



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

19434

Distr.
RESTRICTED

I0/R.224
17 January 1992

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

ORIGINAL: ENGLISH

ASSISTANCE IN INDUSTRIAL ESTATE DEVELOPMENT OPTIONS

TF/GLO/88/909

YAP STATE
(FEDERATED STATES OF MICRONESIA)

Technical report: An analysis of some development options*

Prepared for the Governments of the Federated States of Micronesia
by the United Nations Industrial Development Organization

Based on the work of Thomas Kelleher,
UNIDO expert

Backstopping officers: C. Antonio/R. Kennedy
Institutional Infrastructure Branch

* This document has not been edited.

TABLE OF CONTENTS

	<u>Page</u>
Summary	i
Chapter 1 Background	1
Chapter 2 The Yap Economy	6
Chapter 3 Resource Analysis	27
Chapter 4 Small Economies - an Analysis	43
Chapter 5 International Service Activity	56
Chapter 6 Industrial Development	73
Chapter 7 Tourism Development	85
Chapter 8 Agriculture and Fishing	96
Chapter 9 Local Services (Incubator Unit)	100
Chapter 10 Promoting Investment	106
List of people consulted in relation to the study	111

CHAPTER 1

BACKGROUND

1 Introduction

This project originated following a factfinding visit by a UNIDO expert on industrial estate planning to Yap in August 1987. Two possible sites for an industrial park were identified. Following that visit, the state government requested UNIDO to conduct a techno-economic study on the establishment of an industrial estate.

At the time implementation of Yap's first development plan (1986-91) had started. There was only one manufacturing establishment, a sawmill which was not operating regularly. The 1986-91 plan set a target of 100 new jobs in industry. Thirty nine possible projects were mentioned. Most were resource based, relating to marine development, agriculture, and forestry. The rest were geared towards supplying the local market - food, building materials etc .

The title of this project "assistance in industrial estate development" is based partly on the assumption that industrial development on a reasonable/significant scale is a sensible and viable option for Yap. Perhaps there is a

belief, advocated in many textbooks on development and re-enforced by the example/experience of most developed countries, that industrial development is an essential part of the development process.

The suggestion is that Yap's development would be based both on import substitution, processing of local materials and export industry growth. A number of projects are suggested in the background notes attached to the terms of reference - these include processing of fruits and juices, fish processing, coconut oil extraction, clay brick and tile manufacture, jewellery, fibreglass products, coconut fibre products, batik textile printing. In promoting export manufacturing by local and foreign entrepreneurs duty free access to the U.S. market, subject to certain conditions, under the compact agreement is quoted as an advantage.

In the past 4 or 5 years Yap state has gained an amount of experience with industrial development. A bakery, a brick-making project and a fibreglass boat building project - all supplying the local market have been established. A coconut oil/soap project and coconut fibre manufacturing plant established by the state have failed. A pig slaughter house owned by the state is operating at under 10% capacity and is losing money. To date (1987-90) the state has spent over a half million dollars on industrial projects including 367,000\$ on the slaughter house and 101,000\$ on the coconut fibre plant. The only successful state initiated project is

the fibreglass project (state investment 14,000\$). It has now been privatized.

A garment project producing for export and employing 500 women (including 400 Sri Lanka/Chinese) has been established. It's contribution to the Yap economy is disappointing.

The advantage of access to the U.S. market is more apparent than real. Similar advantages are available in:

- (i) Caribbean countries under the Caribbean Basin initiative;
- (ii) Canada under the U.S./Canadian free trade agreement;
- (iii) Israel under a free trade agreement with the U.S.;
and
- (iv) To most developing countries under the generalized system of preferences. A free trade agreement with Mexico is under negotiation.

The Yap garment project does not have duty free access to the U.S. - presumably because it does not meet the requirement that 35% of the production cost of the finished article be added in Yap. The project faces duties of 20 - 30% on U.S. exports.

Krishan Khosla (UNIDO) in December 1990 conducted a study on the establishment of an industrial estate. The conclusions of the study are not encouraging.

1.2 Industrial Estate Feasibility - Conclusions

The main conclusions of the Khosla study were that:-

- (i) The existing demand in Yap for products of small and medium industry is too low to justify the establishment of a viable industrial estate. However, there are developments taking place which over time could change the situation and justify the establishment of an industrial estate.
- (ii) An increase in the number of tourists, together with a longer stay should increase demand levels and justify the establishment of many small and medium industries.
- (iii) If import substitution opportunities are based on the Federated State of Micronesia as a whole (population 100,000) rather than Yap State alone (population 10,000), more production possibilities might be possible.
- (iv) Increased employment of expatriates arising from additional foreign investment will also increase the demand for products of small and medium industry.
- (v) The possibility of establishing an industrial estate should be reviewed in 1993 in the light of the foregoing.
- (vi) In the light of the government's emphasis on the promotion of foreign investments and joint ventures,

the feasibility of establishing an export processing zone should be considered.

1.3 Revised Terms of Reference

On the basis of the above conclusions and a brief survey of the situation in Yap, it became clear that the terms of reference were obsolete i.e. analyse the immediate requirement and potential demand for a small scale industrial estate and prepare plans. There was no immediate requirement for the foreseeable future. Therefore, the preparation of plans was irrelevant.

Following discussions with UNIDO Vienna and the Authorities in Yap it was agreed that the terms of reference should be revised to cover:

- (i) the need for a business incubator unit to help Yapese avail of business opportunities presented by the development of fishing and tourism;
- (ii) the possibility of establishing an export processing zone; and
- (iii) international service activity and how it might be developed and promoted in Yap.

The study should also contain a review of other very small economies - particularly island economies.

The original terms of reference together with correspondence on those terms of reference are set out in Appendix 1.

CHAPTER 2

THE YAP ECONOMY

2.1. Introduction

Yap State has many of the characteristics of a reasonably wealthy consumer oriented society. The measures of such a society include per capita income, consumption per capita of what might be called luxury goods e.g. cars, T.V's and telephones, life expectancy, infant mortality, literacy of young people attending school, health care facilities.

Per capita income has been estimated at 3-4000\$ although there are no official figures available. This income level is well ahead of "advanced" developing countries e.g. Malaysia (2300\$), Fiji (1600\$) and Brazil (2000\$).

There is a registered motor vehicle for every 10 people. Telephones at present are confined to the Colonia area so the number of telephones per 1000 people is relatively low - about 20 per 1000 compared with Fiji (85), Malaysia (90) and Brazil (90). However, when plans to develop the telecommunications system throughout the island are complete there will be a dramatic increase in phones.

Health and social facilities indicate all compare favourably with "nearly developed" countries. Life expectancy is about

60 years. Infant mortality is 40 per 1000 births. There are about 1000 people per doctor. Health clinics exist in every village and free medical care is available for everyone - even to the extent of flying patients overseas for treatment.

Literacy levels are high. Primary school facilities are free and within reach of everyone. Basic housing is available for everybody. Electricity and water is available throughout Yap proper at subsidized prices

2.2 Employment

Table 1 provides a breakdown of the employment situation based on the 1987 census. Over half the working population (58%) are engaged in subsistence fishing and agriculture. Of those earning a living (1823), the government employs 1072 or 59%. Of the 751 people working in the private sector 2-300 are working on mainly government funded construction projects. Religious personnel account for about 50. The wholesale and retail trades employ about 200. There are very few people engaged in what might be termed "primary economic activity" i.e. agriculture, export manufacturing or tourism which will stimulate the economy.

Since 1987 there has been an increase in export manufacturing employment and tourism. With the establishment of King Tex

TABLE 1

Employment Breakdown

	Yap State			Yap Proper			Outer Islands			Islands as % of total		
	T	M	F	T	M	F	T	M	F	T	M	F
Number earning of which	1823	1329	494	1602	1138	464	221	191	30	12.1	14.4	6.1
government	1072	813	259	866	635	231	206	178	28	19.2	21.9	10.8
Private employees	582	420	162	572	412	160	10	8	2	1.7	1.9	1.2
Private employers	26	19	7	25	18	7	1	1	-	3.9	5.3	-
Own a/c workers	24	18	6	24	18	6	-	-	-	-	-	-
Unpaid workers	52	11	41	51	10	41	1	1	-	1.9	9.1	-
Other	67	48	19	64	45	19	3	3	-	4.5	6.7	-
Attending school	571	349	222	357	196	161	214	153	61	37.5	43.8	27.5
Others of which	3478	1269	2209	1948	716	1232	1530	553	977	44.0	43.6	44.2
Subsistence	2490	822	1668	1173	363	810	1317	459	858	52.9	55.8	51.4
Seeking work	128	104	24	105	86	19	23	18	5	18.0	17.3	20.8
Household duties	339	45	294	273	37	236	66	8	58	19.5	17.8	19.7
Unable	231	117	114	138	69	69	93	48	45	40.3	41.0	39.5
Other	290	181	109	259	161	98	31	20	11	10.7	11.1	10.1
Total	5872	2947	2925	3907	2050	1857	1965	897	1068	33.5	30.4	36.5
0 - 15	4267	2246	2021	2743	1447	1296	1524	799	725	35.7	35.6	35.9
Total	10139	5193	4946	6650	3497	3153	3489	1696	1793	34.4	32.7	36.6

Source: Census of Population, May 1987

in 1990 over 500 jobs were created in manufacturing. However, most of these jobs (400) went to Sri Lankan and Chinese girls. About 100 Yapese were employed. The overall impact of King Tex on the local economy is limited. In the last 2 years there has been a significant expansion in hotels and other tourist related facilities. There are probably about 100 people now working in tourist related activities.

Most of the government and private sector jobs are concentrated on Yap proper. The outer islands account for 34% of the population and 19% of government jobs - mostly teachers and health care workers. There are only 15 private sector jobs or 2% of the total on the outer islands.

2.3 Government Funding

The basis for the country's wealth is the funding available under the compact agreement with the United States. In 1991 a total of almost 15M\$ or 1400\$ per person is provided through compact funding. This funding will continue until the year 2001 on a decreasing scale. Allowing for inflation it is estimated that 13M\$ will be available in 2001 (see Table 2). After that it is not clear what will happen. The general expectation is that funding will continue in some form but the amount will decrease. Table 2 sets out the importance of the compact agreement in funding government spending.

Table 2 in M\$ - Government Funding

	1987	1988	1989	1990	1991 (Jan - 23/7/91)
Compact funding	13.0	14.1	14.3	14.7	7.5
General fund revenues	2.0	2.2	2.7	3.3	2.2
Total	15.0	16.3	17.0	18.0	9.7
Compact as % of total	86.7%	86.5%	84.1%	81.7%	77.3%

Source: Office of Budget and Planning.

The most important sources of general fund revenues in 1991 are:

- (i) interest earned 0.7M\$ (or 32% of the total);
- (ii) excise taxes on beer 0.4M\$;
- (iii) gross revenue tax 0.3M\$; and
- (iv) FSM withholding tax 0.2M\$.

An encouraging trend is the decreasing importance of compact funding. However, much of the general fund revenue is dependant indirectly on compact funding. The interest earned is from investments made with compact fund revenues. There would be very little beer consumed if the compact fund did not exist.

In real terms compact funding will decrease from 15.0M\$ p.a. in 1989 to above 10.7M\$ in 2001. To maintain the existing

level of government spending (19.4M\$ p.a. in 1991), general fund revenues will need to increase from 4.4M\$ (approximately) in 1991 to over 9M\$ in 2001 - an increase in real terms of over 100%.

Because of the uncertainty of the situation when the compact agreement expires in 2001 and the government's stated desire "to become more self-reliant and revive pride in our ability to provide for ourselves" it is advisable that the government set a target whereby the major portion of government revenue (about 70%) is generated independently of the compact agreement i.e. 13.6M\$ from general fund revenues by 2001 in 1991 constant money values.

Such a target implies an increase of over 300% in real terms in general fund revenues in 10 years if the government wants to maintain the existing levels of spending. If, however, the government wants to expand services to cater for an increasing population, an even greater increase in general fund revenues will be required. This target is ambitious but revenue trends in 1990 and 1991 are encouraging.

2.4 Government Spending

Table 3 provides a breakdown of the capital expenditure programme. The development of infrastructure is a very high priority. Nearly 60% of the infrastructure expenditure is

devoted to roads. However, the road programme is now nearing completion and no further road construction is planned in 1992. Airfield development and power extension and upgrading are other important infrastructure projects.

TABLE 3

Capital Expenditure 1987 - 1992 in \$

	1987-90 (1)	%	1991 (2)	%	1992 (2)	%	Total
Conservation	9,245	0.1	-	-	-	-	9,245
Agriculture	516,147	4.7	115,600	3.2	113,292	4.4	745,039
Industry	135,920	1.2	-	-	-	-	135,920
Fishing	3420,000	31.3	500,000	13.8	1150,000	44.6	5070,000
Tourism	16,704	0.2	-	-	38,000	1.5	54,704
Finance	1100,000	10.1	-	-	-	-	1100,000
Human Resources	53,991	0.5	-	-	30,000	1.2	83,991
Infrastructure	4621,033	42.2	2034,921	56.2	169,882	6.6	6825,836
Research	206,161	1.9	137,800	3.8	27,779	1.1	371,740
Other	863,949	7.9	835,800	23.1	1049.079	40.7	2748.828
Total	10,943.150	100.1	3624,121	100.1	2578.032	100.1	17,145,303

(1) Actual (2) Budgetted

Source: Office of Budget and Planning.

Fishing is by far the most important economic activity from a capital budget perspective. Tuna projects account for about two thirds of the fishing investment - or 3.3M\$. Also included is most of the agricultural investment. (6.4M\$) has been devoted to a slaughter house. Industrial investment has been concentrated in a coconut fibre extraction plant (101.073\$). Investment in tourism development and manpower training (0.3% and 0.5% of the total respectively) is insignificant although the 1992 budget shows a significant increase from a very small base.

The third major investment category is "other" - this refers mainly to land acquisition. Also included in this category are transmitters and earth stations and emergency repairs to the power generator.

Current government spending is running at around 10M\$ annually. Table 4 provides a breakdown. Education is the largest sector and has been absorbing an increasing % of the total in recent years. Public utilities and contracts has been absorbing a significant but decreasing amount of the budget. Much of this is used to subsidize the supply of electricity and water. In 1989 expenditure on power and water was 1.2M\$ while receipts amount to 0.3M\$. Since then there has been a significant improvement. Billing and collections have been improved and charges are being increased gradually so that commercial and industrial users pay the full cost. Personnel expenses account for about 50% of total spending.

Table 4 - Operational Expenditure in M's\$

	1986 Total	% of Total	1989 Total	% of Total
Education	2.253	22%	3.044	29%
Health	1.827	18%	1.792	17%
Public Utilities and Contracts	3.055	31%	2.450	24%
Other	2.931	29%	3.129	30%
Total	10.066	100%	10.415	100%

Source: 2nd Development Plan, Chapter 1.

2.5 International Trade

Table 5 provides a breakdown of Yap's export performance in recent years.

Table 5 Exports in 000's \$

	1984	1986	1988	1989	1990	Net Exports 1990
Copra	153	15	94	119	65	65
Trochus Shell	11	103	-	-	188	188
Fish	12	55	210	104	237	237
Bananas	18	9	8	-	-	-
Betel Nut	10	1	-	-	8	8
Handicrafts	1	-	2	-	4	4
Garments	-	-	-	-	1545	465
Sub-total	205	183	314	223	2047	967
Invisible Exports	250	388	460	780	1000	500

The above figures show only the gross receipts for different sectors. Only the last column takes into account the import content of these exports. In the case of garments and

invisible exports (tourism) the import content would be significant - about 70% in the case of garments and about 50% in the case of invisible exports. With fish, trochus shells and copra the import content is close to zero. Thus when the net exports or balance of payments contribution is considered, invisibles (tourism) is by far the most important sector followed by fish, trochus shells and garments.

Table 6 sets out the balance of trade situation.

Table 6 Balance of Trade in 000's \$

Exports	1961	1971	1978	1985	1987	1989	1990
Visible	NA	NA	NA	626	171	223	2047
Invisible	NA	NA	NA	278	427	780	1000
Total	139	71	269	904	598	1003	3047
Imports	323	1563	7342	6092	5084	9095	10594
Balance	184	1492	7073	5188	4486	8092	7547

Note : NA - not available.

As can be seen from the above table, Yap has been running a major trade deficit over the last 20 years. This deficit has been funded with United States assistance through the compact. If or when compact funding ceases it will be necessary for Yap to earn foreign currency from alternative sources.

2.6 Cultural Issues

The Yapese more than most peoples throughout the world have clung tenaciously to their traditions and customs despite being under continuous influence from foreign powers for 450 years. Three distinct languages still remain - Yapese, Ulithian and Woleain - in a land of 11,000 people. Change comes slowly.

The social system is complex. Nine different class distinctions are recognised with authority devolving downwards from a few leaders on Yap proper.

Land ownership is a central feature of life in Yap. Except for about 460 acres on Yap proper that is government property all of the land is privately owned. Land ownership is based on a traditional system of land tenure. To date few areas of land have been surveyed or ownership documented. In such a situation the potential for conflict exists - particularly if land for development is sought and large sums of money are on offer.

Even where ownership is clear, acquiring land for development can be a difficult and time consuming exercise - particularly close to villages or areas where the traditional pattern of living might be affected. Land in or near a village will not be made available to an outside authority for a purpose that the villagers consider unsuitable.

On Yap proper almost all of the villages are located along the coast. There is no example of land being made available for what might be termed "non-village use" outside Colonia and the inland area between Colonia and the airport - except perhaps the U.S. coastguard station at Gagil. Proposals for the development of coastal sites have been rejected over the years.

The problem of land availability for development has been recognised in the 2nd development plan - "Every economic activity needs space" - and Yap needs to generate a very significant increase in the level of economic activity if the objectives of the plan are to be achieved. The first step in making land available for development is a programme of land surveying and registration to clarify the ownership position. At present the surveying programme is proceeding in what might be described as an ad hoc manner in response to requests.

The most promising development area in Yap - the area between the old airport and Colonia - has only been partially surveyed. If the development of this area is to be facilitated then the whole area should be surveyed as a matter of priority.

2.7. Constitutional Issues

The constitution of the State of Yap is a relatively short document - 15 articles. It includes a "bill of rights" which allows the citizens of Yap all the rights enjoyed by people living in a modern democracy.

All citizens over 18 years and registered have the right to vote. There is a separation of powers between the legislature, executive and judiciary. Other sections deal with taxation and finance, amendments, health and education, conservation and development of resources and traditional leaders and tradition.

From an economic development viewpoint the key issues are:

- 1) The recognition of "our traditional heritage and villages as the foundation of our society and economy" - preamble.
- 2) The recognition that "prosperity and welfare require an intelligent selection and integration of modern technology and institutions" - preamble.
- 3) The supremacy of traditions and customs. Article 111 provides that "nothing in the constitution shall be construed to limit or invalidate any recognised tradition or custom". A Council of Pilung and Council of Tamol shall be established to perform the functions which concern tradition and customs. Under Article V, Section 16, each bill passed by the

legislature shall be passed to the councils for consideration. The councils have power to disapprove a bill which concerns tradition and custom or the role or function of a traditional leader. In addition the councils shall be the judge of what relates to tradition and custom. The constitution also provides that tradition and customs be taught in public schools.

- 4) Land title according to Article XIII may be acquired only in a manner consistent with traditions and customs.

2.8. Planning and Development

Planning is a way of making or doing something that has been worked out beforehand. It is a scheme of action. Economic planning then is a programme of action for developing an economy. For a plan to be successful the various elements in the plan must be consistent and fit together e.g. programmes to develop industry or tourism must be supported by suitable infrastructural development programmes. In particular, education and training must receive due attention in any development plan. Human capital is central to the creation and exploitation of comparative advantage.

Medium term planning (i.e. 5 year plans) should be set within a longer term framework or perspective which provides

an overall sense of purpose or direction. Such a long term perspective should focus on priorities and help to ensure a cohesive set of policies.

The degree of detail which a plan should contain is a matter of debate - as are issues like the length of the plan (3 or 5 years) and review procedures. The general consensus is that planning should be indicative i.e. that it should:

- (i) provide development guidelines for the main economic sectors;
- (ii) give everybody an overall picture of how the economy is developing; and
- (iii) help to establish a set of priorities particularly in relation to investment.

There is a good argument for an annual review as the underlying assumptions and economic environment is subject to change.

Yap state is new into its second five year plan. The first plan formulated in the early 1980's covered the period from 1986 - 1990. The second plan 1991 - 1995 is new in operation.

The plan sets out laudable general objectives:

- (i) Strengthening and diversifying the economic base to provide full employment for an expanding population;
- (ii) To provide a basic living standard for everybody;
- (iii) Achieve economic self-sufficiency in food;

- (iv) Create a government of a size and structure that can be sustained without outside subsidies; and
- (v) Promote cultural values and traditions.

The private sector is expected to play a major role in creating employment opportunities. The government's role is to create the environment in terms of infrastructure, incentives, etc. in which private enterprise can function effectively.

Because of the extremely limited domestic market which offers very little scope for import substitution, the emphasis will be on tapping overseas economic opportunities that bring in foreign revenues.

In this respect fishing is considered to be the most promising activity, followed by export manufacturing and processing industries and tourism. A review of the capital spending in recent years confirms the priority attached to fishing. 31% of the capital spending 1987 - '90 was allocated to fishing projects. Domestic manufacturing received 1.2% and tourism 0.2% (See Table 3).

The plans suffer from a number of defects. These include:-

- (1) A lack of analysis of the implications of the stated objectives e.g. full employment means creating x number of jobs per annum. or government revenue without subsidies will be Y. M\$ per year. This can

only support a government of size 2. During the period of the 1st and 2nd plans the number of government employees has remained static. There has been no attempt at reduction.

- (2) There has been no progress towards self-sufficiency in food although there have been some funds allocated to food processing projects and agriculture.
- (3) The training/manpower implications of the plan are not considered anywhere. Indeed, there is a very serious lack of information on the labour market e.g. how many people working in the subsistence sector would be tempted into wage employment; what are their aspirations or capabilities? How many people emigrate each year? Are emigrants in Guam or elsewhere acquiring useful skills? Would they return to Yap if suitable opportunities arise? What are the manpower requirements of the various economic sectors in the coming year?
- (4) There is no evidence to support the contention that fishing is the best long-term opportunity for growth followed by tourism and export industry. Will fishing provide more employment opportunities or tax revenue or foreign exchange earnings than tourism.

There needs to be a thorough analysis of the potential of the various sectors in relation to agreed objectives before priorities are established.

- (5) The intention is that the private sector should be

the main source of productive investment. The local business community is small and there is a general lack of entrepreneurial skills. There is a recognition that the institutional framework for promoting foreign investment is weak. Co-ordination between national and state authorities is not always smooth. The tax structure and labour laws are unhelpful. The foreign investment law has a strict regulatory nature without a promotional component.

There has been no progress over the years in creating an improved climate for foreign investment. There is no promotion programme and the plan contains no proposals in this respect.

(6) There is no serious analysis of the impact of the fade out of the compact funding. A projection by the Office of Budget and Planning dated 28 June, 1991 shows:

- (i) general fund revenues growing at 1-1.5% a year up to the year 2001;
- (ii) compact funding in the year 2001 contributing over 82% of total budget funding compared with 83.9% in 1991 - very little change over a 10 year period; and
- (iii) total funding declining from 17.9M\$ in 1991 to 15.9M\$ in 2001. These projections do not reflect a move towards increased self-sufficiency or a desire to create a

government structure capable of surviving without subsidies.

2.9. Government Objectives

In discussing development priorities with government officials the preservation of culture and traditions emerged as a most important priority, although there was an acknowledgment that "some intelligent compromises are necessary and that some alterations in traditional attitudes towards investors and tourists is necessary.

The major economic priority is the generation of alternative revenue sources to replace the compact funding to finance government budgets and import purchases. Unless alternative funding sources are identified and exploited, existing levels of employment, health or education services cannot be maintained - hence the overriding importance attached to government funding sources.

The creation of additional employment opportunities and the development of self-sufficiency in food production are other government objectives.

The use of scarce resources is another important government concern. These resources include water, electricity and land.

In evaluating particular activities the key economic factors are (in order of importance)

- (i) The Contribution to government revenues and foreign exchange earnings.
- (ii) The use of scarce resources including water, land and electricity.
- (iii) The contribution to self-sufficiency in food.
- (iv) The creation of employment opportunities.
- (v) The transfer of skills, technology, marketing know how etc.

RESOURCE ANALYSIS

A detailed analysis of the resources of Yap, running to 24 pages, is contained in K. Khosla's report. The 2nd development plan also reviews the resource base in some detail. It is not necessary to review the situation again here - except to highlight some particular scarcities.

3.1 Land

At present there is no land immediately available for development projects. However, that statement is not as negative as it appears. Land can be made available for development provided that the people of the area are in agreement with the development. The comprehensive tourism plan cites a resolution by the chiefs of Maap arising from a proposal by a Japanese corporation to develop part of the area against the wishes of the people. - "Henceforth any proposal from whomsoever it may come be it even one of us that threatens by change or innovation to infringe upon the integrity of our well loved ways or of the land and the waters around us that have so long sustained them should first be submitted for review and evaluation".

There is a recognition expressed in the 2nd development plan that Yapese culture can at times hinder economic development and that "a good compromise" must be reached.

There seems to be general agreement among government officials that land along the coast - where most of the village settlements are - is unlikely to be made available for what might be termed "general development purposes". Some tourism/horticultural development is possible in the coastal villages provided agreement is reached with the municipal council and the landowners.

The stretch between Colonia and the airport is an area which could be seriously considered for "general development purposes" - particularly the area west of the High School. There are no village settlements there. Some development has already taken place in the area - old/new airport, weather station, radio tower, slaughter house. Other proposals including tourist/recreation developments are under consideration. The land is not good for agriculture. The total area involved is between 500 and 1000 acres (See Map 1).

In a present day Yap context that is a very large amount of land because very little development has taken place to date. However, if Yap is to achieve a degree of economic independence over the next 10 years a significant level of development will be necessary - up to 400 hotel bedrooms;

office and residential accommodation for up to 500 expatriates involved in international service activity; accommodation for expatriates involved in fishing development projects; and recreational and amenity areas for tourists and residents.

In that context 1000 acres of land is a relatively small area. Some form of control over development will therefore be necessary.

Most of the developments will involve foreign participation. Foreign investment permits will be required. The overriding development objective is the creation of a wide tax base and increasing government revenue to compensate for the decline in the U.S. revenues under the compact agreement. Foreign investment projects which involve large areas of land should be examined from the viewpoint of contribution to tax revenue. Projects incapable of generating tax revenue in the order of 30,000\$ per acre annually should not be considered unless they have other very significant advantages. This is an indicative figure - 300 acres of land giving a gross tax yield of 9M\$ annually. The proper guideline figure can be calculated when there is more detailed knowledge on the availability of land and the funding requirements of the government.

3.2 Water

Like land water can be a scarce commodity on Yap despite the very high annual rainfall. Because of the limited reservoir capacity, long dry spells can cause shortages particularly in Colonia which is dependant largely on one reservoir of about 35M gallons capacity. During the first half of this year (1991) Yap experienced a very long dry spell which resulted in severe water rationing in Colonia for the first time in a number of years (at its worst water was available for one hour every second day).

At present Yap proper has 3 regional water supply systems as well as a number of smaller local systems. Apart from the reservoir the Colonia system has a well capable of pumping about 60,000 gallons a day. The capacity of the Colonia treatment plant is above 400,000 gallons daily - which is close to the daily consumption.

The Southern Yap system is based on wells - some of which went dry earlier in the year. There is considerable surplus capacity in the system. It has also been recently connected with the Colonia system.

The third regional system at Gagil/Tamil has plenty of surplus capacity but is not yet connected to the Colonia system.

The 2nd development report highlights two problems with water supply. The first relates to safety. The Colonia system is not safe for drinking. The second problem relates to demand. The Colonia system is operating close to capacity. The overall demand for water is expanding in line with the pace of development - which has picked up considerably in recent years. The Colonia system in particular will have to be expanded. Two possible options are suggested - (i) finding and tapping new wells and (ii) extending the reservoir or making a new one.

It is not the task of this report to suggest how to expand the supply. However, inadequate water supplies is a potentially serious problem which could hold back development in the coming years.

The charge for water at present does not cover the full cost of production. The government is in the process of increasing charges on a graduated scale with large users facing the biggest charges. It is important that commercial users and foreign investors in particular pay for the full cost of supplying water.

3.3 Electricity

Yap has over 100% standby generating capacity. There are 6 generators with an installed capacity of 7100 KW. The general practice however is to run around 80% of installed

capacity - giving about 5700 KW supply. Peak demand is about 2400 KW at present - up from 1200 kW in 1988. Much of the growth is due to losses as the system was extended and the connection of one very large (3-400 KW) user. It is not expected that a similar growth in demand will occur in the coming years.

The existing generating plant should be able to cater for a 15% growth in demand over the next 5 years and still leave 50% standby capacity.

Most of Yap proper is serviced by a central power grid. There is a 3 phase supply as far south as the old airport and up to Gagil/Tamil in the north.

At present most of the difficulties with electricity centre on maintenance and funding. Power is heavily subsidized. According to the 2nd development plan the state subsidy in 1989/90 is around 950\$ per household. The cost to the state of each additional hook-up is 500\$.

In a situation where power is heavily subsidized financing will inevitably be difficult. In a difficult financial situation maintenance often suffers. Such is the case in Yap.

A number of steps are proposed to improve the financial situation and move gradually towards full cost recovery.

SUMMARY

1. There is no demand at present or in the foreseeable future for a small industry estate to accommodate a range of small manufacturing industries in Yap.

2. Because of this conclusion, the terms of reference which related to the analysis of the demand for a small industry estate are obsolete. Following consultations with UNIDO and the authorities in Yap it was agreed that this study should cover:
 - (i) the feasibility of establishing an export processing zone;
 - (ii) the development of international service activity; and
 - (iii) the need for a business incubator unit to assist small business avail of the opportunities arising from the development of fishing and tourism.

3. The Yap economy has many of the characteristics of a reasonably wealthy consumer society, including an estimated per capita income of 3 - 4000\$.

4. Over half (58%) of the working population are engaged in subsistence agriculture and fishing. Most (1072 out of 1823 or 59%) of those in the money economy

work for the government.

5. Very little independent wealth creating activity takes place. Fishing, tourism and one export manufacturing project do contribute to the level of economic activity. However, the main source of wealth is the compact funding or grant from the United States which amounts to 1400\$ per person annually.
6. Compact funding will continue on a decreasing scale until the year 2001 and accounts for about 80% of government revenue.
7. Assuming a significant reduction or elimination of compact funding after the year 2001, the Yap government will have to develop a new revenue base by developing new activities which yield significant tax revenue.
8. The 1st and 2nd Yap development plans do not analyse in any depth the implications for a significant reduction in compact funding - or the implications of the development of particular economic sectors in terms of infrastructure, of manpower training or government revenue, or use of scarce resources or overall impact on the economy.

9. Yap suffers from a shortage of many resources including land, water, electricity and labour.

10. A survey of 52 very small states including Caribbean and Pacific island states shows (i) Yap is particularly small (3rd smallest); (ii) no very small island state has a manufacturing sector; and (iii) tourism and international services are the best development prospects in very small island states.

11. International service activity has been growing worldwide at a significant rate in recent years. The type of service activity which might successfully locate in Yap includes:-
 - (i) services delivered via remote telecommunications - such as data processing;
 - (ii) services using Yap as a residence and tax base e.g. consultants working in export markets;
 - (iii) services which view the isolation and tranquility of Yap as an advantage eg. authors, artists;
 - (iv) retirement homes; and
 - (v) Tax havens - residence facilities for wealthy expatriates.

12. Under the Compact Agreement, Yap State can offer attractive tax concessions to U.S. citizens who establish residence in Yap. These concessions should

be investigated in detail by a qualified tax expert and used as much as possible as a promotion incentive.

13. The prospects for industrial development based on import substitution or processing import materials for export are extremely limited. An export processing zone activity will create no linkages with the rest of the economy, use scarce resources (water and electricity) contribute very little in terms of tax revenue and create relatively few job opportunities for Yapese. Yap does not have many of the essential requirements for successful EPZ development.
14. Tourism development has a significant growth potential in Yap. Tourism will create opportunities for small scale vegetable producers, fishermen, and local business. It will also make an important contribution to tax revenue and create many worthwhile employment opportunities for Yapese.
15. An incubator unit based at the site of the old power plant (Map 2) would facilitate the growth of new Yapese entrepreneurs and help them to exploit the business opportunities which will arise from the development of tourism, fishing and international services.

16. The Government of Yap needs to project a positive and proactive attitude in relation to the promotion of foreign investment. It must resolve in its own mind the apparent conflict between tradition and development and specify "the intellient compromises" it talks about in its development plans - particularly in relation to land availability.

These include:

- (i) an improved billing system (already implemented);
- (ii) a gradual increase in rates; and
- (iii) the introduction of a differential rates system with increased rates for higher usage.

Both the introduction of rate increases and a differential rates system are being introduced at present.

This report is not concerned with generating capacity except (i) to emphasize the necessity of an adequate and reliable supply in order to attract foreign investors and (ii) to suggest that commercial users and foreign investors in particular should pay the full cost of electricity. Otherwise Yap would be returning to the investor (particularly if he is a large electricity user) much of the benefit (increased tax revenue) it derives from such investment via subsidized electricity.

A notable omission in the section on electricity in the 2nd development plan is the lack of any demand forecast. This is not a serious problem because of the large surplus capacity. The rate of development in Yap appears to be accelerating. It is important therefore that some projections of future demand be made to allow for proper planning of future generating capacity and distribution network - although the need for an assessment of power requirements is recognised.

3.4. Telecommunications

Facilities could be described as "not good" at present. Line connections are possible only in Colonia and along the airport road. Elsewhere connections are only possible via radio. There are however proposals to extend the line system all over Yap. Another problem is the lack of capacity and occasional bottlenecks.

3.5 Manpower - Availability and Training

The number of people available for work in Yap is limited. Skilled people in particular are difficult to find. Table 7 below is an optimistic estimate of the numbers of people who might be available for work in Yap based on the 1987 census. There has been no surveys on labour availability since the 1987 census there has been some additions to the workforce - about 250 a year made up of high school graduates and dropouts, together with some grade school leavers - giving a total of about 1000 over 4 years. Some of these people have found work in new private sector developments (e.g. hotels, King Tex). Others have replaced those in the government and private sector who have died or retired, and a considerable number have left Yap for Guam (to work), Hawaii (work or education) or the United States.

There is considerable evidence that 2-300 people a year have been leaving the island since 1987. Estimates of 1000-1500

TABLE 7

Labour Availability

	Yap Proper			Outer Islands			Total		
	M	F	T	M	F	T	M	F	
Subsistence Sector									
Total	363	810	1173	459	858	1317	822	1668	2490
No. of 40+	187	327	514	207	293	500	394	620	1014
No. 15 - 39	176	483	659	252	565	817	428	1048	1476
No. available for work	141	242	383	202	282	484	343	524	867
No. "seeking work"	86	19	105	18	5	23	104	24	128
School leavers	65	54	119	51	20	71	116	74	190
Total labour available	292	315	607	271	307	578	563	622	1185

Assumptions

- (1) 80% of men under 40 and 50% of women under 40 in the subsistence sector would be available for work.
- (2) All classified as "seeking work" in the census are available.
- (3) One third of those attending school over 15 in the census would be available for work.

Figures are taken from 1987 Census of Population.

Yapese on Guam appear correct. A number of those working in Guam are skilled or experienced people working in the construction and service industries. They are attracted by higher incomes - earnings in Guam can reach 4/5 times what is possible in Yap.

Taking account of the numbers emigrating and the growth of the private sector in recent years, the employment estimates in Table 7 can be considered valid - even optimistic today. It is not clear how many people would be willing or interested in securing full-time employment - some undoubtedly are.

Most of those on the list would be classified as unskilled. Many of them, particularly those working in the "growing/catching" sector may have limited language or other skills necessary to work in paid employment. Most of them are living on the outer islands and may be unwilling to migrate to Yap proper where most of the job opportunities will arise. Those on Yap proper "growing and catching" will find a growing demand among hotels and stores for fresh vegetables and fish.

A reasonable estimate of the numbers available and interested in work on Yap proper would be around 300 people. Many of them will need training to avail of the employment opportunities likely to arise in the coming years.

An additional source of workers for new Yapese projects are those Yapese living in Guam at present. Whether or not they will return depends primarily on the level of wages in Yap - particularly in the longer term. With free movement of labour from Yap to Guam/Hawaii and the U.S. it will be possible to maintain only limited wages/salary differentials between Guam and Yap in future years. This of course has implications for the type of business or economic activity which can be promoted in Yap. It will not be possible to regard Yap as a low wage centre comparable to China, Bangladesh or Sri Lanka. Activities which depend primarily on low labour costs will not succeed in Yap over the medium/longer term - export processing industry is in this category.

At present there is no reliable data on or communication link with Yapese working overseas. Some of them may be potential small scale (or even larger scale) entrepreneurs. Others may be capable of occupying skilled positions in the growing tourist or fishing industries.

Equally there is no reliable information available on the qualifications, aspirations or attitude of people within the "growing/catching" sector.

CHAPTER 4

SMALL ECONOMIES - AN ANALYSIS

4.1. Introduction

This analysis of small economies covers a total of 52 territories ranging in size from Monaco (less than 1 sq. mile) to Iceland (40,000 sq. miles). In population terms Niue with 3000 people is the smallest while the maximum is approximately 300,000 people - this was the cut-off point. The territories are scattered throughout the globe - 18 island economies in the Caribbean, 18 island economies in the Pacific, 9 territories in Europe - most of which are connected to the European mainland. (The two exceptions are Iceland and the Faroe Islands). The remaining seven territories are spread throughout Africa and Asia.

Table 8 provides an analysis by geographic area and size. The very small territories are concentrated in the Pacific region and to a lesser extent in the Caribbean.

Table 8 - Analysis of Population Size

Size (Population)	Caribbean	Pacific	Europe	Other	Total
Under 20,000	5	7	-	-	12
20 - 50,000	1	2	5	-	8
50 - 120,000	6	5	3	3	17
120 - 200,000	3	3	-	-	6
200,000 +	3	1	1	4	9
Total	18	18	9	7	52

Apart from their small size, many Pacific territories are more isolated than those in other regions. The Pacific territories are all 500 miles or more from other territories. The Caribbean territories, all islands as well, are much closer together. Most of them form a line between Puerto Rico and Trinidad. Distances between them rarely exceed 100 miles.

The European territories with the exception of the Faroes and Iceland are all within the European mainland. Many of them are centrally located within Europe.

Of the other territories only the Seychelles and the Maldives are a considerable distance from other countries. Macao is very close to Hong Kong and China. Djibouti and Equatorial Guinea are part of the African mainland. Sao Tome and Mayotte are relatively close to the African mainland.

4.2 Per Capita Income

Table 9 sets out the breakdown by per capita income and region. As might be expected the European territories have the highest income levels. The Caribbean territories - Bermuda, Bahamas, and the Caymen Islands have per capita incomes in excess of 10,000\$. The Pacific Island territories have the lowest per capita incomes - over one third of them have incomes of less than 1000\$ per capita.

All of those territories are independent states. The remaining (more wealthy) territories, with the exception of Nauru, benefit from a significant inflow of funds from the United States or France.

Table 9 - Per Capita Income

	Caribbean	Pacific	Europe	Other	Total
Under 1000\$	-	7	-	1	8
1000 - 2500\$	6	1	-	4	9
2000 - 5000\$	4	3	-	1	10
5000 - 10,000\$	5	7	1	1	15
10,000\$ +	3	-	8	-	11
Total	18	18	9	7	53

4.3 Analysis of the Caribbean economies

Table 10 sets out the size of the per capita income and population in the various territories. The table also indicates the importance of the different sectors in the various economies. The territories with the largest per capita incomes have strong or very strong tourism sectors. Conversely, those territories with the lowest per capita incomes have small or underdeveloped tourist sectors. As might be expected those territories (with low incomes) depend to a considerable extent on agriculture. St. Vincent Dominicas and St. Lucia are major banana producing islands. St. Christopher and Nevis depends on sugar and Granada produces cocoa and nutmeg.

TABLE 10

Per Capita Income and Importance of Various Economic Sectors in the Caribbean

	Per Capita	Tourism	Finance Banking	Industry	Agriculture
Population					
0 - 20,000					
Turks, Caicos	M	M	S	V.S.	S
Anguilla	M	M	M	V.S.	S
Caymen	V.L.	V.L.	V.L.	S.	V.S.
Virgin Is. (U.K.)	L	V.L.	M		
Montserrat	M	M	S	S	S
20 - 50,000					
St. Christopher	S	S	S	S	M
50 - 120,000					
Bermuda	V.L.	V.L.	V.L.	S	V.S.
Antigua	M.	L.	S.	S.	S.
Artaba	L.	L.	M.	M.	S.
Dominica	S.	V.S.	V.S.	M.	L.
Granada	S.	M.	V.S.	S.	M.
U.S. Virgin Is.	L.	V.L.	S.	M.	S.
120 - 200,000					
Belize	S.	S.	V.S.	M.	M.
St. Lucia	S.	S.	V.S.	M.	M.
St. Vincent	S.	S.	V.S.	M.	M.
200,000 +					
Barbados	L.	M.	L.	M.	S.
Neth. Antilles	L.	L.	L.	S.	V.S.
Bahamas	V.L.	V.L.	L.	S.	S.

Source: World Bank Yearbook 1991

V.S. Very small
 S. Small
 M. Medium
 L. Large
 V.L. Very large

The basis for grading the various sectors were as follows:-

Tourism: was based on the number of tourists per head of population. V.L. was 8 + tourists annually per head of population; L. 5 - 7 tourists; M. 2 - 4

tourists; S. 1 tourist and V.S. less than 1.

Industry: very large was where industry contributed over 25% of GNP; L. 16 - 25%; M. 6 - 15%; S. 2 - 5%; V.S. - under 2%.

Agriculture: V.L. was where agriculture accounted for 25% of GNP or more; L. 16 - 25%; M. 6 - 15%; S. 2 - 5%; V.S. - under 2%.

Per Capita

Income V.S. - under 1000\$; S. 1000 - 2500\$; M. 2500 to 5000\$; L. 5 - 10,000\$; V.L. 10,000\$ +.

Apart from very strong tourism sectors the wealthier islands also have significant offshore financial sectors. This applies in particular to Bermuda, the Netherlands Antilles and the Caymen Islands. In all three islands the banking sector is the second pillar of the economy. In the Bahamas also offshore banking is also an important economic activity. However, the image of the Bahamas has suffered in recent years because of alleged associations with money laundering. As a result it has lost market share and has lost its position as a leading centre. Much of the business lost by the Bahamas has moved to the Caymen Islands.

The manufacturing sector plays a limited role in most of the islands. There are some interesting correlations in Table 10. The territories with very small or small populations have small or very small manufacturing sectors (i.e. where

the sector accounts for less than 5% of GNP). A reasonable conclusion would be that such territories are too small to support a manufacturing sector. The wealthier territories also have small manufacturing sectors - as the main emphasis is on tourism and offshore banking. The territories with medium sized (5 - 10% of GNP) manufacturing sectors are those territories which are classed as medium to large scale in population terms and have a small to medium per capita income. Much of the manufacturing activity involves (i) processing of agricultural raw materials e.g. rum and sugar or (ii) free zone type activity involving garment production, sports goods and electronic assembly. Such industry requires large numbers of people (mostly women) working for low wages - thus the concentration on only larger islands with lower incomes.

The development plans of all the islands emphasize tourism development - usually as a top priority. (Only in Dominica is tourism potential limited because of the unsuitable coastline and terrain). Many of the islands are becoming selective in the type of tourism they want to encourage. Obviously the emphasis is on upmarket tourism. Some islands offer resident permits to wealthy business people and retirees. Data processing is an activity being promoted in a number of countries. Barbados with its educated workforce has been particularly successful. Monserrat is developing as an important communications centre.

The development of an export manufacturing sector is being emphasized only on the larger islands which can offer competitive wage rates for garment manufacturers and electronic assemblers e.g. St. Christopher, St. Lucia, St. Vincent, Antigua, Barbuda and Belize. A problem with free zone type development on these islands is the serious impact that the closure of one or two firms can have. These islands can only accommodate 10 - 12 firms employing an average of 300 workers. The closure of one or two can have a serious impact. Barbados suffered in the mid-1980's when 2 or 3 major electronic assembly firms closed.

4.4. Analysis of the European Economies

The small European territories are different in many respects from the Caribbean islands or Pacific territories. Five of the nine (European territories) are attached to mainland Europe. Two others, the Channel Islands and the Isle of Man are a very short distance from the U.K. and are linked to the U.K. politically, economically and culturally. All seven can be classed as wealthy. Tourism and offshore banking are the leading economic sectors due to:

- (i) the very low level of direct and indirect taxation;
- (ii) the proximity of very large wealthy countries with relatively high levels of taxation; and
- (iii) a tradition of stability and secrecy in each of the territories which encourages the growth of offshore

TABLE 11

Per Capita Income and Importance of Various
Economic Sectors in Very Small European Economies

Size	Per Capita Income	Tourism	Banking Finance	Industry	Agric.& Fishing
20 - 50,000					
Andorra	V.L.	V.L.	M.	S.	M.
Gibraltar	L.	V.L.	L.	L.	-
Liechtenstein	V.L.	M.	V.L.	M.	S.
Monaco	V.L.	V.L.	S.	L.	-
San Marino	V.L.	V.L.	M.	V.L.	S.
50 - 120,000					
Isle of Man	V.L.	L.	V.L.	M.	S.
Channel Islands	V.L.	L.	V.L.	M.	M.
Faroes	V.L.	V.S.	V.S.	L.	L.
200,000 +					
Iceland	V.L.	V.S.	-	L.	L.

banking. (Monaco is an exception in this respect as the French control the banking system. This inhibits the growth of offshore banking).

The nature of the tourism varies from territory to territory. Some like Monaco focus on the very wealthy. The Channel Islands and Isle of Man attract lower/middle income tourists mainly from the U.K. Andorra attracts a lot of day trippers from France and Spain.

Apart from tourists some of the territories encourage very wealthy people (millionaires) to establish residence for tax purposes. The Isle of Man, Channel Islands and Monaco are noteworthy in this respect.

An important source of revenue in Andorra is the sale of stamps. Manufacturing is a very important activity in San Marino and Monaco and a reasonably important activity in Liechtenstein and Gibraltar. In Liechtenstein (in Swiss tradition) the emphasis is on precision instruments while ship building and repair is an important activity in Gibraltar. (Gibraltar developed as a naval base and free port over the last couple of centuries!). Much of the industry in Monaco is high tech and staffed by migrant workers from France and Italy. Industry in San Marino is light manufacturing based on imported Italian materials. The Channel Islands has been noted for the efficiency of its agriculture apart from being an important tourist and offshore banking centre.

The other two European territories - the Faroes and Iceland depend largely on fishing. In the Faroes fishing and fish processing account for about 30% of GNP. A small textile industry exports traditional Faroese woollens. There is also some export of machinery and transport equipment - mainly ships, fishing vessels and related equipment. (There are 3 shipyards).

The economy is subject to fluctuations based on the price of fish. The authorities have attempted to diversify the economy by encouraging the growth of industry and tourism. Large subsidies from Denmark have protected the economy to an extent and contributed to the high living standards.

Iceland is dependant on fishing and manufacturing. Fishing and fish processing contribute about 20% of GNP and 75% of exports. Manufacturing (excluding fish processing) is also important - contributing about 20% to GNP. The most important sectors are aluminium, diatomite, fertilizer and ferro-silicone. As with the Faroes fluctuations in the fortunes of the fishing industry have a major effect on the economy.

4.5. Pacific Island Territories

Table 12 outlines the situation in the Pacific Island territories. Two factors are worth noting. The first is

TABLE 12

Per Capita Income and Importance of Various
Economic Sectors in the Pacific

	Per Capita	Tourism	Finance Banking	Industry	Agric.
Population					
0 - 20,000					
Cook Is.	L.	M.	S.	S.	M.
Yap	M.	S.	-	-	L.
Nauru	L.	-	-	L.	-
Nive	V.S.	-	-	-	V.L.
Nr. Mariana Is.	L.	V.L.	-	S.	M.
Palau	M.	M.	-	S.	M.
Tuvalu	V.S.	V.S.	S.	V.S.	L.
20 - 50,000					
Marshall Is.	M.	M.	-	V.S.	V.L.
American Samoa	L.	S.	-	L.	M.
50 - 120,000					
F.S.M.	M.	S.	-	-	L.
Guam	L.	L.	-	M.	M.
Kiribati	V.S.	V.S.	-	V.S.	V.L.
Tonga	V.S.	S.	-	S.	V.L.
Vanuatu	V.S.	S.	M.	S.	L.
120 - 200,000					
W. Samoa	V.S.	V.S.	S.	S.	V.L.
French Polynesia	L.	L.	-	M.	S.
New Caladonia	L.	M.	-	M.	V.S.
200,000 +					
Solomon Is.	V.S.	V.S.	-	V.S.	V.L.
Source	:	World	Year	Book	1991

the very strong correlation between prosperity as measured by per capita income and tourism growth. The other feature is the very low level of industry development with a few exceptions - Nauru with its phosphates and American Samoa which has major fishing canning activity. Guam which is a major distribution centre for the Pacific Islands has a number of consumer oriented industries e.g. beer and mineral water bottling. There is a tendency also for industry to grow in importance as the population increases - if Nauru and American Samoa are excluded. Tuvalu generates significant income from postage stamps (1 M Australian \$ in 1989).

4.6. Other Small States

The seven territories spread throughout Africa and Asia also show a strong correlation between tourism and well being (Table 13). The Seychelles with (medium) and Macao with (large) per capita incomes have the largest tourist industries. There is also a reasonably good correlation between population size and the importance of the industrial sector.

4.7. Conclusions

Among the list of the 52 smallest (in population terms) territories in the world, Yap state with 10,000 people ranks among the smallest - only Nauru and Niue are smaller. For most of these economies tourism is the best prospect from a

development viewpoint. There are a few exceptions - Iceland, Faroes and Monserrat where the climate or terrain is unsuitable. However, there are no such obstacles in Yap. On the basis of this survey, tourism must be considered a good development prospect in Yap. Based on the survey the potential for industrial development in Yap is very low. In most of the economies surveyed outside Europe, industry is unimportant - and the smaller the economy the less important is the industry sector. Yap is very small and outside Europe. Therefore, the prospects for industrial development is very poor.

TABLE 13

Per Capita Income and Importance of Various Economic Sectors in very small Asian/African Economies

Size	Per Capita Income	Tourism	Banking Finance	Industry	Agric.
50 - 120,000					
Seychelles	M.	L.	V.S.	S.	S.
Sao Tome	S.	S.	-	S.	L.
Mayotte	S.	V.S.	-	-	V.S
200,000 +					
Macao	L.	L.	S.	L.	S.
Equatorial Guinea	V.S.	-	-	M.	V.L
Djibouti	S.	-	M.	M.	S.
Maldives	S.	M.	V.S.	M.	L.

CHAPTER 5

INTERNATIONAL SERVICE ACTIVITY

5.1. Introduction

For many years the focus in economic development has been producing goods to increase wealth. Services was considered as the "other" activity i.e. what was left over after primary (mining, fishing, forestry and agriculture) and secondary (manufacturing, construction, utilities). Primary and secondary industries were considered the basic industries which determined the level of activity in a country or region. The service sector was considered non-basic or dependant on the nature and scale of basic industry. It was there to service local needs and had no multiplier effect and was considered a non-traded activity.

The basic industries on the other hand (especially agriculture and manufacturing industries) produced goods for national and international markets. These basic industries were able to maintain self-sustaining growth independent of a particular area and provide a significant multiplier effect in the local/regional economy. A strong manufacturing sector in particular could support a large service sector. Accordingly there had been a tendency to equate economic development with manufacturing development.

The conventional wisdom in economics however has been overtaken by events - especially in the last 20 years. Today services are being increasingly traded. International rules and regimes for overseeing and facilitating such trade are the subject of negotiation in every international trade organisation - GATT., EC etc.

5.2. The Scope of International Services

Virtually every service activity can now be classified as international in one sense or another. Many aspects of retailing have an international dimension. The most obvious example would be duty free shops. Mail Order firms which can also be regarded as retailers often cater for an international market. The world's first duty free shop at Shannon has a large mail order section. The larger stores in the world's major capitals service an international market as do smaller specialized stores and general stores in tourist areas.

Wholesaling and distribution is also an international activity. All of the earlier (pre 1960) free trade zones were primarily wholesale and distribution centres. (The manufacturing or industrial free zones are a recent phenomenon). The free trade zones or cities that developed in the Middle Ages in the Mediterranean and the cities of Northern Europe, and more recently Gibraltar, Hong Kong and

Singapore were important trade and distribution centres.

Hawaii and to a lesser extent Guam are major wholesale and distribution centres for all the island nations of the Pacific.

Many personal services are aimed at an international clientele. The rapid expansion of international tourism has stimulated a rapid growth in demand for a whole range of personal services - the most obvious are hotels and restaurants but every aspect of personal service is involved. Tailors from Hong Kong and Singapore have come to Europe measuring and supplying customers with "made to measure" clothing. Medicine has become international. Clients from the Middle East go to London for medicare provided by Indian doctors. American companies manage and run hospitals in Saudi Arabia. Related to the issue of medicine is the care of particular sectors or groups of people. Many smaller towns in the U.S. are making special efforts to attract retired people. The reasons are (i) their spending power provides a stimulus to the local economy and (ii) these people make very few demands on infrastructure or other services. A number of small countries are targetting wealthy business people with very low taxation levels. Monaco, the Isle of Man, the Channel Islands are obvious examples.

Professional services have expanded in scope and are supplied on an international basis to meet the requirements

of multi-national industry. The most obvious example is the accountancy profession. All the major accounting partnerships have a worldwide network of offices. Parts of the legal profession are moving in a similar direction as is advertising, public relations, market research and forecasting.

Construction activity is becoming more international. A major issue in U.S./Japanese relations is the right of American contractors to bid for Japanese construction contracts. Many of the services related to construction are also international - engineering and architectural consultancy, project management etc.

Finance is another area which has become international. Included in this sector is various forms of banking including commercial banking; merchant banking; portfolio management; insurance and re-insurance; leasing and brokerage activities. Many small islands have become major offshore banking centres - including the Isle of Man, Channel Islands, Caymen Islands, Bahamas and Netherland Antilles. Over twenty per cent of Euro market bond activity is accounted for by offshore banking centres including those islands already mentioned.

Apart from traditional activity a whole new range of service sectors have developed in recent years as a result of the electronic/information revolution. The Caribbean has become

a major data processing centre for the United States. Software sales is a major export activity for many countries.

5.3. The Nature of International Services

Traditionally services were a very local and personal activity. The family banker, doctor or legal advisor was a family friend and services were provided in a very discreet and personal manner. In recent years however services have become much more impersonal and international. What has made the revolution in the service industry possible is the developments in telecommunications and international travel.

Service exchanges can take place in one of three ways (i) via telecommunications or other forms of remote communication; (ii) supplier coming to the consumer; or (iii) consumer coming to the supplier.

Examples of telecommunications transactions include: offshore banking where many clients never have any personal contact with their banker; data processing where, for example, information relating to airline bookings, hospital records and many other activities in the United States is keyed into computer systems by people on Caribbean islands. Examples of other forms of remote communications include mail order - where as the name suggests, goods are bought and sold via mail.

Examples of suppliers coming to consumers include: international accountants; consulting engineers; software specialists and various types of specialist service engineers, including engineers coming to Yap to service generators. In most cases where suppliers travel it is a "business to business" service - rather than business to personal consumer.

Examples of consumers going to suppliers include tourists, hospital services and education. The consumer in this case is usually an individual or personal consumer. Retirement complexes and residential areas for wealthy expatriates are further examples of consumers moving to a particular location.

5.4. The Growth of Services

Services is at the heart of a major revolution which is taking place, especially in the developed and developing countries of Europe, North America and East Asia. Automation in industry and agriculture is having the effect of reducing the number of people working in these sectors (agriculture in particular) or at least slowing down the growth of employment (manufacturing). The possibilities for automation and productivity growth in the service sector are limited, consequently the service sector has been the main source of employment growth. Tables 14 and 15 illustrate this point.

TABLE 14

Employment Growth 1972 - 1983

	U.S.A.	Germany	Australia	Finland	France	Japan
Industry	15%	12%	35%	38%	32%	60%
Services	35%	35%	48%	50%	38%	60%

Source: OECD Statistics from Services in a Global Market by Jaques Nusbauner.

TABLE 15

Activity Growth per person - 1972-'84

	U.S.A.	Germany	Australia	Finland	Belgium	Japan
Industry	11%	42%	40%	56%	70%	70%
Services	5%	20%	12%	22%	10%	25%

Source: OECD Statistics from Services in a Global Market by Jaques Nusbauner.

Recorded trade in services is now half that of recorded merchandize exports in major trading countries. In countries like Great Britain which has a very strong international service sector ("City of London" etc), service exports are a major balance of payments item.

The service sector has been increasing in importance since the war. As an economy develops the service sector increases in importance as an employer. Table 16 illustrates this point.

TABLE 16

Employment by Sector

	Services		Industry		Agriculture	
	1961	1981	1960	1981	1960	1981
Low income countries	14%	15%	9%	15%	77%	70%
Middle " "	23%	34%	15%	21%	62%	45%
Industrialized " "	44%	56%	38%	38%	18%	6

Source: World Bank Development Report.

5.5. Location Characteristics

Physical factors play an important role in determining location of manufacturing activity i.e. proximity to raw materials (agri-processing) or deep water port locations (steel) or low cost energy (aluminium smelting) or proximity to major markets (motor assembly). Other factors such as investment climate, operating cost considerations and availability of labour are also important.

With international services, physical factors are less relevant in determining locations. Man made factors such as tax structure, legislative environment, telecommunications facilities, international air services, good living conditions are more important. This applies in particular to services which are delivered via telecommunications (data processing) or where the provider of the service comes to the customer (consultancy, servicing machinery).

5.6. Tax Incentives

Section 2.5.4 of the compact agreement provides that "Those governments (Palau, Marshall and F.S.M.) can impose tax upon income derived by a resident of Palau, Marshall Islands or F.S.M. from sources outside those states in the same manner and to the same extent as those governments impose tax upon income derived from within.

Any individual resident of Palau, Marshall Islands or F.S.M. who is subject to tax by the United States government on income also taxed by the government of Palau, Marshall Islands or F.S.M. shall be relieved of liability to the government of the United States for tax which would otherwise be imposed on such income.

"Resident" shall be deemed to include any person physically present for a period of 183 days in any year.

The authority to tax the individual resident on income from outside sources shall rest with the government in whose jurisdiction such individual was physically present for the greatest number of days in any year.

The above section is inconsistent with the United States IRS code which applies stricter criteria (than 183 days in F.S.M.) to determine when a U.S. citizen qualifies as a resident abroad.

The IRS code allows a U.S. resident living abroad to exclude a maximum of 70,000\$ earned income from U.S. taxes. The compact agreement imposes no such limit.

The preamble to the compact "affirms the common interest of the U.S. and the peoples of F.S.M. in creating close and mutually beneficial relationships". It also affirms the interest of the U.S. government in promoting economic development and self-sufficiency.

Article 111 Section 1 of the by laws of the Board of Advisors of the Investment Development Fund allow for assisting "the government of the F.S.M. in the design and implementation of programmes to attract investment and productive participation in economic development in the F.S.M. by citizens and commercial enterprises of the U.S.".

Legal opinion in Yap (the Attorney General's Office) states that where the compact rules and the U.S. federal tax code

are "manifestly inconsistent" the intent of the compact shall prevail.

This legal opinion should be further researched because if it holds up, F.S.M. and Yap state can offer very attractive tax concessions on income earned worldwide to any U.S. citizen who resides in Yap for 183 days, or who establishes a Yap residency qualification by other means.

5.7. Yap as an International Service Centre

In considering Yap state as an international service centre two issues arise. The first is whether or not such activity can operate successfully in Yap under existing conditions or with limited modifications to the legislative or infrastructural environment. The second issue is whether or not such an activity is acceptable or desirable in Yap.

Given Yap's isolated location (i.e. the high cost and low frequency of international transport and limited telecommunications services) the possibility of developing international service activity there is limited. On the other hand, because of Yap's very small size it requires only a very limited amount of service activity to ease or solve it's economic problems.

Yap, however, has two important advantages for businesses considering establishing an international service activity there (i) Yap has a stable currency (U.S. dollar) which is

internationally acceptable and (ii) personal and corporate taxation are very low - less than 10%.

Apart from its isolated location, other disadvantages which Yap faces in attracting international service activity include (i) inadequate or non-existent support services e.g. office supplies, repair and maintenance of office equipment; (ii) lack of accommodation - both living and office; and (iii) inadequate recreational facilities.

The type of activity which might successfully locate in Yap includes:-

- (i) Services which are delivered via remote telecommunications (e.g. data processing, some forms of offshore banking) and which are largely self-sufficient in terms of supplies and maintenance.
- (ii) Services which would use Yap as an accommodation and tax base but which are provided by means of the supplier going to the consumer. Obvious examples include individual consultants in a wide range of disciplines who work in East Asia or the West Coast of the U.S./Canada.
- (iii) Services or activities which would view the isolation and tranquility of Yap as an advantage - writers, artists and composers. Audio or video recording studios might function effectively in Yap if the circumstances were correct.
- (iv) Retirement homes - which could be regarded as a form

of tourism. Many small relatively isolated communities in the developed world (e.g. U.S. and Europe) are trying to attract retired people in order to inject spending power and provide an economic stimulus. Florida and Arizona are probably the best known examples of states or areas benefitting from an influx of retired people. Japan might be a target market.

- (v) Tax havens. A number of very small countries in Europe and elsewhere offer residence permits to wealthy foreigners who in turn pay very low rates of tax. Of course a low rate tax on a large income still represents a significant income for the country concerned e.g. 10% of 100,000\$ is 10,000\$. Yap with its income tax rates under 10% could prove attractive to some foreigners.

Unlike industrial activity, services make few demands on infrastructure in relative terms. This applies in particular to demands on electricity, water, effluent facilities, transport infrastructure.

Service activity can make a significant contribution to tax revenue. This applies in particular to the types of service outlined in the preceding paragraphs which are by and large tax haven type services. Each person (consultant or retiree) would earn an income in excess of 50,000\$. Assume (i) an average income of 75000\$; (ii) an income tax rate of

10%; (iii) an indirect tax rate of 10%; and (iv) expenditure in Yap of 25000\$ p.a. The tax yield per person would be as follows:

Income tax	7500\$	(10% of 75,000\$)
Indirect tax	2500\$	(10% of 25,000\$)
Total tax	10000\$	per person annually.

The population impact of such activity would be small. Retirees in particular have few dependants. Assuming a dependency ratio of 1:1 the population impact of 500 "tax haven" or international service personnel would be 1000.

The employment impact of such a development is difficult to predict. There would be some direct employment - consultants might employ assistants (e.g. consulting engineers employing draughtsmen) or secretaries. Retirement homes and other residents would create direct employment for building workers (in the construction phase), gardeners, maintenance personnel etc. The increased spending power of these new residents would create new employment opportunities in the traditional service sectors like retailing, laundry, repair. Overall it is possible that 500 "foreign services personnel" in Yap could result in the creation of about 500 jobs for Yapese.

The impact in terms of technology transfer is difficult to predict but it is reasonable to assume that there would be some positive impact in terms of training Yapese and

providing them with knowledge and contacts to succeed in export markets.

There would be some impact on tourism. With 500 foreign services personnel living in Yap, friends and relations would visit - say an average of 1 - 2 per person. This would result in an additional 500 - 1000 tourists - a 10-20% increase on existing numbers.

There is no reason to believe that 500 foreign service personnel would have a serious impact on culture or traditions. Much depends on the type of people who come, where they live and work and the care taken by both groups (foreigners and Yapese) in understanding each other. There is a large area of land between Colonia and the airport with no Yapese villages which could be developed to accommodate foreigners. Access to selected beaches can be provided and suitable arrangements for water sports and other recreation activities can be made.

5.8 Conclusion

The development of an international service sector with up to 500 foreigners would make a significant impact on the Yap economy and contribute significantly to the major economic objectives of increasing the revenue and creating employment opportunities for Yapese. Properly planned it should be

compatible with Yapese culture and traditions.

It is not possible at this stage to quantify the costs involved (promotion, infrastructural etc.) of developing such a sector - or who would carry these costs (Yap state, private developers or individual investors). Neither is it possible at this stage to judge the "market place" reaction to proposals to develop an international service sector in Yap i.e. how would the Japanese or U.S. retirement community or individual consultants in the U.S. West Coast (or elsewhere) involved in international business, or tax "exiles" or writers, artists, composers etc. react to the idea.

Given that (i) the potential benefits of such a proposal are significant; (ii) the fact that very small numbers of "customers" are required to make the scheme successful (1-200 from the millions of Japanese retirement community and 50-100 individual U.S. West Coast international consultants and 30-50 authors/artists etc.); and (iii) a number of other small island states in the Caribbean and the Pacific have achieved some success in developing international service sectors, the idea is well worth considering in a Yapese context.

5.9 Recommendations

Research should be undertaken to establish the validity and scope of the compact tax concessions - can they be extended to corporations as well as individuals? Can they be reversed by further U.S. government rulings? Do the tax concessions last beyond the year 2001? What level of interest exists in the U.S. in such tax concessions? What groups in the U.S. will find these concessions most attractive - retirees, authors, artists, individual consultants or contractors working overseas e.g. oil exploration personnel; banks; financial institutions; others?

Apart from tax concessions the research should also establish what other facilities such individuals or companies would require - telecommunications, offices, residential facilities, support services etc.

On the basis of such research it should be possible to evaluate the costs and benefits of promoting and developing international services in Yap and whether or not such activity should in fact be developed.

INDUSTRIAL DEVELOPMENT

Industry can be divided in a number of ways - heavy industry, light industry, labour intensive, capital intensive, high tech. etc. For the purpose of this report the most relevant classifications are (i) import substitution and (ii) export oriented manufacturing, including export processing zone development.

6.1. Import Substitution

Many countries when starting the industrial development process begin by producing basic consumer products for the domestic market. Items like cement blocks and bread are among the first products produced - they can be produced on a very small scale and need very little artificial protection because of the high transport costs involved. Other consumer products however (e.g. clothing) require a reasonably large market to benefit from scale economies and some artificial protection in the form of tariff protection against imports.

Yap state has a cement block unit and a bakery. However, because of the very small size of the market it has not been possible to progress much further. Yap has one of the

smallest markets in the world. It has been suggested that instead of considering Yap as a domestic market with 10,000 people, the whole Federated States of Micronesia (population about 71,000) should be classed as the domestic market. Projects could be divided between the four member states on a pro rata basis.

Apart from the issue of whether or not the F.S.M. market is big enough to support a range of domestically produced consumer products, there is another more fundamental problem to overcome before regarding F.S.M. as a single market - transport. Within F.S.M. Truk is the nearest state to Yap - and Truk is over 1500 Km west of Yap proper. Ponape and Kosrae are further west. There is no transport service (air or sea) linking the four states. Movement of goods and people between Yap and the other states is via Guam. Until such time as a reliable efficient low cost transport service links Yap directly with the other F.S.M. member states it is premature to consider Yap as part of the F.S.M. domestic market. All indications are that such a service is not viable.

6.2. Export Industry

The development of an export industry sector has been suggested as a possible solution to Yap's development problems. As Yap has no raw materials for processing (except fish) and no skills the idea is that the export

- 15 -

industry would process imported raw materials and be of a "low tech" character i.e. garment manufacturing. The advantage of duty free access or at least preferential access to the U.S. market was cited as an advantage.

The success of the Mauritius EPZ programme and similar programmes in Sri Lanka, Taiwan, Hong Kong, Malaysia, Singapore and elsewhere has created interest in many developing countries in the EPZ concept - and Yap is no exception.

6.3. EPZ Characteristics

The characteristics of a Free Trade Zone can be summarised under five headings:

(a) **Geographical Area**

A zone is a limited geographical area. It is fenced in and possibly patrolled. The level of security varies considerably with the location of the zone, the type of goods passing through it, the reputation of the zone users and the attitude of the Governing Authority.

(b) **Importation**

Goods of any description can usually be imported into the zone Free of Customs and other duties and

formalities, provided they are not prohibited by law (drugs, arms, pornography) or from a destination covered by a trade embargo.

(c) **Activities Permitted**

The handling, storing and manufacture of goods and the provision of internationally traded services, are encouraged in most zones.

(d) **Shipment of Goods**

Goods held in a Free Zone are normally exported. Some countries insist that all goods are exported. In some European zones and free trade zones of the United States, the bulk of the goods from the zone are imported into the host country. Goods cannot normally be consumed within the zone without the payment of Customs and other appropriate duties.

(e) **Legal Status**

All laws of the host country, except those relating to Customs, usually apply in the zone. Normally the Customs Authorities have control over the movement of goods within the zone and between the zone and the ports of entry-exit.

The Zone Organization is responsible for the overall operation of the zone. Other government agencies are usually responsible for the implementation of other

legislation (e.g. Central Bank or currency control).

6.4. Requirements for Successful EPZ Development

Attracting export oriented foreign investment is a very competitive business worldwide. This is particularly true of "good quality" investment. A free zone, especially in the early stages of development, helps to improve the image of a country from a foreign investor viewpoint. It is a particularly useful instrument where there is a major bureaucracy controlling imports. The type of industry that will benefit most from a free zone situation is that which requires regular (weekly) supplies of materials from overseas. Examples include clothing, textiles, leather, plastics, sports goods, consumer durables, light engineering and electronics.

The designation of an area as a free zone does not automatically make an area attractive as a location for foreign export industry investment. The basic conditions for attracting foreign investment must exist, otherwise the investment will be of a lower quality than expected or worse, the investment will not materialise.

In this respect the key considerations are:-

- (i) Political and economic stability: For most investors this is the most important consideration.

Essentially what most investors look for is a consistent economic policy favouring private enterprise, foreign investment and export development and a politically stable environment.

- (ii) Good transportation and communication facilities:
For most free zone industries (eg electronics, light engineering and clothing) good air connections are important. This means adequate air cargo capacity and services to all major destinations. For international service activities, good telecommunications facilities are very important.
- (iii) Good Physical Environment: Most free zone investors are international companies with a good reputation. As such they will look for a pollution free environment with high standards of physical planning.
- (iv) Reliable Infrastructure: A reliable water and electricity supply are very important.
- (v) Market Access: Preferential access to a major market is a very big advantage eg South Pacific countries vis a vis Australia and New Zealand: Caribbean countries vis a vis US and Canada, ACP countries vis a vis EEC.
- (vi) Support Services: Basic support services such as banking and freight forwarding are essential in all zones, if a zone is seeking higher skilled engineering or electronics activities, the existence of good quality sub-contractors and spare parts suppliers is an advantage.

- (vii) Labour: The cost and productivity of labour and the range of skills will, more than anything else, determine the type of industry which will be attracted to the zone.
- (viii) Good Organisation: An organisation which can (a) deal efficiently and quickly with investors applications and (b) assist investors once approved in the establishment phase is important. Very often the difference between two locations is marginal and the location decision will hinge on minor considerations. The overall impression made by the Zone Organisation on the investor, can be decisive in such circumstances.
- (ix) Urban Environment: If a free zone hopes to attract good quality light industry and expatriate personnel, a well developed urban environment is important.
- (x) Existing Industry: It is an advantage both to the firms setting up in the zone and the host country that a certain amount of industrial development should have already taken place in or near the proposed zone.
- (xi) Incentives: The principles involved in designing an incentive package are that they should be:
 - (a) simple and straightforward to avoid confusion and misunderstanding;
 - (b) certain and unalterable for each enterprise to convey a feeling of security and goodwill;

- (c) be at their highest in the initial years when confidence in the zone is low and physical handicaps are greatest;
- (d) be flexible in their application to give the zone organisation leverage in negotiating with investors of desirable projects. In most free zones the incentive package is built around tax reliefs on profits and duty free importation of materials and equipment.

6.5 Yap as an EPZ Location

Yap lacks many of the facilities needed to develop as a successful export processing zone location - or to support any form of export industry based on the processing of imported raw materials.

The only positive features in Yap from an EPZ development viewpoint are (i) political stability and (ii) market access to the U.S. - this means quota free but not duty free access to the U.S. market.

Quota free access to the U.S. market for garments is a very artificial advantage and a very doubtful advantage on which to base any long-term development plans.

Yap lacks good transport and communications facilities. A few (2 or 3) ships a month call at Yap. There is an air service 3 times weekly to Guam. The prospects for improved services are limited. Air services to Guam might rise to 5/6 per week as tourism develops.

Yap does not have the infrastructure (water and electricity) to support EPZ development at present. Any significant expansion of industry would require an expansion in generating capacity and water supply systems. One factory (King Tex) resulted in a 20% growth in peak electricity demand.

Yap lacks the basic support services which most free zone firms require. These include (i) freight forwarding; (ii) office supplies and basic repair and maintenance; (iii) financial services - the two banks are limited in the facilities they can offer (eg. very high collateral is required for loans).

The availability of labour is limited as is the range of skills. Labour costs in Yap are higher than in many competitor locations e.g. South Asia.

6.6 The Desirability of EPZ Type Development

In considering the desirability of any form of development in Yap the following considerations are relevant: (i)

contribution to government revenue; (ii) use of scarce resources; (iii) employment created and impact on culture and tradition.

A typical EPZ factory makes garments (over 50% of EPZ factories worldwide make garments). Output per worker averages 8400\$ annually - assuming it operates at full production. Value added in the zone is around 30 - 35%. The major expense item is wages. Thus a factory with 500 workers has a profile along the following lines:

Annual output	4.2MS	(500 x 8400)
Wages	1.0MS	(500 x 410\$ p. week x 50 weeks)
Electricity, water	0.2 MS	
Other expenses (incl. profit)	0.3MS	
Raw Materials (all imported)	2.7MS	

In Yap the government receives a gross tax (1.5% of turnover), tax on wages (about 3% on taxable wages of 1000\$ per employee) and tax on imported raw materials (about 1.5%). The tax yield therefore is

Gross tax (1.5% of 4.2MS)	63,000\$
Import tax (3% of 2.7MS)	41,000\$
Wages tax (3% of 0.5MS)	<u>15,000\$</u>
Total tax	119,000\$

Less the subsidy on water and electricity which could amount to 50% of 200,000\$ or 100,000\$.

The net contribution to government revenues on the basis of the above assumptions is 19,000\$ annually. There is no precise figure available for the extent to which the government subsidizes electricity or water, but it is believed to be significant. It should also be noted that these figures are not from King Tex but are typical of the output figures and wage levels in the garment industry in EPZ's

The EPZ factory in Yap (King Tex) makes a significant demand on water and electricity both of which are scarce, expensive to produce and subsidized in Yap.

EPZ factories create significant numbers of low paid jobs for women - 80% of EPZ factories employ women in low skilled jobs for low wages (20 - 50\$ per week). King Tex in Yap did create 500 such jobs - but only 100 went to Yapese girls. The others went to Sri Lankans or Chinese. There are a number of explanations for this employment mix (i) the Chinese/Sri Lankans are more productive and therefore cost less per unit of output; (ii) Yapese lacked experience in factory work and were therefore less skilled and disciplined (punctuality etc); (iii) Yapese did not like factory work.

The value added in Yap would be gross output 4.2M\$ less raw material imports 2.7M\$, less imported content of electricity (cost of oil etc.) 0.1M\$, less profits repatriated and other expenses 0.3M\$ less % of wages paid to foreign workers

(say 40% of 2000\$ or 800\$ per worker) 0.3M\$. The value added in Yap therefore amounted to 0.8M\$.

The indirect benefits of EPZ development in Yap would be negligible. Possible inputs such as packaging zips buttons etc. could not be sourced in Yap. Even such basic services as office supplies, or equipment repair would take years to develop because of the very small size of the market in Yap. Local purchases, except for water and electricity and some basic domestic requirements, would be zero.

6.7. Conclusions

Yap does not have the facilities or services necessary to support export processing zone type development at present - nor will Yap have such facilities in the foreseeable future.

EPZ type development will make very little contribution to government finances, will use scarce resources and will not generate significant employment opportunities for Yapese.

6.8. Recommendations

EPZ type activity should not be considered further as a development option for Yap.

CHAPTER 7

TOURISM DEVELOPMENT

7. 1. Introduction

To date two reports on tourism development in Yap have been completed - "A Comprehensive Tourism Plan", dated August 1985 by Richard Dunlop and "A Tourism Marketing Plan for Yap State" by Carolyn Cain, dated June 1990.

Tourism is recognised in the Yap Development Plans as a sector which can earn foreign exchange and which a small island economy like Yap can engage in relatively easily. A location close to Guam, Saipan and Palau, all of which are major tourist destinations is an obvious advantage. Yap's main attraction (as is Palau's and Saipan's) is its water sports potential.

The State, according to the plan, recognises the need to develop tourism in a selective and culturally and environmentally appropriate way. Possible approaches are suggested: (i) isolated tourism development away from populated areas; (ii) targetting special interest groups whose activities are comparable with local lifestyles eg. water sports enthusiasts or cultural interest groups; or (iii) restricting tourism development to areas where visitors are welcome.

Implementation of an efficient tourism policy requires, according to the plan, co-ordination by government and the private sector. Co-operation with other neighbouring islands - particularly Guam and Palau is also important.

7.2. Yap - Some Comparisons

TABLE 17

	<u>Tourism Arrivals</u>			
	Guam	Northern Marianas	Palau	Yap
1980	292000	117000	5000	1500
1988	586000	233000	18000	2300
1989	700000	268000	20000	3200
1990	800000	300000	23000	3900
Populatiion	120000	19000	15000	10000
Rooms (1988)	3740	1824	350	26
Daily Exp.				
per tourist (1988)	185	239	108	100
Average No. days	4.5	3.6	3.5	3.0
Growth 1980/90	174%	156%	360%	160%
Number of tourists				
per 100 population	6666	15789	1533	360

Table 17 shows the relative position of Yap as a tourist destination. All the indications are that the tourism

potential in Yap is at least as good as that of Palau - on that basis Yap should have 15,000 tourists in 1990 - a 316% increase over the actual figure of 3600.

Even within the FSM the tourism performance of Yap is inferior to that of Truk or Pohnpei.

	No. of Rooms	No. of Hotels	No. of Visitors (1987)
Kosrae	33	5	1870
Pohnpei	126	7	5670
Truk	87	2	5060
Yap	26	2	2140

7.3. Yap - Potential

It is not the task of this report to examine in detail the tourism potential of Yap. However, there is enough circumstantial evidence to suggest that (i) the potential is significant and (ii) can be realized without major difficulty.

The Japanese outbound market is the fastest growing in the world. The long term forecast is for the present relatively high growth rates to continue. Japan has been a very important market for Guam and the Northern Marianas. There is evidence that both destinations are reaching saturation point and the scope for further growth is limited.

Given (i) Yap's proximity to Guam and the Marianas Islands (Yap is closer than Truk, Pohnpei, Kosrae, Palau or the Marshalls); (ii) its location between Guam and Palau; (iii) Yap's growing reputation as a diving centre; and (iv) a desire among holiday makers for new destinations, Yap's potential must be considered significant.

7.4. Indirect Benefits of Tourism

Tourism not only brings about growth and development in its own right, it also facilitates growth and development in other sectors of the economy. Tourism provides the main payload to improve air services. It also results in the provision of good hotel and recreation facilities. Increased air connections enhance the attractiveness of any location including Yap as a base for export oriented manufacturing or service activity. Increased air services means increased air freight capacity - which in the case of Yap can mean increased exports of fresh fish to Japan.

Improved hotels and other tourist related facilities, which will come with tourism development, will also make Yap more attractive as a base for international services.

7.5. Potential Benefits

The potential impact of a 100 bedroom hotel is as follows:-

Direct impact	tax revenue 529504\$
	employment 215

Indirect impact:

(assuming multiplier

effect of 0.3)	tax revenue 164851\$
	employment 72
	tax revenue 714355\$
	employment 293

The total spending by tourists is estimated at 5.256MS. Direct tax revenue excluding airport tax is estimated at 486504\$ or 9.3% of tourist spending. The total direct "tax take" could probably be increased to about 15% of tourist spending or 713654\$, plus airport tax of 63000\$, by increasing selective tax rates or introducing new tax rates. A hundred bedroom hotel would create a peak electricity demand of 50 - 100 kw.

The above figures are for illustrative purposes only and are designed to show that tourism development is much more attractive than EPZ development in terms of (i) electricity used (much lower in hotels) and (ii) tax generated (much higher in hotels).

Table 18 below sets out a comparison between a 100 bedroom hotel and a 500 worker garment factory:

	100 Room Hotel	EPZ Factory 2500 M2
Gross Sales	5.256MS	4.2MS
Employment Total	215	500
Yap employees	150	100
Wages per employee p.a.	7000S	2000S
Value added in Yap	3.151MS	0.8MS
Net tax to Yap State	529504\$	19000\$
Multiplier	0.3	Negligible
Scope for increased tax	good	very little
Location	some flexibility (Yap or outer islands)	Yap proper
Skill content	good	low
Suitability of Yap	good	poor
Key factors for success	weather, quality ambiance	cost/ productivity

The basis for the hotel calculations are set out in an Appendix to this chapter. The factory calculations are in Chapter 6.

7.6. Progress to Date

In the last two years the private sector has made significant progress in relation to tourism development. Three new

hotels have been opened, together with two new restaurants. Visitor arrivals have increased by 70% in the period 1988-90 (from 2300 to 3900). A further increase to 4900 looks possible in 1991. Further developments are planned in the next year or so. Hoteliers are making serious efforts to market their products overseas.

However, the 1990 Tourism Marketing Plan noted that government policy in relation to tourism was "passive" or "hesitant". Very little has been done to market Yap. There is no specific budget allocation, no paid advertisements and no public relations. Yap never participated in any trade shows. There is no co-ordination of marketing with tourist offices of neighbouring states.

There is no evidence that the government has adopted a more active approach in 1991. The staff of the tourism department is 2. There was no evidence of any concerted marketing effort. Some minor initiatives are being planned e.g. information booth at the airport. The Tourism Commission provided for in the Yap State legal code is "non-operative". The budget allocation for tourism in no way reflects the importance of tourism within the economy or its potential for growth.

7.6. Recommendations

The government in consultation with private sector interests should draw up an action programme for the industry and allocate a capital and promotion budget which is in line with (i) its importance (it is the major independent economic activity and principal foreign exchange earner and (ii) potential (it probably has more growth potential than any other sector including fishing). The recommendations in the Tourism Marketing Plan could form the basis for such an action plan.

Appendix to Chapter 7

Note: These figures and "order of magnitude" for illustrations and comparative purposes.

100 Bedroom Hotel - Potential Impact

Hotel Revenue

Potential bednights 36500 x 2 (double occupancy)	73,000
Actual bednights (60% occupancy)	43,800
Gross revenue - 80\$ per bednight	3,504,000
Imports 40%	1,401,600
Local supplies 20%	700,800
Salaries/wages	1,000,000
Other expenses plus profit	401,600

Other Local Revenue

Local sales 40\$ per bednight	1,752,000
Imports (40%)	700,800
Local Supplies (20%)	350,400
Salaries/wages	500,000
Other expenses plus profit	200,800

Tax Revenue

Hotel Taxes

Hotel tax 5% of Revenue	175,200
Gross tax 1.5%	52,560
Import duty 4%	56,064
Salaries/wages tax 3%	30,000
Gross tax on local suppliers	<u>10,512</u>
Sub-total :	324,336

Local Sales Taxes

Sales tax 5%	87,600
Gross tax 1.5%	26,280
Local suppliers gross tax	5,256
Import duty (4%)	28,032
Salaries/wages (3%)	<u>15,000</u>
Sub-total :	162,168
Airport tax 10%	63,000
Grand total	549,504
less water. electricity subsidy	20,000

Employment @ 7000\$ average

Hotel	143
Ancilliary	<u>72</u>
Total	215

Multiplier effect 0.3

Additional tax receipts $549,504 \times 0.3 = 164,851$

Total tax receipts $549,504 + 164,851$ or 714,355

Additional employment $225 \times 0.3 = 68$

Total employment - 293

Assumptions

- (i) Yap sales tax of 5% introduced.
- (ii) Gross tax of 3% remains - 50% or 1.5% of gross receipts to Yap State.
- (iii) Import duty - average 8% as cigarettes, liquor etc. represent a considerable % of hotel imports. Therefore, half or 4% goes to Yap State.
- (iv) Salaries/wages - 6% tax remains - 3% goes to Yap State.

Total spend by tourists is $43,800 \times 120$ or 5,256,000. The total tourist "tax take" excluding airport is 549,504\$ or 10.5% of tourist spending.

The total tax take could probably be increased to 15% of tourist spending or 713,664\$ plus airport tax of 63,000\$ by increasing selective tax rates or introducing new taxes.

CHAPTER 8

AGRICULTURE/FISHING

Agriculture and fishing at subsistence level is the major source of employment in Yap State (See Table 19).

TABLE 19

Employment Breakdown

	Yap Proper			Outer Islands			Total		
	M	F	T	M	F	T	M	F	T
Total									
Workforce	1501	1274	2775	650	888	1538	2151	2162	4313
Subsistence									
Sector	363	810	1173	459	858	1317	822	1668	2490
2 as % of 1	24%	64%	42%	71%	97%	86%	38%	77%	58%

On the outer islands subsistence activity is almost the only source of employment outside government (there are 15 private sector employers/employees on the islands).

Despite the large number of people engaged in fishing and agriculture Yap is still a major food importer (27% of total imports or 2.9MS in 1990).

At present there is virtually no commercial agriculture practiced in the state. There have been some attempts to develop commercial activities - notably poultry and pigs without success. The government is conducting research at present on vegetable farming and fruit production.

There has, however, been some progress in developing commercial fishing in recent years, mainly through the efforts of the Yap Fishing Authority.

8.2. Fishing

Fishing is regarded as the most promising long-term growth opportunity in Yap. As a result the government has invested considerable resources in the development of the industry in recent years - 84% of its total capital investment in economic activity in the period 1987 - '90, or 3.42MS. A further 0.5MS is being invested in 1991 and 1.15MS in 1992.

There are two major fishing projects under way. The first began in 1988 when a new complex including a workshop, office, storage, ice-making facility, slipway and dock was donated by the Japanese. The Yap Fishing Authority now has two 52ft long liners built in 1989 four 28 ft vessels and one 33 ft vessel. Fifteen people are employed on shore together with 60 fishermen.

Until 1989 the emphasis was on trawling and bottom fishing for "local" sale in Guam and Honolulu. More recently the emphasis has been on catching fish and sending them by airfreight to Japan for the Sashimi market.

The second project - a joint venture involving the Yap government, the FSM National Fishing Corporation and private American interests - is a major tuna fishing operation involving a modern fishing fleet, related shore facilities and a fish cannery. The first stage is a Yap based fleet transshipping fish at foreign ports - which is happening now. The second stage involves the development of facilities at Yap and the third stage is the construction of a cannery. The feasibility of a cannery in Yap has not yet been proven.

Apart from these two major projects, a number of local fishermen are investing in boats and facilities for inshore fishing to supply the local market. Many of the development bank loans are for this purpose. With the growth of the tourism and expatriates living in Yap (if international services are promoted and developed) the potential for this type of fishing activity is good.

8.3. Agriculture

In agriculture there seems to be a lack of motivation on the part of many villagers. There is, according to business people in Colonia, a good opportunity for market gardening

at present which will grow with the development of tourism and international services. Supplies from the villages are, according to Colonia retailers - erratic. Supplies from Guam are of variable quality and expensive. Airfreight charges from Guam add 60% to the cost. Apart from market garden opportunities and perhaps the supply of eggs and chickens to the local market, the only other development possibility is the diversification of subsistence production to provide a more balanced diet.

8.4. Conclusion

It has not been possible with the information provided to evaluate the fishing potential. It is clear that the agricultural potential is very limited. However, that limited potential will not be realized until suitable marketing channels are established which will provide producers with guaranteed outlets and retailers and consumers with guaranteed supplies.

LOCAL SERVICE INDUSTRY

To date the range of services available in Yap is extremely limited. There are a large number of retailers, some wholesalers, a few small builders, a couple of motor traders, a few restaurants and hotels, a dive shop, a few small manufacturing activities, blocks, boats, bakery, a few professional people (insurance, legal,) and little else. Most of the activity is concentrated around Colonia.

If (i) the government and private sector in co-operation, work to realise the full potential of the tourism sector in the coming years and (ii) the international service sector develops - then a range of new opportunities for new small business will emerge.

9.1. Possible Opportunities

The opportunities could be divided into:

- (i) Tourism related services - such as tour guides; car and coach hire; tour operators; additional dive shop(s); boat hire; sport fishing;
- (ii) Personal Services - doctors, dentists, opticians, solicitors; accountants; insurance;

- (iii) Repair and Maintenance - T.V.'s and radio; refrigeration; air conditioning; engineering; motors fishing net repairs;
- (iv) Business Services - Office supplies/business machines; secretarial services; freight forwarding; waste disposal; security;
- (v) Construction - Joinery; architect; furniture/upholstery; and electrical.

9.2. Realising Opportunities

Many of these business opportunities can be exploited by first time Yapese entrepreneurs working in Yap or overseas. To help people realise the opportunities that will arise - assuming a serious attempt is made to develop tourism and international services, the state can play a supporting role. This supporting role involves providing low cost buildings in a central location together with secretarial services, and advice on various aspects of business development - this package of support services is often known as a business incubator.

9.3. The Business Incubator Concept

An incubator is a building or series of buildings which can accommodate a number of new small companies usually

established by first time entrepreneurs. Operating expenses are reduced as far as possible by:

- (i) keeping rents low through including only essential facilities and possibly subsidizing rents; and
- (ii) providing shared services where possible e.g. secretarial, administrative and book-keeping services.

Failure rates of new business start ups are reduced by providing business advice when and where necessary and enabling the various entrepreneurs to learn from each other.

The main features of an incubator include (i) flexible space designed to meet the entrepreneur's requirements; (ii) low rents; (iii) business advice including assistance in negotiating finance; (iv) flexible lease arrangements; and (v) a time limitation. Businesses should normally leave after 3 - 5 years and operate in an open competitive market.

The incubator concept has been widely used in the United States, Europe and Australia as well as parts of the developing world to facilitate new business growth, particularly in decaying inner cities and less developed regions. There are literally thousands of incubators in Europe and the U.S. - some of which are very "high tech" and based beside universities or research institutes.

9.4. An incubator in Yap

The concept can be applied in Yap. As tourism and international service activity develops there will be an increased demand for a whole range of services as set out in 9.1. Many of these services can be supplied by new entrepreneurs. Some of these entrepreneurs will require 50 - 100 sq. metres of factory or warehousing space - repair and maintenance services or construction related activity. Others will need 10 - 20 sq. metres of office accommodation. All will benefit from "a good business location", secretarial support services and business advice.

A possible site is the former power plant building close to the oil storage depot. (The site is outlined on Map 2). It is close to a potential marina site. The building could be developed from both ends. The end facing North East can be developed for office accommodation. The end facing South West towards Madrich can be used for factory/warehousing projects.

A minimum of facilities should be installed to keep costs low and allow flexibility in use. The partitioning and fitting out of the building should not be done until the users needs are ascertained - what space he needs; location of power points; size and location of office accommodation (if any) within warehousing sections.

The Office of P.U. and C. (Public Utilities and Contracts) completed some preliminary drawings for the sub-division of the building into a series of small factory units. The project did not progress any further because of lack of funds or budgeting allocation to do more detailed drawings and investigation. The project presently rests with the Office of Budget and Planning.

The building beside the Tourist Information Office - which was formerly used for the coconut fibre rope making and soap projects, could be converted into offices for some form of tourist related business.

There is significant assistance available from the U.S. government for re-developing the buildings as incubator units.

The Pacific Business Centre in Honolulu or a similar organization with experience of small scale business development in the Pacific region should be recruited to evaluate in detail the feasibility of the incubator project, including the type of facilities needed and guidelines for managing and operating the project once in operation.

It is important that the incubator unit does not undermine the commercial development of the Yap Co-operative Association (YCA) - or any other commercial developer. Low cost space should be provided only to first time

entrepreneurs who in time would "graduate" and build their own units or lease space on the commercial market. In this way the incubator unit could be seen as complimenting the activity of commercial developers by providing a steady stream of "graduates" for the incubator unit. Businesses would normally remain in the unit for 3 - 5 years.

9.5. Recommendations

The Yap State government should decide in principle to establish an incubator unit(s) and retain the Pacific Business Centre (PBC) or similar organisation to advise in detail how the unit(s) should be developed and managed. The PBC (or whoever is advising the government) should be able to draw on experience with small business development in other Pacific Island states and advise the Yap government on what grant or other assistance (e.g. technical advice and training) is available from the United States for the project.

CHAPTER 10

PROMOTING INVESTMENT

10.1 Introduction

The role of the state in economic development in Yap is to facilitate private sector development and co-ordinate various action plans. The state will not participate directly in business projects except on a temporary basis in pilot projects, or where the scale of the project is beyond the means of the private sector.

In order to facilitate and encourage private sector investment, the State must create a suitable investment climate. A number of elements go to make up the investment climate. These include: (i) a positive and welcoming attitude towards investment on the part of the State; (ii) a suitable tax structure; (iii) availability of the key factors of production, land, labour, and capital; (iv) good infrastructure and support services; (v) freedom to repatriate capital and profits; (vi) an active promotion policy; and (vii) political and economic stability.

10.2. Positive Attitude

At this point in time the attitude of the Yap State government towards foreign investment could not be described as positive. The foreign investment law makes discouraging reading. It is regulatory in nature with no promotional content. Approval procedures can be slow as the Federal Government in Ponepei must authorize foreign investment - thus long delays are possible. Post from Yap to Ponepei can take 3 weeks. There are no promotion brochures. Neither is there any evidence that the Yap State government has made any serious attempt to encourage foreign investors. Given that foreign investors - particularly export oriented investors - can choose among different locations, countries seeking investment must promote themselves as investment locations.

If Yap is serious about attracting investment it must:

- (i) Decide what type of investment it wants - and can accommodate;
- (ii) Analyse the requirements of potential investors;
- (iii) develop an action programme to meet those requirements;
- (iv) Design an aggressive promotion programme within budget limitations to attract investors;
- (v) Establish an organizational structure to implement the promotion programme, evaluate investor proposals and assist investors in the establishment phase.

According to the by laws of the Investment Development Fund (Article 3, Section 1) assistance is available for the design and implementation of promotion programmes targetting U.S. citizens and commercial enterprises.

10.3 Taxation

The existing gross tax has been cited as a disincentive from an investment viewpoint. It impacts particularly on projects which have a low profit in relation to turnover. It has been suggested that a profits tax would be more equitable.

In a country which has few accountants, the gross tax has the merit of being easy to calculate. It should not present any serious problem for retailers who make up a large part of the existing business community. The gross tax is essentially like any other sales tax - it can be passed on to the consumer.

However, the gross tax may prove a problem for companies who are exporting goods or services - particularly if the profit margin is low. There is a strong argument, therefore, for reconsidering the gross tax as it applies to export activity. Perhaps exporters might be given the choice of paying a gross tax or a profits tax - of say 20%. In any redesign of the tax structure it is important to remember that a most important criteria in evaluating an investment Project is contribution to tax revenue.

10.4. Availability of Land/Buildings

The issue of land availability is dealt with in Section 3.1. Related to the land issue is the availability of buildings and support services for new entrepreneurs - an incubator unit. This is covered in Chapter 9 on local service industry.

It is essential that the government take positive action to make land available for development purposes. It is an issue which must be handled with sensitivity in Yap. Nevertheless, it is an issue that must be tackled if Yap is serious about economic development.

10.5. Availability of Labour

The availability of labour is covered in Section 3.5. The first essential is to establish the facts in relation to the labour market - who wants work? What qualifications have people got? What will be the demand for workers in the coming years? With such demand and supply forecasts it should be possible to develop a proper action programme in relation to training. Contact should be established with Yapese workers in Guam, Hawaii and elsewhere to establish their intentions and qualifications.

10.6 Availability of Capital

The availability of large sums of capital in Yap is a problem as there are few wealthy people. There is no tradition of foreign investors bringing in large sums of capital. The banks in Yap have traditionally adopted a very conservative attitude towards lending. This is understandable. Up until the last year or so banks had few reasons to be confident about development projects. However, if the government exhibits a more positive action oriented approach to development the banks may well adopt a more flexible approach to lending. Foreign investors will also be encouraged to invest larger sums of money if the government is seen to be positive and proactive in its approach to foreign investment.

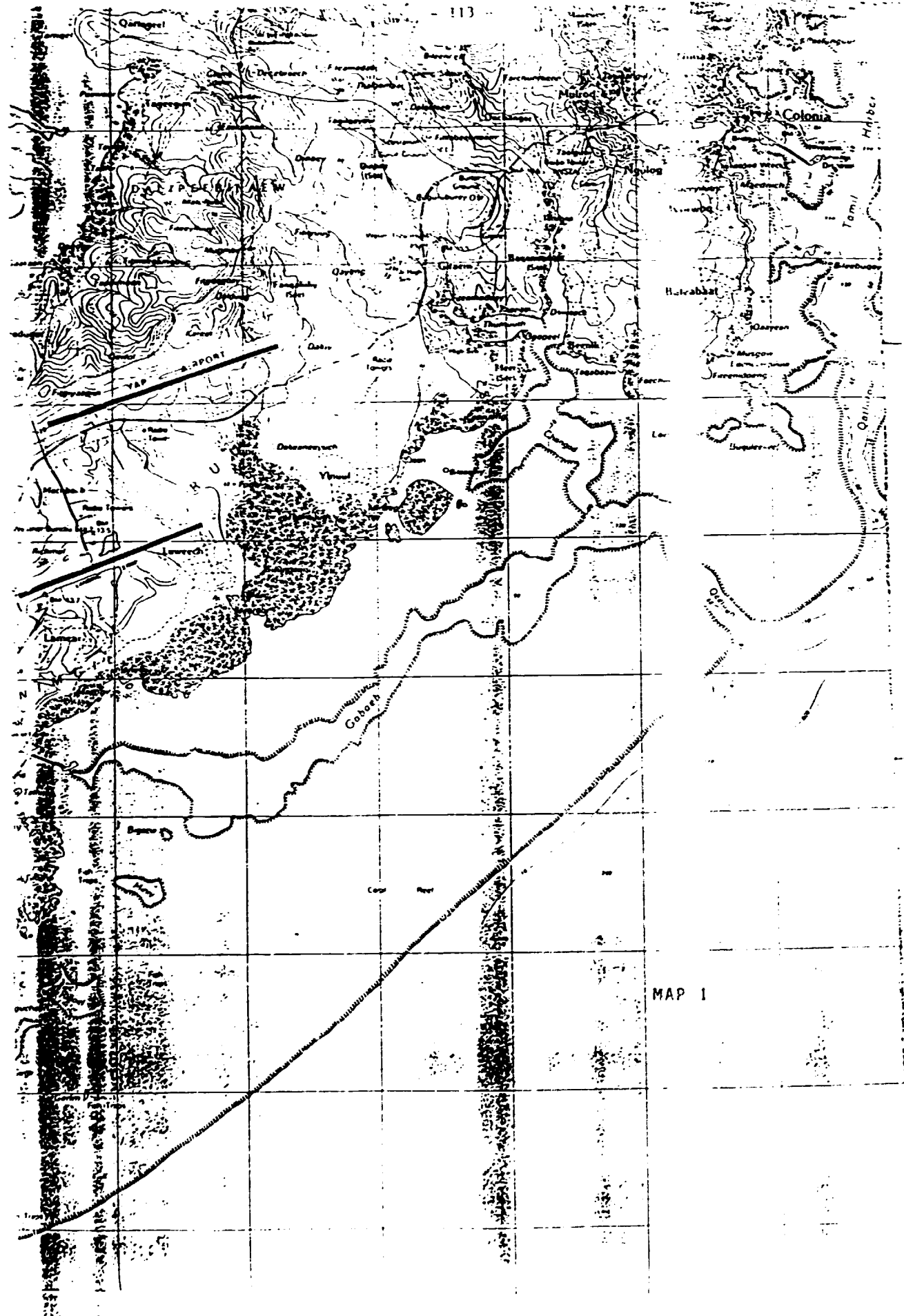
10.7 Government Action

It is important first that the government and the state resolve in its own mind the apparent conflict between tradition and development. The government must make and specify the "intelligent compromises" it talks about in its development plans. It must signal clearly its attitude toward investment with concrete action - if it wants investment to flow and development to take place. It must decide what land will be available for development - and under what conditions (e.g. long term lease) and at what price - and those conditions must be acceptable to the investor community.

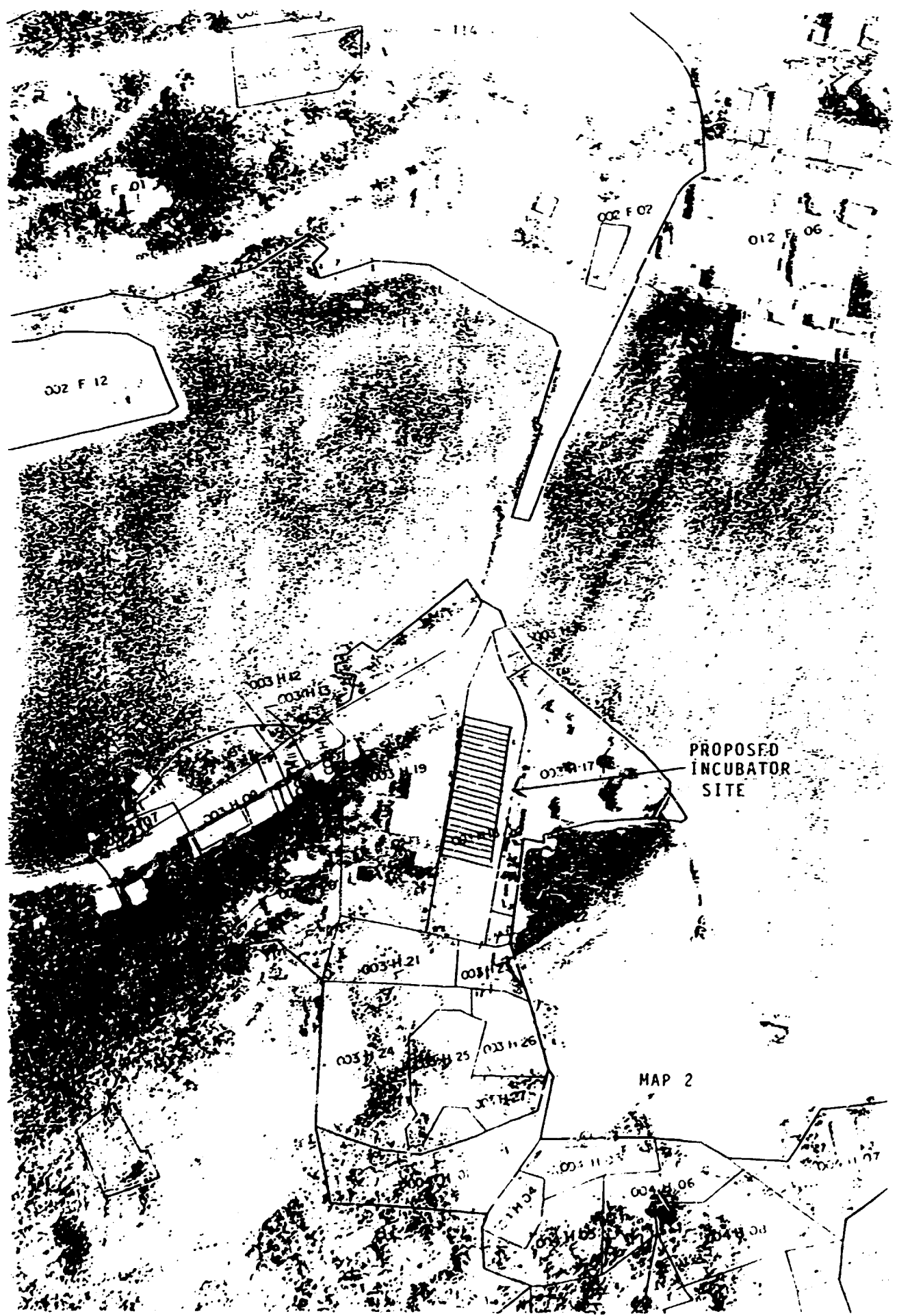
LIST OF PEOPLE CONSULTED

The Hon. Petrus Tun	Governor of the State of Yap
James Gilmar	Director, Dept. of Resources and Development
Sebastian L. Anafel	Director Office of Planning and Budget
Hillary Tacheliol	Director Administrative Services
Michael Gaan	Chief, Division of Commerce and Industries
Jesse Toruan	Division of Commerce and Industries
Al Ganang	ditto
John Buchun	ditto
Francis Yoror	Office of Budget and Planning
Leo Chiengyan	ditto
Francis Reg	Chief, Division of Manpower, Training and Employment Services
Lukas Reg	Job Corps Co-ordinator
Joe Clough	Assistant Attorney General
Raphael Dabuchren	Chief, Land Resources
James Waagan	Physical Planning
Charles Chieng	Director Public Utilities and Contracts
Ron Burgess	Public Utilities and Contracts

Samuel Giltamag	F.S.M. Telecommunications Corporation
Henry Falan	Principal, Yap High School
Vicki Laetman	Director Extension Centre, CCM
Robert Beengin	F.S.M. Taxation Dept.
Philip Ayin	F.S.M. Customs Dept.
John Tamaglibyan	State Taxation Dept.
George Garangman	Branch Manager, Air Micronesia
Matan Tayin	Power Plant Manager
Leo Flawau	Project Supervisor F.S.M. Development Bank
Jesse Gootmag	Loan Officer F.S.M. Development Bank
Mark B. Mathou	Branch Manager, Bank of F.S.M.
Oliver Cheng	King Tex Garments
Joe Tamag	Rai View Hotel
Myai San	Blue Lagoon
Bill Acker	Yap divers
Carl Henlin	Yap Co-operative Association



MAP 1



PROPOSED
INCUBATOR
SITE

MAP 2