then?"

As a result, young people often turn to people other than their parents for advice. Often the adviser does nothing but cause more confusion in the youth's mind. The youth searches for more advice or explanations for things, which often leads him to places that his parents would never dream that their child would go to. This is the beginning of the youth's isolation from home and his entry into peer groups.

Peer groups are often the influencing factor in the city. Teenagers often join gangs that work for the eventual destruction of society. In most criminal cases, when a member of the group who took part in the criminal action is asked why he did it, the common answer is, "I was just following them. They told me to go with them. I didn't know that they would break the law."

Girls often join gangs as well and sell themselves sexually to crewmen of visiting ships or to naval seamen. When caught and asked by the police, they reply: "Look, you should be considerate. I have a young child to support. I am not employed so I have to look for ways to earn a living to be able to support my child. This is the only way I can make money. Don't you understand?" An easy way of getting money it may be, but it brings venereal disease, which often spreads among the youth in the area and can eventually lead to brain damage.

Pacific youth do have their personal problems. I asked some youths around town what their short-term problems were. They all answered that when they go off to sleep on street corners at night, they often worry about where they will get food the next day. Others said that they worry about the clothes they need. Most of them were wearing ragged clothes. As for me, I often ask myself, "After university, will I ever be employed? Will there still be any
This is not my problem only, but one that is common to all Pacific youth.

Youth, if they have the right motivation, can contribute a lot to national development. The government should now think of involving youth in activities in the rural areas. Young people in a village could set up their own project with financial aid from the government. For example, the village youth in Wakwak, Papua New Guinea, started a piggery project with the financial aid from the Southern Highlands provincial government. It was reported that once the project started the young people hardly left their village to go to the towns because they were so busy working (Maladina, 1961, p. 28).

The regional governments should also concentrate on setting up vocational and technical institutions and should encourage parents to see the value of these institutions to the future of their children.

Subjects like tropical agriculture and animal husbandry should be introduced as compulsory subjects at secondary school level. Students need to get the idea that there is nowhere else to turn to except the land and the sea, as city jobs are continually being filled up.

Every society must set aside some time for recreational and social activities for the youth, such as sporting activities and "social nights." Recreation is an integral part of youth growth and social development.

The government should also provide more facilities and build bigger schools in rural areas so that young people will discontinue their movement to towns to seek further educational opportunities.

There are many other measures that could be taken to alleviate the problems faced by Pacific youth today, but the ones mentioned are some of the major ones that could be taken if we are really anxious to find solutions to the problems faced by the youth in the region.
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It is wrong to speak of problems faced by youths in the Pacific and the world today as "youth problems" or as a "youth crisis" for they are in actual fact problems of society. They arise from the change and development taking place in our society and the failure of society to combat problems brought about by such developments as urbanization, the population explosion, and westernization, to name but a few. Youths become victims of such problems rather than the cause. They suffer the consequences, which most of the time are beyond their control, as such problems are either the result of mistakes of the past or the natural consequence of development and cannot be avoided.

Youths today are beginning to look at the products of the school systems. They are beginning to question, "Why has not the knowledge and wisdom of our forefathers been included in the curriculum, and why has the modern knowledge from industrial nations been imported?" Also, because the youths are educated in a second language, the teachers tend to adopt methods of rote learning. Critics of rote learning say that "the success or failure of children should not depend on their performance in examinations that they sit in a foreign language when they have little understanding of what is involved. They are being accepted or rejected for employment or for further education on the results of rote learning of what are to them nonsense facts and figures, unrelated to their life, their background, and usually their future" (Waqa, 1977, p. 15).

In creating the examination system the schools have also created failure. The lucky school graduates will go for further education or get white-collar jobs. In the Pacific there is mass unemployment in government, business, industry, and other areas which provide jobs. The school dropouts will be out of the system and will probably venture to the village, stay home, or roam the streets and become a menace to society. Regardless of this, education is still in great demand. A job once filled by a secondary school leaver is now filled by a person with a university education. So more and more university graduates are being sought to compete for the small number of jobs.

How do youths react to such a system that continues to educate them for white-collar jobs? There is a great fear of failing the system. Camari Waqaivalu, a foundation student at the University of the South Pacific, gives her views as such: "I always have this fear in me. A lot of times I ask myself if I can make it this year. But what is ahead? What is the sense of striving for a degree where many holders are aimlessly walking around? Sometimes I have this assured feeling that I'll make it, but the fear comes around when I can't seem to visualize what will be in store for me. Nevertheless, the question remains unanswered: Will I pass or not?"

Camari was not the only student I met who was afraid of failing the foundation year. The students fear falling out of the system. They all want
employment and many are willing to give up their place at U.S.P. to take a job that is available for them. Their feeling is, "Its now or never."

These university students are the lucky ones that have been given further education. Employment is their main objective and many are merely passing time at the university, eagerly searching the papers daily for vacancies. Their everyday questions are: "Will I get a job? Where will I get a job? What will become of me? Is there any future for me?" They conclude that their future is grim. They are like a ship sailing aimlessly out in the harbor not knowing its destination.

The dropouts of the system are the backbone of crime. They are the ones who steal, rob, and victimize the public for a living. These youths have taken to the streets because their homes cannot take them, because there is little care for them, because their peers have done so, or because they merely do not have employment. They are the unwanted ones of society. They are also criticized, condemned, and victimized in newspapers, books, magazines, radios, and other forms of the mass media. What has the public done to help these youths? If an operation or operations are underway, how successful are they?

One reason mentioned above for the street-stalking is home conditions. More and more parents are leaving their homes, thus youths are left to roam. Statistics show that more divorces are taking place than marriages, thus more and more broken families are being created. Will all these poor souls get security and love? Some youths are taken to relatives and others are taken to orphanages. How will an unwanted youth combat his outside problems? How will he live his life? Will he abuse it? Pray for hope? Only time can answer these questions.

A 20-year-old Tongan who joined his friends roaming the streets of Suva says: "My folks just don't give a damn about me. I flunked Fiji Junior. I left because home wasn't home anymore so I got out to do things I wished to do. In the market area we choke for money to buy chow and booze. At times we choke from shops and houses. Its fun, but a bum is a bum. You know, I can't go on. There is no future. I'm finished! I have now become a sucker for this gag. I only look forward to my beer to drown my sorrows in."

Religion is another problem that youths face. Some youths, such as Moslems and Hindus, may want to marry outside their religion but cannot. Many find it hard to follow the strict rules of their religion. Some religions forbid alcohol and smoking, but youths love to drink and smoke and therefore break the rules. Christianity, for one, forbids sex outside marriage, but many youths find this prohibition hard to obey in such permissive societies. Some forbid the "bright lights," but such places happen to be the favorite hangout for many youths today. Also, the desire for materialistic things is forbidden in some religions, such as Christianity.

Racial conflict is faced by youths in such countries as Fiji. This conflict is prevalent in schools, universities, offices, religion, homes, and in politics. In areas where the indigenous people are almost outnumbered or outnumbered by another race, the areas become "hot spots." In New Caledonia, where the granting of independence is the political conflict, racial conflict also plays its part.
Facing members of the opposite sex is a handicap to many youths, which most overcome at a later age. Many youths find it difficult to make conversation with members of the opposite sex. Many cannot understand or, to some extent, appreciate the opposite sex. John, a 21-year-old Papuan foundation student at the University of the South Pacific, says: "I don't understand why girls like to wear such horrible makeup. They like to wear such mini clothes to show their skinny legs. The big bangles they wear make too much noise."

Western education causes generation gaps between youth and parents, youth and grandparents, and youth and kinsmen. Parents fail to realize that the acquisition of education also becomes the acquisition of a radical mind; western styles of dressing, eating, and speech; and belief in freedom of speech and expression.

Will the Pacific islands youths really occupy positions of leadership in tomorrow's world? As a radio broadcaster in Fiji said: "There is no use questioning the problems of youth. But we can go somewhere. What will the future leaders become? Can youth live with dignity and enjoy a high quality of life without paid employment in white-collar jobs? I have no answers but awkward questions. Finally, are more awkward questions. The future will bring more and more unemployment" (Udagawa, 1979).
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Pacific Islands Development Program
The Role of the Private Sector in Pacific Islands Development
W. DENNIS ROSE is senior research economist with the New Zealand Planning Council, Wellington.

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Pacific Islands Development Program
| Table 1. Institutional modes | V-A.5 |
Most commercial production in Pacific island economies is in private hands, ranging from mixed subsistence-cash producers in agriculture and fishing to manufacturing, trading, and financial companies. The success or failure of development policy depends largely on the success or failure of private risk-accepting procedures. A key test of economic management is thus whether it contributes to the efficient development of private commercial activity.

Pacific island economies differ in many ways from developed industrial economies. Most Pacific island economies are predominantly rural, with a large number of self-employed entrepreneurs rather than wage earners. Private companies are active in small-scale trading and manufacturing operations. The number of large commercial ventures is generally small. Such ventures are frequently foreign owned; others are publicly owned or operate as joint ventures.

Development policies need to recognize these distinctive commercial forms. The issues faced in encouraging the growth of small-scale agricultural production are in some respects quite different from those that arise in bargaining the terms of joint undertakings with foreign companies. Both areas, however, need to be understood in any package designed to encourage maximum levels of private contribution to national economic development goals.

**Major Elements of Policy**

Government policies in relation to commercial development fall into three main areas—the overall management of the economy, the provision of infrastructure, and the direct encouragement of development. The more important economic management issues are the exchange rate policy, the role of regulation, and the scale of government activity.

Exchange rate regimes are important to development policy because they influence the pattern of price relativities between overseas and locally produced goods. They help determine the potential profitability of every undertaking in the country. The complex economic and political issues of exchange rate management in economies as small as those of most Pacific island countries deserve more attention than they have been given to date in regional discussions of development policies.

Private commercial development takes place within regulatory limits designed to protect safety, health, and environmental standards. The need for such regulation is obvious and is accepted. At the same time it is important for governments to recognize that regulations do impose costs on producers.
Therefore, governments should avoid unnecessary regulations; make regulatory requirements clear, simple, and public; and, in cases where administrative approval is required, ensure rapid processing of applications.

The scale of government activity is an important influence upon the commercial climate. Governments compete for resources with other sectors. An increase in government activity generally implies a corresponding reduction in resources available to the private sector. Consequent pressure on the availability of skilled labor and finance to commercial enterprises may inhibit development. This possibility needs to be kept in mind as governments decide on their own spending priorities.

The efficiency and cost of government-provided infrastructure and services help determine the ability of local producers to compete with those in other countries. It is generally sensible to charge the full cost for such services where this is feasible, for example, in telecommunications, wharfage, and power. The high cost of these services sometimes leads to suggestions that they should be supplied at concessional rates, but in the long run a secure and predictable level of service is more likely to provide a stimulus to business development. Where assessment is not generally feasible, as in the case of roads and education, it is important to ensure that the scale of the program adopted is in line with the ongoing ability of the country to support it.

Most Pacific island governments have policies directed specifically at stimulating private commercial development. The more important include development planning, tax and duty concessions, tariffs and quotas, and development banking. By their nature development plans have focused on areas in which governments have primary responsibility. This was appropriate in the early years of independence, but given the now extensive development planning within the region, it would be useful to examine at a regional level the ways in which the planning process might be extended to deal more comprehensively with private sector development.

The role of industrial incentives in the region was extensively reviewed in a 1983 study by the United Nations International Development Organization (UNIDO), undertaken for the South Pacific Bureau for Economic Cooperation (SPEC). This study concluded that, although tax concessions had helped many local companies through their sometimes difficult early years, they were generally seen as an ineffective means of attracting foreign private investments. It recommended regional consideration of policies directed at encouraging and supporting entrepreneurial activity by indigenous persons and groups. Further, to inhibit an unnecessary bidding up of incentives, the study recommended consideration of (1) regional policies for resource-based industries such as minerals, tropical agriculture, fishing and tourism, and (2) a nonmandatory code of common practice covering the granting of incentives to foreign and larger scale foreign enterprises in manufacturing and other activities. These issues deserve further discussion and consideration.

The relatively open trade policies favored by Pacific island countries and their avoidance of extensive protection for local producers are generally appropriate. Small countries, however, do face particularly difficult problems in protecting local producers against predatory commercial practices—an issue deserving further consideration.
Development links provide an important stimulus to entrepreneurial activity within Pacific island economies. Their work has been helped by informal links between banking personnel in the larger region and with agencies such as the Asian Development Bank. Their role as a catalyst of development is fundamental, and their close commercial links with the private sector place them in a unique position to assist government in the development of commercial policy.

Conclusion

Economic development is a complex process. The main thrust in development is provided by the combined efforts of a multitude of independent but interdependent decision makers in all sectors. Government's role is essentially as scene setter; through its overall responsibility for economic management, it exerts a powerful influence on the commercial environment. It also provides much of the infrastructure and in most cases actively promotes entrepreneurial and commercial activity.

This paper covers a broad field and identifies some important issues in setting the environment for development. Five issues in particular deserve special attention: (1) the exchange rate regimes (page V-A.12), (2) the scale of government activity (page V-A.13), (3) the role of development planning (page V-A.14), (4) the role of tax and duty incentives (page V-A.15), and (5) the role of development banks (page V-A.17).

INTRODUCTION

Any discussion of the role of the private sector in development is inevitably colored by ideological judgments. Many will argue, with obvious merit, that practically all the goods and services that characterize the modern, high-income industrial economies are the product of private enterprise. They will go on to argue that the surest path to development in the less developed economies is to give private enterprise sufficient opportunity. Others will note that, in the days before independence and development planning, private enterprise had practically unfettered sway and, in the society of trading houses, plantations, and mines, produced economic and social forms that were rejected by the newly independent island economies.

This paper does not attempt an overall judgment on these difficult issues. Its purpose is more limited. Nearly all Pacific island economies are a mixture of traditional agriculture and cash cropping; private and public entrepreneurial activity in plantation production, manufacturing, trading, services, and transportation; and a range of activity by foreign companies. Accepting this diversity, what are the factors that need to be taken into account by Pacific island governments in defining an appropriate role for the private sector in development? If we can identify these factors, we will be in a better position to refine our individual ideological perceptions; more practically, we will be better able to promote development policies appropriate to current circumstances.

Briefly, the scope of this paper is as follows. The first part deals with what are in effect boundary issues. What are the factors that determine whether a particular activity is carried out by traditional modes, by small- or large-scale private activity, or by state or foreign companies? This is not an area for hard-and-fast rules, but it will be useful to establish the
characteristic strengths and weaknesses of each mode. The second part focuses
more sharply on the economic environment within which the private sector
operates. How is that environment shaped by laws and regulations, by the tax
system, and by the scale of government activity? Finally, the paper examines
the extent to which governments are able to influence the path of private
development by regulation and administrative practice. On this basis, how do
we determine an appropriate overall balance in the pattern of government
interventions affecting the private sector?

In discussing economic matters, particularly those relating to private
sector development, it is easy to fall into the trap of assuming that all
development objectives can be encapsulated in a single measure such as the
level of incomes, of profits, or of gross domestic product (GDP) per head.
This is not so. As I noted in a 1983 UNIDO report, "Study of Harmonisation of
Industrial Incentives in the South Pacific Region" (available from SPEC):
"There is a clear ambivalence within the region about the course of modern high
income industrialised societies. Although it is clear that Pacific island
peoples aspire to many of the products of the industrialised societies, it is
also clear that many aspects of those societies are rejected. In discussing
development objectives there is much emphasis on the need to build a Pacific
way and to ensure that the established bases of Pacific society are not
destroyed." The extent to which any country can in fact pick and choose from
within the development package available is heavily conditioned by circumstance
and is debatable. Clearly Pacific island peoples and governments face a
difficult task in determining and balancing economic and other development
objectives. This question lies beyond the scope of this paper but needs to be
borne in mind.

PART ONE: INSTITUTIONAL MODES

The private sector is variously defined. A working definition for our
purposes can be drawn from Table 1. In most discussions of private sector
development, primary emphasis is placed on market-related activity and thus
excludes domestic and subsistence production. I will generally follow this
convention. The focus of this discussion does, however, need to be expanded to
take account of mixed subsistence-cash crop agriculture.

Mixed Subsistence-Cash Production

In most of the countries of the Pacific region, mixed subsistence-cash
production is the predominant form of economic activity. Most of the
population lives in rural areas, and the economically active members of the
rural population are typically engaged in a mixture of subsistence and cash
crop production. Although there is considerable variation in practice,
subsistence-cash production is usually undertaken on an individual or family
basis through exercise of use rights on collectively owned land.

In terms of the classic economic factors of production, the strengths of
this mode lie in the combination of labor input under the individual's own
control along with the use of communally owned land under well-defined custom
rights, which effectively guarantee the use right and protect the user's
property rights in investments such as trees. An important part of production
is for own use, but cash production also provides the basis for exchange both
for domestic purchases and for needed inputs to agricultural production.

V-A.4
Pacific Islands Development Program
Table 1. Institutional modes

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<td>Small-scale production (individual, family, or partnership)</td>
<td>Public enterprises</td>
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<td>Cooperatives</td>
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The mode also has its limitations, and major questions arise concerning the extent to which its characteristic scale and technology impose limits on its income-generating potential. Policymakers question the means by which subsistence-cash production might be helped to grow and become more flexible. Inevitably a much more troubling question also arises. This is whether the potential of the mode, although assisted by successful development policies, is in fact so limited that primary emphasis needs to be placed on other modes of production. In turn this raises major issues about the use of both land and labor. If the potential of small-scale cash subsistence production cannot be expanded to match the aspirations of Pacific island people, this would seem to foreshadow both the shifting of a major part of the work force from self-employment to wage employment (possibly including cooperative forms) and lead to significant changes in patterns of land ownership and use.

In the neighboring high-income economies of Australia, New Zealand, and Hawaii, custom owners were in large part dispossessed more than a century ago, thus providing the basis for a larger scale and more specialized capital-intensive agricultural production. Over time, the majority of the immigrant populations came to settle in cities and towns. Similar processes have been evident in the evolution of all modern high-income economies. The critical challenge for the independent Pacific island economies is first to see whether they can meet development aspirations within evolving patterns of
custom ownership, and if not, whether they can manage the transition to new patterns of agricultural land ownership in ways that are less destructive of social forms than were the agricultural revolutions of today's high-income industrial powers.

**Small-Scale Market Production**

The boundary between small-scale market production and subsistence-cash production is inevitably blurred but the central features are quite distinct. In this category production is almost exclusively for sale and is in the hands of individual or joint proprietors with access to sufficient capital to cover investments in fixed assets, land, buildings, plant and equipment (which may alternatively be leased), and to provide working capital sufficient to cover work in progress, stocks of materials, and payment of wages. Small-scale market production is common in agriculture (usually under individual freehold or leasehold), rudimentary manufacture, trade, transportation, business, and professional and personal services.

Small-scale self-employment in such areas is an important element in any modern economy. It provides a major part of the range of goods and services produced; it is adaptable; it is an important source of innovation and in a number of instances it provides the starting point from which much larger enterprises grow. The distinguishing feature of self-employment is that the proprietor supplies both labor and equity capital and bears the major risk in the undertaking. In addition, proprietors need to offer sufficient security to enable them to borrow money from financial institutions. Not everyone is in this position and, in any community, it is usually a minority who opt for self-employment. In the Pacific islands a large number of the self-employed come from within migrant, expatriate, and afikase (part-European) communities. The reasons for this are diverse but include a greater awareness of opportunities based on knowledge of more developed economies; higher levels of both financial capital and the acquired skills of persons such as lawyers, accountants, motor mechanics, and engineers; and, for some, difficulty in securing sufficiently remunerative paid employment.

The Pacific island countries generally would like to see more locally born persons enter their own business. Some countries within the region have developed special programs to assist in the development of indigenous entrepreneurial talent. This transition can be difficult. An individual's readiness to move into self-employment is very much conditioned by his or her view of socially acceptable roles, as well as by traditional factors of access to capital, training, and appropriate skills.

**Cooperatives**

The cooperative provides an alternative to the private company in organizing a larger scale market activity within the private sector. The essential differences between a cooperative and a private company are that (1) the members of the cooperative are all in some way directly involved in the activity of the enterprise (e.g., as workers within a producer's cooperative, as suppliers to a processing or trading cooperative, as purchasers from a trade cooperative, or as savers and borrowers within a credit union), and (2) ownership rights are more evenly spread, with members, frequently enjoying equal voting rights.

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The advantages of a cooperative are that it enables the pooling of capital resources from among its members and that it can expect a continuing loyalty from them in its day-to-day activities. The pooling of resources means that the cooperative can undertake investments far beyond the scale that can be contemplated by individual operators, and once firmly established it can expect to complement those funds by borrowing. Membership loyalty stems from the fact that membership implies more than simply joint ownership. The cooperative is also important either as a place of work (in which case the member supplies both labor and capital to the undertaking) or as a guaranteed purchaser or supplier.

The mode also has its limitations. The relationship between members and cooperatives produces its own tensions, and these may be so severe as to lead to the decline of the undertaking. In some cases where the government has taken a major role in setting up the cooperative, it may be a cooperative in little more than name only. Management problems can arise. The natural scale of cooperatives is also limited by the factors that first brought its members together, although examples show these limitations can be transcended.

Finally, it is worth emphasizing the possible potential of cooperatives as a basis for developing the traditional mix of custom land ownership and individual land use into a system supporting a larger scale market-oriented production. The cooperative could provide the means by which finance capital is mobilized and collective investments undertaken in areas such as roads, irrigation, drainage, buildings, and equipment.

Local Companies

In developed industrial economies the incorporated company is the characteristic commercial and industrial institution. The major economic actors are corporations, most predominantly owned by nationals, the shares of which are publicly traded and which rely either on reinvestment of profits or on further public issues for additional equity capital. Alongside these are a host of smaller private companies whose shares are not publicly traded. The original shares will typically have been held by a small group of businesspeople who launched the enterprise; and the shares may be privately traded thereafter.

The Pacific island situation is significantly different. Historically the largest private companies have been foreign-registered companies for which branch operations in any one island territory formed only a part of their business. Their shares were not traded in the island countries. Local corporate activity was limited to the operations of smaller scale private companies and to the establishment of some local subsidiaries of foreign companies. This general pattern persists today, although the rapid development of local financial institutions and development banks is bringing some change.

This difference in corporate structures is important because the company has proved to be the most appropriate form for development and management of larger scale productive enterprise. Its key characteristics are: (1) the drawing together of capital from a wide range of persons, (2) the limiting of the individual investor’s liability to his direct stake, (3) the achieving of a degree of separation between ownership and management of the enterprise (an essential feature in any enterprise with a large number of owners), and (4) the
creation of a financially distinct and autonomous unit that must stand or fall on its own performance.

The small scale of the Pacific island economies clearly shapes the direction of corporate development. In the smallest countries there is hardly scope for the activity of more than a few small companies. At the other extreme there is no reason why countries such as Papua New Guinea and Fiji should not in time develop corporate structures and capital markets analogous to, for example, those of Australia and New Zealand.

Foreign Companies

As already noted, foreign-based companies are important actors in Pacific island economies. The two typical forms are branch and subsidiary operations. A branch is legally a part of the overseas company and provides an appropriate form for trading and distribution companies that need a permanent local presence (e.g., an oil depot in a small island state) but whose local scale of operations is small both absolutely and relative to the company as a whole. A subsidiary is a more appropriate form for larger scale activity, particularly where the complexity of the operation requires local managers to be given a considerable level of autonomy, as, for example, in a manufacturing operation.

A subsidiary company possesses the four major characteristics of a company identified above with the significant exception that ownership is concentrated in the hands of the parent company. This itself reflects another important difference. Typically, the capital required for the local venture can be drawn from within the foreign parent company's own resources or from well-established avenues of credit. For the commercial community in a small island economy, the drawing together of a similar amount of capital can be a major undertaking.

The economic advantages of the foreign subsidiary lie in the fact that it is a semiautonomous part of a larger whole. When first set up, the subsidiary's resources of capital, know-how, and management are drawn in large part from the parent company and this relationship continues.

The role of foreign companies in development is a contentious issue. Their economic strengths are obvious enough and from the viewpoint of the developing country there is the additional advantage that the foreign company accepts the risk on its equity investment. If the venture fails or proves problematic, the cost falls on the investor rather than on the host economy. The foreign company's objectives cannot, however, be assumed to be the same as those of the host country. Although their objectives are likely to be similar (for example, both are likely to want to see the subsidiary producing efficiently and operating profitably), experience shows that differences do arise. There is, of course, always room for argument about what a reasonable rate of profit is, but more fundamental is the fear that the international company will use its knowledge and weight to transform the local environment to its advantage. A hard bargaining company, for example, may persuade an island government to make unnecessary concessions as a precondition of setting up a local operation. These are difficult issues not easily resolved in principle or in practice, and we will return to them later.
Public Enterprises

All countries make significant use of publicly owned enterprises. Public corporations are usually responsible for a range of basic utility services such as mail, telegraph, and power. In some countries they are active in an important range of industrial activities, while in the centrally planned economies they are the dominant corporate form.

The economic advantages of the public corporation stem from the fact that the state provides its capital and that it frequently enjoys some elements of monopoly power. A frequent motive for establishing a public enterprise is that its activity is undertaken in an area of natural or de facto monopoly as, for example, in electric power supply or sugar milling. In such cases there are clear advantages in having the monopoly in public hands. The state can then exercise the option of ensuring either that the enterprise does not exploit its monopoly position or, if it does, that at least profits of the monopoly accrue to public revenues.

The form also has its limitations. The disciplines imposed upon democratically responsible politicians and their advisors (and even more so upon autocratic rulers) are rather different from those imposed on corporate managers by their parent companies or their shareholders. Governments may be tempted to pour more money into enterprises in which their private sector counterparts would be more interested in cutting their losses. Equally, governments may be tempted to respond to the financial difficulties of public enterprises by extending or protecting their monopoly position rather than by insisting on improvements in productive efficiency and management.

Basically these dangers stem from the taxation and regulatory powers of government. Whereas the nongovernmental enterprise must take its commercial, fiscal, and legal environment more or less as read and strive to operate efficiently and profitably within these parameters, the state as entrepreneur is always tempted to use its wider powers to modify its own commercial environment. In defining operating rules for public enterprises, it is important to protect against this danger, which arguably is greater in smaller economies.

Joint Ventures

In principle joint ventures can be mounted between any number of parties, but the term is most commonly used to refer to joint commercial undertakings between a foreign company and a local government. The two, for example, might be partners in telecommunications or in a forestry operation or fish processing plant. Joint ventures are frequently equal partnerships and thus contrast with most fully private commercial undertakings in which final control usually lies with one party. The economic logic of the joint venture is usually that the foreign partner is responsible for supplying the productive technology and possibly overseas marketing for the enterprise, while the local government provides part of the capital and the right of access to the use of the local resource. Within broad limits neither can operate without the other so that the question of final control becomes academic. Rather, the issue becomes one of defining a viable working relationship between two interdependent parties.

Joint ventures can, as regional experience—particularly in the Solomons—has shown, provide an appropriate means of developing local resources.
through the use of overseas technology and management skills. The major limitations of the form are similar to those of public enterprises and stem from the possibility that the state may use its regulatory powers unwisely to protect the commercial interests of the joint venture.

PART TWO: THE COMMERCIAL ENVIRONMENT

This part of the paper focuses on the factors that shape the environment within which enterprises operate and identifies major ways in which these factors may be influenced by governments. Because the majority of the factors that determine the environment for the private sector also bear on public enterprises, most of the discussion applies to commercial activity in both private and public sectors.

The defining characteristic of entrepreneurial activity is the production of goods or services and their sale at prices that enable the producer to cover costs, to pay wages at the locally going rate, and to earn a satisfactory return on capital. The simplicity of the final purchase off the shop shelf or floor makes it easy to forget the steps in which a sequence of entrepreneurs have foreseen needs; envisaged ways of meeting them; organized the necessary materials, labor, and capital; arranged financing; and finally delivered their products. The ongoing stream of commercial, market-related activity depends upon an array of individuals and companies with knowledge, experience, and skills. It is also shaped by the cost structure prevailing in the local market place. What is commercially feasible depends on the prices at which necessary inputs can be secured and the prices at which output can be sold. The major categories that need to be considered are output prices, prices paid for material and service inputs, wage structure, and cost of capital.

Output Prices

Output prices are generally determined by factors beyond the producer's control. World market prices normally prevail for exporters, but producers for the local market may be shielded by tariffs or quotas and thus be able to charge prices out of line with those prevailing on world markets. Output prices are also influenced by the exchange rate.

Input Prices

Input prices are influenced by a variety of factors, the relative importance of which differs between different classes of inputs. The local cost of imported inputs is determined by the combined effect of world market prices, transportation and related costs, the exchange rate, and tariffs. The cost of locally produced goods and services (excluding primary commodities) is determined by local costs of production. If the local costs are below the cost of comparable imported products, the price of local products may rise toward this level unless local competitive pressures are sufficient to keep profit margins down. Payments to local producers of primary commodities are frequently determined as a residual after deduction of local processing and transportation costs from expected or actual realizations on international commodity markets. Power to determine payments to producers in this way usually depends on the exercise of de facto or statutory monopoly powers by the primary produce processor. Where more than one processor exists, competitive pressures may hold processing margins down and secure a higher payment to

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producers. Prices for goods and services provided by the state (e.g., electric power and wharfage) are determined by the cost of production as modified by government decisions either to subsidize the input as an incentive to business or to use its monopoly power to generate surplus revenue.

Wage Structure

Wage rates are determined by the going local rate for particular classes of skills. Rates for unskilled labor are influenced by alternative earning opportunities, as in cash-subistence production. Skilled rates vary widely and depend on local supply. For some skills in short supply expatriate rates will apply. A noteworthy feature of many island enterprises is the high relative cost of senior staff. The cost of salaried staff tends to be much higher as a proportion of total costs than, for example, in Australia. Wages are correspondingly lower as a proportion of total costs.

Viewed from the perspective of the individual firm, the going rate for labor is determined by the market. At a national level differences in demand or supply of particular skills are the prime determinants, with supply itself being affected by the educational costs of acquiring various skills. The overall rate for all classes of labor combined is ultimately determined by the real productive structure of the economy and the conditions under which it trades with the rest of the world. Although individual employers are usually interested in securing labor at lower rather than higher rates, economic success at the national level is normally measured by higher rather than lower wage rates. To the extent that measures such as GDP per capita approach national aspirations, so too will measures of wages per member of the work force, provided these are not secured under conditions that prejudice future growth (as may happen if too high a level of wages reduces the level of reinvestable profits).

Cost of Capital

Two distinct categories of capital need to be considered: the cost of owner's equity, and borrowed capital. The cost of owner's equity is in essence defined by its opportunity cost: What would it be worth to the owner if he or she chose to use it in some other way (i.e., to consume or invest it in some other undertaking or in financial securities)? The opportunity cost depends on the range of opportunities open to the entrepreneur, and these depend much on circumstance. The rural farmer contemplating the opening of a small trade store may have few options open to him. The multinational enterprise assessing the case for a local manufacturing operation will consider the returns that it could expect to earn from alternative investments in other countries.

Similar differences arise in borrowed capital. For smaller companies costs are determined by the terms and conditions prevailing in local capital markets, which are frequently rudimentary. Larger undertakings, because they offer better security, are usually in a better position to deal with financial institutions. Subsidiary companies, may be able to borrow from or through their parent companies whereas public corporations and large-scale cooperatives may be able to borrow from the government. The cost of borrowing depends upon terms and conditions, but the more general point is that, if these terms are likely to be lower, the range of opportunities open to the borrower is larger.
PART THREE: GOVERNMENT'S ABILITY TO INFLUENCE THE COMMERCIAL ENVIRONMENT

Accepting that most commercial production is undertaken by private producers, what is the role of government? To what extent can it steer the course of economic development, and how responsive are private decision makers and investors to government policies? These issues defy simple answers but the main elements can be sketched.

In reviewing the role of government it is useful to carry one background issue in mind; that is, there is probably an asymmetry in the impact of good and bad policies on development. Although effective government policies are an essential part of successful development, the stimulus that they give is frequently fairly limited. On the other hand, the harm that can be caused by bad policies may be severe. This is not an argument against government action; rather, it is an argument for caution. To a degree, the dice are loaded.

Government policies in relation to commercial development fall into three main areas: overall economic management, provision of infrastructure, and direct encouragement of development.

Overall Economic Management

Effective management of the economy at large is probably the most fundamental requirement for economic development. Here, in particular, the harm of bad policies can be all pervasive. But experience shows that this is an area in which there are few easy solutions. The field is also extensive and I have room for only a few points. Probably the most important relate to the setting of an appropriate exchange rate, the role of regulation, and the scale of government activity.

Exchange rate regimes. The exchange rate affects the whole pattern of price relativities between overseas and locally produced goods. Its relevance to business development can be illustrated by thinking through the implications of an overvalued currency. The high level of many Pacific countries' trade deficits in relation to GDP suggest that their currencies are overvalued. This overvaluation of local currencies makes imports relatively cheap, thus encouraging imports and discouraging local production of substitute goods. Overvaluation also holds down the returns that local producers can earn through exports and thus discourages exports. Therefore, an overvalued exchange rate discourages production for both local use and for export and so inhibits commercial development. Its countervailing attraction is the cheaper prices of imports in local currency. If the country can continue to cover its trade imbalance either by borrowing or by foreign aid, the resultant lowering in local costs and prices may seem attractive. In the development context, however, overvaluation is generally counterproductive.

Determination of an appropriate exchange rate is a difficult issue for any country. The major capitalist economies have in the past two decades moved from a system of government-determined fixed exchange rates to one where the rate is determined in the foreign exchange market. This system of floating rates has not proved trouble free even for the larger countries, and it would be fairly generally agreed that the risk of speculative movements makes freely floating exchange rates unattractive for small economies. The issue of exchange rate management in the Pacific island countries is of considerable
importance and deserves rather more attention than it has been given to date in the discussion of development policies.

**Regulatory requirements.** Regulatory requirements are always contentious. Government requirements, relating to, for example, public health standards, worker safety, local equity, and effluent disposal are part of all modern economies. There can be no objection in principle to the proposition that there are areas of commercial activity where a government, as the representative of the people, must impose certain standards. It is also important to acknowledge that any regulation that causes an enterprise to do something that it would not otherwise have done imposes some costs on the productive structure. It is thus important not to impose unnecessary regulations.

Determining the necessary minimum set of regulations is one of the more difficult tasks faced by governments. Recognizing, however, that any effective regulation will impose some direct costs and may well inhibit economic change (as, for example, some business licensing arrangements), it is important for governments (1) to avoid unnecessary regulations and regulations in areas where benefits are likely to be trivial, (2) to take care not to set regulatory standards at unrealistically high levels, and (3) to make regulatory requirements clear, simple, and public and, where administrative approval is required, to ensure rapid processing of applications.

Administering regulations has some requirements similar to those subsequently discussed for services provided by public utilities. Most parties will recognize cases where there is a genuine need for regulations in terms of safety and other standards and that consequent costs have to be incurred. However, they may be discouraged from proceeding if they feel that the required standards are unrealistic or if the process of approval seems likely to be tortuous. The typical size of a Pacific island investment is small, and its total cost can be significantly increased by the need to finance staff through long periods of negotiation for approval.

**Scale of government activity.** In the larger Pacific island economies government recurrent and capital expenditure expressed as a percent of GDP ranged in 1981 from 30 percent in Fiji to 44 percent in Western Samoa. For several of the smallest economies government spending actually exceeded GDP and was made possible only by large per capita aid transfers.

The scale of government activity has an important influence on the economy at large. Government services demand resources. The state as an employer requires skilled staff; its capital works program places demands on the local industries, such as building and construction. People and resources used in this way are not available for use in commercial activity, and in seeking such resources the private producer has to be prepared to bid against the state. The larger part of government spending is usually financed from tax revenues either from indirect taxes, which affect the cost structure, or from direct taxes, which reduce the funds available to the private sector and may act as a disincentive. If government operates its accounts at a deficit and borrows to cover this, it once again reduces the resources available to the private sector. Government has a necessary and important role, but policymakers need to be aware that government's activities do use resources that could otherwise be applied elsewhere. Maintaining a balance in this area clearly has profound implications for development.
Provision of Infrastructure

Governments provide much of the basic infrastructure of the modern economy, including physical facilities such as roads, ports, water and drainage, and institutional frameworks such as the system of law and the means for its enforcement. Clearly the technical efficiency and cost of these services help determine the ability of local producers to compete with those in other countries. Poor water, erratic electricity, inefficient transportation, and arbitrary legal systems can make or break the activities of a local firm.

Island governments, like those in other developing countries, face significant problems in determining appropriate levels of investment in physical and institutional infrastructure. Lower income levels, the small scale and narrow resource base of most island economies, and the competing claims for finance for other government services mean that island governments generally cannot expect to provide the same level of services at costs similar to those in a metropolitan economy. Clearly this creates special difficulties for the government trying to determine priorities. The technical standards accepted as a norm for services such as roads, telecommunications, or water supply in metropolitan economies may not be economically sustainable in particular island locations. Potential investors may nevertheless claim that their decision hangs on the cost of such services and suggest that special concessions be made. As a general rule there is little merit in providing infrastructural services to commercial producers below cost. If, for example, the local cost of generating electricity is high because of a need to rely on imported fuels for power generation, then it is better to recognize this fact rather than encourage energy-intensive industries by offering subsidized power.

In determining the scale of investment and the level of service provided, it is generally sensible to (1) work on the assumption that such services should be assessed whenever possible (i.e., telecommunications, wharfage, and power); (2) in cases where assessment is possible, charge at full cost including the cost of capital; and (3) in cases where assessment is not possible (i.e., the building of roads and provision of social services), make investment decisions a matter of political decision within the budgetary process, taking into account both the initial investment cost of establishing a new level of service and the future budgetary cost of maintaining that level of service. (This point may sometimes be overlooked when a foreign-aid donor proposes to finance a prestigious piece of capital investment.) Probably the central point here is that efficiency and predictability of service are at least as important as cost. A government that has well thought out budgetary, investment, and pricing rules is in a better position to provide a consistent level of services scaled to the circumstances of the country. In the long run this is likely to provide a much more effective stimulus to business development than a preparedness to offer concessions.

Direct Encouragement of Development Planning

Since independence Pacific island governments have devoted considerable energy to development planning; and the periodic publication of development plans is a regular feature in most countries. By their nature development plans tend to focus on areas within which government has primary responsibility. It is obviously more meaningful for governments to set themselves targets in areas such as education, agricultural inspection, and roads where they have
direct financial responsibility, than in areas such as subsistence or
manufacturing production where decisions lie in the hands of many private
individuals and firms. To be effective and helpful, planning needs to be
realistic and related to the problems perceived by island policymakers.
Although a plan necessarily adopts a long-term focus, it must relate to
decisions that need to be made right away. Achieving the right balance can be
difficult. In addition problems may arise when a significant part of the
planning process depends on expatriates who lack substantial local knowledge
and experience.

Given the planning experience that island governments have now
accumulated, there is perhaps an opportunity for discussion at the regional
level on desirable future directions in national economic planning and, in
particular, the ways in which the planning process might be extended to deal
more comprehensively with opportunities for private sector development.

**Tax and Duty Incentives**

Pacific island countries offer a variety of incentives—including tax
holidays, investment allowances, and tariff concessions—designed to encourage
commercial development. (These are comprehensively reviewed in my earlier
quoted 1983 UNIDO study.) Experience suggests that incentives have not proved
particularly effective in their original purpose of attracting foreign
investment. This accords with international experience, which suggests that
from the viewpoint of the investor the benefits derived from incentives are not
all that great relative to other factors such as political risks and the
economic costs of operating in a remote location. For the overseas investor
the primary requirements are usually stability (both political stability and a
basic predictability in the pattern of economic management), nondiscrimination
(including consistent tax treatment and the freedom to remit profits and
capital), and often protection of the local market (discussed later).

In contrast many developing countries have placed much emphasis on the
offering of tax holidays and special concessions. Although empirical evidence
suggests that these incentives have not been effective in encouraging foreign
investment or in promoting development, their widespread use creates particular
problems for Pacific island governments. Two points deserve comment. First,
even if, as I am suggesting, the offering of tax incentives by developing
countries has had little overall impact on the level of investment by foreign
companies, it is certainly probable that differences in incentives between
countries will affect the pattern of investment between countries. In other
words, if a neighboring country is offering incentives another country may feel
forced to follow suit. Second, even in situations where the tax incentives
have had no significant influence upon the decision to invest, it will always
be worthwhile to apply for and indeed to bargain for them. Such incentives
will frequently add 1 or 2 percent to the rate of return on a project and are
well worth fighting for. In the process it is easy for local administrators to
draw the possibly false impression that the incentive is playing a major part
in determining an investor's decision.

Resolution of this problem is clearly complex, particularly in a decade in
which the People's Republic of China has entered the race to attract foreign
investors. The practical experience of South Pacific countries shows that
local companies are usually the major beneficiaries of tax and other

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incentives. Although it is impossible to say just how effective the incentives have been in this role (largely because we do not know what would have happened in their absence), it seems likely that incentives have provided a stimulus to the development of local enterprise.

In my UNIDO study, I suggested that there would be merit in having regional discussion to review the role of incentives in national and regional development policies. I suggested that it would be useful for island governments to:

- Discuss policies directed at encouraging entrepreneurial activity by indigenous persons and groups. The larger countries in the region have already developed expertise in this area and could provide a useful base for development within the region as a whole.

- Consider developing regional policies for resource-based industries such as minerals, tropical agriculture, forestry, fishing, and tourism. In these areas of comparative advantage there is a clear danger that one Pacific island country, in attempting to attract investment, might undercut the bargaining position of the others.

- Consider adopting a nonmandatory code of common practice covering the granting of incentives to foreign and larger scale local enterprises in manufacturing and other activities. The primary purpose would be to establish guidelines for observing limitations in granting incentives such as tax holidays to inhibit competitive bidding of incentives between island countries.

Protection of Local Producers

Most countries provide some degree of tariff or other protection for enterprises producing for the local market. Among economists such practices generally have a bad reputation. For example, protection of a local producer is achieved only at the cost of higher prices to the users of that producer's output. These higher prices may well undo or offset the original objective. Suppose, for example, that a tariff is imposed on imported leather as a means of encouraging employment in local tanneries. Against this gain is the possibility that an increase in the cost of leather will inhibit the expansion of local firms using leather and thus discourage employment growth in areas such as sandal making. Similarly, protection of the local market for particular consumer goods (such as beer or soft drinks) may reduce the money consumers have available to spend on other things. More generally it may be argued that protection, which is usually justified in terms of its employment-promoting or wage-enhancing potential, often ends up delivering excess profits or windfall gains to those best able to manipulate the local political system.

Such arguments certainly provide a strong caution against the extensive use of protection, but they are not conclusive. Two considerations justify protection in some circumstances. Most countries have at some stage used tariff or other protection to support local industries in the early stages of their development. This is the so-called infant industry argument, which suggests that many industries that will in time develop become fully competitive nevertheless need early protection from established foreign competitors. These competitors have long since worked their way past the initial teething troubles that beset any firm.
In addition, even established firms may need to be protected from predatory practices such as the dumping of products below cost on the local market. Such practices may destroy firms that are well able to withstand normal competitive pressures. International trade law has long since established antidumping codes and conventions. These, however, have been developed in forms appropriate to the legal and commercial frameworks of the developed industrial nations, and simpler practices such as the reserving of a proportion of the local market to the local producer may be more appropriate for small island economies.

In general Pacific island countries have favored relatively open trading policies and have avoided extensive protection for local producers. This stance seems appropriate. Indeed it may well be that the widespread regional practice of granting time-limited tax holidays to new enterprises provides a more appropriate way of assisting firms through their early stages of development rather than offering them significant ongoing tariff or other protection.

**Development Banks**

Development banks have provided an important stimulus to entrepreneurial activity within the Pacific island economies. Their development has been assisted by informal links between banking personnel in the larger region and with agencies such as the Asian Development Bank. Development banks play an important part not only in providing finance but also in developing standards of project appraisal and business management within the region. The ongoing contractual nature of their working relationship with the private sector puts them in a unique position among public sector agencies. Funded by government, yet linked with the private sector through commercial transactions with all industrial sectors, the development banks play an increasing role in helping governments develop policies that will encourage faster growth of individual, cooperative, and corporate entrepreneurial activity.

**CONCLUSION**

Economic development is a complex process. The main thrust in development is provided by the combined effect of a multitude of independent but interdependent decision makers in all sectors of the economy. The central dynamic is the desire to survive and prosper in the contemporary world economy (e.g., the production on a commercial basis of a wide range of goods and services for trading within the home economy or for sale to the rest of the world).

Outside of the centrally planned economies, production is focused on markets where the main actors are private companies and individuals. This too is the situation in the Pacific island economies although, as I have stressed, basic cash-subsistence production is also important. In the longer run the relative importance of market-related production is certain to increase. In all this the various forms of private enterprise—from small-scale entrepreneurial activity to local companies, foreign subsidiaries, and joint ventures—will all play an important part. Cooperatively and publicly owned enterprises will also have their part to play.

Government's role is essentially that of a scene setter. Government, through its overall responsibility for economic management, exerts a powerful influence on the commercial environment; it also provides much of the...
infrastructure for commercial activity; and, finally, most governments attempt to actively promote entrepreneurial and commercial activity. In drawing an appropriate balance within this complex framework, there are a few simple rules beyond observing that a balance does have to be drawn. Effective policies in promoting one particular objective frequently impose costs elsewhere, and these costs have to be weighed against the desirability of securing the stated objective. This need for balance emphasizes the desirability of openness in government. There is a need for ongoing discussion and analysis of policies of their stated objectives and their probable effectiveness and costs. The ultimate test of the effectiveness of public policies lies in their contribution to the well-being of citizens. They are the constituency who ultimately must decide individually and collectively what is an appropriate balance between public and private modes of economic activity.
PACIFIC ISLANDS CONFERENCE

The Pacific Islands Conference is a heads of government organization that combines policy research with the ideas and experience of its participating nations to help resolve common problems of development.

Island leaders established the Conference in March 1980 at a meeting in Honolulu organized and hosted by the East-West Center. Leaders and high-level representatives from 18 island and six metropolitan governments, along with participants from public and private organizations, discussed "Development the Pacific Way" and called for greater research and evaluation of priority concerns.

To provide follow-up on the issues raised at the 1980 meeting, the leaders established a Standing Committee of eight Pacific islands heads of government, which acts on behalf of the Conference, and named the Pacific Islands Development Program at the East-West Center as Secretariat for both the Conference and the Standing Committee.

The Pacific Islands Development Program (PIDP) conducts research and training programs in areas specified by the Standing Committee. PIDP’s research results clarify policy options that the island leaders consider in making crucial decisions affecting their islands’ development.

Funding for the Pacific Islands Conference is provided by its member governments, the East-West Center and PIDP, grants and contracts, private contributions, and the meetings' host governments.

The Pacific Islands Conference, which now includes 23 island and seven metropolitan governments, will convene its second meeting in August 1985 in the Cook Islands to examine issues of "Development and Change."