South Pacific Forum Fisheries Agency
Field Trip Report

By
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Fisheries Development Officer
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FFA Report 93/24
Summary

Fisheries has become one of the most commercially important sector for the Pacific Island countries (PICs) in recent years. It provides a source of foreign exchange earnings, employment and food protein. The abundance of tuna stocks in the Pacific constitutes one of the important valuable fisheries commercially exploited. Although, tuna accounts for substantial increase of foreign exchange earnings, other inshore fish species have also contributed significantly to the well being of the PICs.

A field trip was made to Koror, Republic of Palau, Pohnpei, Federated States of Micronesia (FSM) and Majuro, Republic of Marshall Islands between 15 February and 6 of March, 1993.

The main purpose of my visit was to familiarise myself with past and present fisheries development activities and to investigate future development and training prospects which FFA could be of possible assistance.

The field trip report is in two Parts. Part I provides a summary of fisheries development activities, organisations involved in the fisheries activities and potential future prospects for development. Part II covers the actually travel itinerary and discussions held with various officials met.

Generally, the three Micronesian countries have benefitted from both the small and large-scale commercial fisheries development activities in recent years, especially the economic benefits that come from the access arrangement of the US multilateral Treaty on Fisheries and license fees of fishing vessels from the other distant water fishing nations (DWFNs) to fish in their 200 mile Exclusive Economic Zones (EEZ).

The three countries recognised the fact that, although small-scale fisheries development is aimed at satisfying the domestic needs, it is vulnerable to over-exploitation and therefore close monitoring and management is important. They believe that in a long term the greatest benefits to their countries will accrue from the tuna industry development through joint-ventures, license of fishing vessels from DWFNs and operations of shore-based facilities.

The major setback common in the three countries visited has been the shortage of technically qualified capability to elaborate on development and investment proposals in great depths and to set the investment conditions conducive to private sector and or foreign participation.

The long term development need will be to ensure the manpower needs are assessed in line with the development and develop training programmes that will enhance a balance
manpower development opportunity for the future. Success to this would be the long term sustainable development through an effective, responsive and flexible fisheries administrations to be supported by positive development measures to encourage a steady private sector growth in both the small-scale and industrial fisheries sub-sectors.

The future development needs briefly summarised below are only for consideration and do not necessarily represent the priorities of the countries visited.

- To develop manpower training programmes to contribute more effectively to fisheries development and management regimes.
- To encourage increased local production of marine resources to supply the existing unsatisfied domestic demands.
- To create favourable conditions conducive to private sector investment in the tuna industry.
- To maintain a consistent supply of good quality longline catches for the sashimi market. (Accordingly, bigeye tuna exported from Guam and the Republic of Palau for the sashimi market have been described as low grade (source; Infofish, March publication).
- To develop strategies for viable small-scale fisheries operations.
- To demonstrate economic viability of the giant clam mariculture.
- To develop plans for private sector involvement in the fish marketing for both domestic and export.
- To develop infrastructure that would support private sector initiatives.
- To develop research and monitoring capabilities of the inshore resources to ensure that they are not over-exploited.
- To ensure effective training programmes designed for training of commercial fishermen and deckhand operators.
- To develop inspection and quality control capabilities.
- To conduct fisheries sector reviews of the past, present and future development activities and needs with the aim to establish strengths and weaknesses in order to assist them to set their future directions.

Part 1:

**REPUBLIC OF PALAU - Koror**

Palau was visited between 17 - 23 January.
**Introduction - Brief**

The Republic of Palau has a population of about 15,000 people (1990 Census) of which 68% of its habitants lived in the capital town, Koror. The island is situated about 800 miles of Guam, USA and about 600 miles east of Philippines. The lagoons, reefs and ocean resources have been the main aspirations of Palau's economy, culture and recreation.

**Fisheries Development - Brief overview**

Fisheries exports accounts for an estimated annual foreign exchange earnings of more than 1 million US dollars while the domestic earnings are estimated to be around US $500,000 - $800,000 per annum. *Source: MRD Annual Report, 1991.*

**Organisations.**

A number of government and semi-government organisations are responsible for marine resources development, management and enforcement in Palau. These organisations include;

- **Marine Resources Division (MRD)**

  A division of Bureau of Resources and Development and is responsible for facilitating marine resources development and management of coastal resources, including research, extension, training and mariculture.

- **Micronesian Mariculture Demonstration Centre (MMDC)**

  The MMDC was established in 1973 to carry out mariculture research and demonstration of several marine species which would benefit Micronesian territories. The main marine species have been the giant clams and trochus. Since than this activity has now formed part of MRD's functions.

- **Palau Maritime Authority (PMA)**

  An authority established under the national law and has appointed board of directors responsible for licensing of fishing vessels and management of ocean resources with in the 200 mile Exclusive Economic Zone (EEZ).

- **Palau Fishing Authority (PFA)**

  A semi-government business arm responsible for promoting commercial production and marketing of inshore pelagic and reef resources. PFA has board of directors appointed by the President. PFA also manages the functions of Palau Federation of Fishermen's Association (PFFA) which was discontinued in 1982 after it was found insolvent.

- **Attorney General's Office (AGO)**

  The AGO is responsible for surveillance and enforcement of fisheries regulations.
Private Sector

A number of private companies are also involved in the fishing industry, especially in the production and marketing of fish and fishery products.

Two private companies presently operated out of Palau. Palau International Traders Incorporated (PITI) which has in the past registered more than 152 longline vessels and the Palau Marine Industries Corporation (PMIC) which has 120 longline vessels also licensed to fish in the 200 mile EEZ.

Other operators licensed/registered to fish in Palau's 200 mile EEZ were the US purse seiners under the multilateral Treaty on Fisheries and Japanese purse seiners.

Marine Resources Development Programmes

Marine Resources Division plays an important primary role in ensuring marine resources development programmes are effectively coordinated between the various bodies. Through this coordinated efforts MRD aims to promote maximum sustainable development and management of marine resources to derive economic benefits for the people of Palau and the country as a whole.

In order to achieve the aim, MRD has implemented a number of major programmes which covers a range of projects. These programmes include;

- the mariculture research which involves developing techniques for the culture of important marine species common ones have been the giant clam (*T.gigas*, *T.derasa* & *H. hippopus*) and trochus as well as the aquarium display facility for other marine species.

- the marine resources management which aims at stock assessment and evaluation of commercial marine species, and the management of these resources to ensure they are exploited on a sustainable basis.

- the marine resources development which aims at identifying development opportunities and assessing prospects for encouraging private sector fisheries enterprises in the production and marketing of marine products.

- the fisheries training which aims at improving the skills and technologies of persons involved in the fisheries sector to ensure effective and efficient fisheries development and management of the resources.

General Development Prospects

Palau has a good future marine resources development prospect for further development of coastal fisheries and ocean resources. A number of positive factors contribute to this prospect.

Marine Resources
i. The reef and lagoon marine resources are under-exploited. Total catches from the subsistence fishery is difficult to estimate however fish landed through the commercial markets was estimated to have been between 200-300 tonnes for 1991 and 1992.

ii. The development of tuna species has been moderate and present catches by long-line operations based in Palau have been between 3,000-4,000 tonnes for 1991/1992. According to the present estimates there is a potential for increased catches.

Only one pole and line vessel is currently engaged in fishing for skipjacks and bonitos. Much of the catch is landed and sold in Koror. There is potential for increased catches and the fishery offers opportunities for further development.

iii. Research in the culture of commercial marine species has showed prospects for mariculture development of giant clam. While the technology has been proven feasible further work is required for commercial evaluation of the fishery.

iv. Prospects for aquarium fishery in Palau is good. Each year the aquarium facilities at the MMDC attracted tourists to view the displays of various marine species (finfish, turtles, mollusc and other invertebrates). In 1991/92 over 7,000 people visited the facilities. Further work is required to upgrade the facilities and to assess its commercial viability.

v. The reefs, lagoons and waters surrounding Palau offers world class recreational activity for diving and sport fishing for the tourist market. Prospects for this related activity is good as has been demonstrated by increased number of tourist going to Palau. Further work is required to ensure effective control and monitoring of this activity.

Markets

i. There exist unsatisfied freshfish market in Palau for reef and pelagic fish. The local market highly demands fish and this has offered viable prospects for small-scale fisheries development. Any excess of catch easily finds a market in Guam and Saipen. *(Unlikely, comparing the present volumes).*

ii. The tuna species have no difficulty in having to find a market overseas, especially the Japanese markets for the *sashimi* products. Daily international flights in and out of Koror provides adequate air transportation to move fresh chilled fish from Koror to the major consumption centres. There is also a jet presently based in Koror (Airai Airport) which has been solely used for carrying the fresh chilled tuna to Guam and Tokyo, Japan. Quality difficulties need to be overcome.

Training

i. Training has been considered an important part of HRD of MRD and every efforts will be made to ensure each staff member is provided an opportunity
to improve his or her skills and knowledge to enhance productivity and quality.

ii. Training can be offered or received in a number of ways; through short courses, on the job training, attendance of seminars/meetings and or by attachment programmes through regional organisations. Training opportunity would be relevant and appropriate to each staff member and the work environment.

Institutional Strengthening

i. The MRD has a total of less than 30 positions in its structure and only 22 of these positions are presently occupied. The MRD obviously needs to increase its manpower strength to enhance its responsibilities, to direct and coordinate its work programmes. To guide the organisational strengthening it may be beneficial for the MRD to refer to the James Crossland Report of October, 1991 which proposed a structure for consolidating of the present agencies to form one organisation and the work programmes to guide the work of MRD.

People Met. See Annex I.

References. See Annex II.

FEDERATED STATE OF MICRONESIA (FSM) - Pohnpei

Federated States of Micronesia was visited between 24 - 28 February.

Introduction - Brief

The FSM has a population of less than 100,000 people, spread over the four major states namely Pohnpei, Korsrae, Truk and Yap. The island chain of the Federated States of Micronesia is among the largest in the South Pacific, extending broadly across the Western Pacific.

Fisheries forms an important activity for the local inhabitants whose subsistence needs have always been satisfied from catches around the reefs and lagoons. The fact that the population is centred around the main urban centres has created market demands for fish.

Fisheries Development - Brief overview

FSM benefitted approximately US $15,000,000 annually from access arrangements and licensing fees received from DWFNs providing substantial revenue to both Central and the State Governments. (Source: MMA)

Objective

The national fisheries development objective of FSM has been to promote economic self-reliance through sustainable fisheries exploitation and management.

Organisations.
The responsibility for fisheries in the FSM is vested in the government of the four states and the central government. The State Governments are responsible for fisheries matters within the limits of territorial waters while the Central Government through Micronesia Maritime Authority (MMA), Division of Marine Resources (DMR) and the National Fisheries Corporation (NFC) are responsible for the fishing activities outside the territorial limits and coordination of fisheries among the states.

**Micronesian Maritime Authority (MMA)**

The MMA is responsible for regulation and licensing of fishing activities outside the territory limits. It is also responsible for access negotiations, joint venture as well as US multilateral Treaty on Fisheries.

**Marine Resources Division (MRD)**

The MRD of the Department of Resources and Development is responsible for providing technical assistance to state fisheries administrations in fisheries planning, development, extension, training and research. It promotes small-scale fisheries development to encourage participation in the industry by the people of the FSM.

**National Fisheries Corporation (NFC)**

The NFC is responsible for major tuna industry development in FSM. The Corporation has appointed board of directors by the National Congress and is responsible for wide range of activities to ensure maximum economic returns from the exploitation and processing of tuna resources. It functions include entering in to joint venture agreements, participation in the national commercial ventures, providing technical assistance in the formulation of fisheries investment proposals and promotion of training opportunities.

**Private Sector**

The 200 mile EEZ of FSM is one of the richest tuna fishing zones in the Western Pacific having abundant stocks of skipjack and yellowfin tuna. As a result the extended zone has been a target for several fishing fleets by DWFNs in recent years. More than 176 longline fishing vessels from Japan, Taiwan and Korea have been licensed to fish for yellowfin and bigeye tuna. About 60-70% of the longline catches went to the Japanese sashimi markets transhipped through Guam, Yap and Pohnpei.

Several longline fishing vessels owned by the Taiwanese and the National Fishing Corporation (NFC) are presently based at Yap and Pohnpei. Catches from this vessels are handled through the shore-based facilities and sent by air to Japan through Guam and or Honolulu.

Apart from the US purse seiner fleet licensed under the multilateral Treaty on Fisheries, FSM has also licensed several purse-seiners from Japan and Korea to fish for skipjack and yellowfin tuna in its extended jurisdiction.
Marine Resources Development Programmes.

The MMA and MRD of the Department of Resources and Development (DR&D) implements a number of functions which also includes the following;

- Technical advice to both the central and state governments on fisheries development planning, management, conservation, and training.
- Marine resources management and stock assessments.
- Mariculture/Aquaculture development.
- Sedentary marine resources development.
- Commercial tuna industry development
- License of fishing vessels.

General Development Prospects.

The marine resources of the FSM offers good opportunities for sustainable development and these have been supported by the following factors.

Marine Resources.

i. The islands and atolls of the FSM consist some of the extensive reef and lagoon areas in the Pacific. The resources there are mainly harvested by small-scale fishermen for both subsistence needs and domestic cash markets. Generally, they are under-exploited, although concerns have been raised regarding over-fishing of certain species as a result of continuous pressure. The prohibition of foreign fishing activities in the territorial waters is an incentive to small-scale fisheries development.

ii. The development of the tuna industry will continue to provide a major revenue prospect for the FSM for many years to come. The central and state governments commitment to the development of the tuna industry is evident by their efforts to create an environment for a viable operation, joint-venture agreements and facilitating for domestic handling and transhipment facilities.

Markets

Fresh fish is highly demanded in the urban centres of the four states, despite the fact that increasing small-scale fisheries deliveries have been made in recent years. Daily international flights from Guam provides a good air transport for fresh chilled tuna (bigeye and yellowfin) from the longline fishery to Japan and the American mainland markets.

Training
As development proceed there is obviously a need for personnel training in both the central and state governments at all levels to ensure resources are developed and managed sustainably. Insufficient trained manpower at technical and managerial level has been expressed as a major constraint. Though training needs were highly expressed as central to fisheries development and management there have been little efforts presently made to plan and focus different types of training for each officer and how they would be achieved. A reason for this has been due to the fact that the fisheries organisations are small and lacked sufficient staff to continue the work programmes, especially training courses of longer duration.

Institutional strengthening

The present manpower ceilings for both the MMA, MRD and the state fisheries provide little flexibility to meet the rapidly increasing fishing industry needs. There are less than 20 staff working in both the central and state governments and the work demand has increased over years. For MMA and MRD to contribute to the fast growing and competitive fishing industry, institutional reviews to the present organisations manpower ceilings are considered necessary to strengthen the fisheries administration capacities in order to promote an efficient and balance fisheries development and management service.

Official Met See Annex I.

References: See Annex II

REPUBLIC OF MARSHALL ISLANDS - Majuro

Republic of Marshall Islands was visited between 1-4 March.

Introduction - Brief

The Marshall Islands consisted of two nearly parallel chains of Islands and atolls and has an area of nearly 181 kilometres. The total population of the Republic of the Marshall Islands was estimated to be 49,000 people (1988 Census) and the majority of the population lived in the two main atolls Majuro and Ebeye. Majuro is the commercial and political centre and has a population over 20,000 people.

Agriculture (copra processing) and fisheries are the two most important economic sectors to the Republic of Marshall Islands. They provide the main source of subsistence and income generating activities. The coconut plantations have been the main source of the country's income, however, declined price has not encourage copra production to its fullest potential.

The 200 mile EEZ for the RMI is abundant with marine resources, and only until recently little commercial fishing was promoted. Fishing has been predominantly a subsistence occupation and is limited to the inshore reefs and lagoons.

Fisheries Development - Brief overview
Fisheries revenue through the US multilateral Treaty on Fisheries and commercial fish exports from the RMIs accounts for over US $2.0 million for the period 1990/91. Source: ADB Appraisal Report. The Marshall islands EEZ and the inhabited islands and atolls provide the habitat for abundant inshore and offshore marine resources and indications are that expanded commercial activities may generate increased socio-economic benefits and foreign exchange earnings.

The government objective for the fisheries sector aims at establishing a national fisheries industry as a backbone to the economy of the RMIs in line with the need to achieve national self-sufficiency through small-scale fisheries development. The principal focus have been to; develop joint-ventures to exploit tuna resources and establish shore-based facilities. As a result recent efforts have been centred around negotiations with DWFNs.

Organisations

The fact that commercial fisheries was not active in recent years the Government had decided to establish the Marshall Islands Marine Resources Authority (MIMRA) within the Ministry of Resources and Development to be responsible for development and management of marine resources within its 200 mile jurisdiction. MIMRA is also responsible for issuing fishing licences, access negotiations, joint-venture arrangements and monitoring of commercial operations outside the territorial waters.

The MIMRA has duly appointed board of directors by the President who have vested powers to ensure Marshall Islands gains an increasing share of economic benefits from the exploitation of its marine resources. In doing so four related programmes have been formulated to contribute to the short and long term objectives.

- The fisheries development division is primary responsible for small-scale fisheries development planning and implementation in parallel with the municipal councils. It also involves resource management, data collection, demonstrations of fishing gear and techniques and development of outer island fisheries. The Japanese Government, through JICA has provided a grant aid of more than US $5 million to support the outer islands fisheries centres. The first of the fishing centre on the Arno atoll was recently completed. Other fishing centres to be included in the second phase will be the Likiep, Namu and Ailinglaplap atolls.

- The mariculture/aquaculture division is responsible for providing support for mariculture development centres and projects in the atolls. It also assists to assess the commercial viability as well as investigating markets. A small industry for giant clam and trochus existed at present through natural harvesting however are notably susceptible to over-exploitation. As a result interest has been prompted to further investigate the commercial viability of culturing giant clams and trochus. MIMRA has a small mariculture station at Likiep atoll. There is also a private financed giant clam project in Mili atoll that has been said to be successful.

- The resource management, planning and development division is responsible for industrial fisheries. The main focus has been to encourage and promote the development of the tuna industry through access negotiations, joint-venture and
shore-based operations. The aim is to accrue increased economic benefits from the operations of foreign vessels in the 200 mile EEZ of the RMIs.

The MIMRA has successfully negotiated three joint-ventures through Marshall Island Development Authority (MIDA). These include two separate joint-ventures with US operated purse seiners and Majuro Longline Fish Base Operation with a Hawaii-based company. Presently, fifteen longline vessels are based at Majuro and from 1 January to 1 March, over 113,000 lbs (51,256 kg) of bigeye and yellowfin tuna have been sent through Honolulu to Japan and mainland America for the sashimi market.

The training division is responsible for coordination of training activities including the Maritime Training Centre. The aim is to improve the technical and administrative capabilities within the government service at the same time provide commercial fishermen training for the Marshallese. The division will also establish a manpower development programme aimed at meeting future needs.

Private Sector

As mentioned, it was only until recently that participation in the commercial fishing operations in the Republic of Marshall Islands has been active. A number of constraints have caused this and the major constraints identified have been; the lack of technical trained manpower, lack of local based fishing fleets and onshore support facilities, and lack of infrastructure. However, improvements have occurred and this has resulted in the successful negotiations of three joint-ventures through the MIDA, a government business arm engaged in the joint-venture operations.

Assistance to fisheries development has mostly come from foreign aid. The Japanese Government has provided a grant aid for the upgrading of the dock, and construction of a fishing base and cold storage facilities at Majuro. It has also funded the outer island fishing centres, 10 small fishing crafts and a research vessel all aimed to promote domestic production, and supply of ice as well as collection of data.

External Assistance for the period 19985-1990 can be summarised as follows;

<table>
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<th>Donor Agency</th>
<th>Project Title</th>
<th>Amount US $,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>JICA</td>
<td>Arno Fishing Centre</td>
<td>US$ 5.0</td>
</tr>
<tr>
<td>OECF</td>
<td>TA Arno Fishing Centre</td>
<td>1.5</td>
</tr>
<tr>
<td>JICA</td>
<td>Upgrading of dock-Majuro</td>
<td>4.1</td>
</tr>
<tr>
<td>JICA</td>
<td>Landing facilities</td>
<td>3.0</td>
</tr>
<tr>
<td>FFA/SPC/UNDP</td>
<td>TA- Various</td>
<td>0.15</td>
</tr>
<tr>
<td>US</td>
<td>Feasibility studies</td>
<td>0.15</td>
</tr>
<tr>
<td>US (NMFS)</td>
<td>Mariculture</td>
<td>0.11</td>
</tr>
<tr>
<td>FFA</td>
<td>Feasibility Study- Longline</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>US$ 14.01 m</strong></td>
</tr>
</tbody>
</table>
Further external assistance has been approved by the Asian Development Bank (ADB) at the equivalent cost of US $6.95 million for the funding of a integrated pilot online fishing operation in Kwajalein, fish processing facilities and equipment, institutional strengthening in regard to Marshall Islands Maritime training centre and a training vessel, mariculture programmes and boat building facilities.

**General Development Prospects**

The future development prospects of fisheries in the Marshall Islands 200 mile EEZ can be described as generally good. The near-shore resources of the inner reefs and lagoons, the deep bottom species on the outer slopes, and the pelagic species are the bases for a viable small-scale fisheries development for both the subsistence and cash economy.

**Small-scale Fisheries - Atoll Fishing Development Centres (AFDCs).**

This program was established under a grant aid from the Japanese Government to assist in the development of small-scale fisheries in the outer islands and atolls. The aim of the program is to reduce the economic gap between the urban centres (Majuro, Ebeye and Kwajalein). The aim of the AFDCs is to provide services for fish purchases and sales. It is hoped that the centres will stimulate local fish production thereby generating income earning opportunities for the outer island inhabitants.

Success to the operations of the AFDCs will be the long term consistent supply of good quality fish for the domestic market. Other factors relate to; policy support measures, environment, socio-cultural and level of community participation, institutional and management capacities and the positive support to the private sector initiatives.

**Tuna Industry**

The main aim of the tuna industry is to provide revenue for the country through various commercial activities. The recent upgrading of the landing and handling facilities at Majuro has stimulated a joint commercial operation of a longline fishery based in Majuro.

**Longline Fishery**

The prospects of a longline fishery based from Majuro is good and supported by a number of positive factors which include; a daily international flight between Honolulu and Guam, there exits an increasing demand for high quality fresh fish for the Japanese sashimi market. The sashimi market is sensitive to good quality, size, fat content and method of handling. Longline fishing method has been recommended as a better method and with careful handling, speed and efficiency the local industry should greatly benefit.

Under the ADB fisheries project a longline fishery project has also been planned for Kwajalein.

**Pole and Line Fishery**

A small pole and line fishery operation has been stagnant for a while now. Reasons were unknown however, assumptions would be to do with the economics to operate sustainably. A
mission from the Republic of China (Taiwan) has been to the island to renegotiate for the revitalisation of the fishery on a joint-venture basis. No decisions was reached according to Mr Jack. He indicated that FFA may be asked to assist in the joint-venture negotiations if it does come through.

Purse Seiner Fishery

Apart from the US purse-seine fleet under the multilateral Treaty on Fisheries, two joint-ventures with two US purse-seiner operators have been reached and are presently operating in the Marshall Islands 200 mile EEZ. This fishery is important to the RMIs because of its advantage to generate revenue for the country through license fees.

Cannery

In recent years there have considerable interest to establish a cannery in the RMIs with the view to develop a local industry and thereby creating employment opportunities. Following this the government has engaged a US Company to carry out a feasibility study. Although, there stands a potential for a small-scale industry, experts have concluded that the biggest constraint is water.

Aquaculture/Mariculture

The export of sedentary marine products (clams, trochus, beche-de-mer etc) have potential to generate substantial income for the people and the country. However, sedentary resources are vulnerable to over-exploitation under continuous fishing pressure. For this reason aquaculture and mariculture techniques have been introduced. While hatchery culture techniques have been developed for giant clams, there has not been a proven record to determine its commercial viability. Opportunities should be tested to determine that culturing of these species commercially are possible and sustainable.

A rehabilitation programme of clams should be investigated (if this has not been done) for reef planting if there have been signs that the resource has been over-exploited.

Market

There exit unsatisfied demand for fresh fish in the local market of Majuro and Ebeye in the RMIs. While this may be a case at present, long term fresh markets plans should be developed for the main urban centres as well as export markets.

Training

Training has been identified as a major component of fisheries development programmes in the RMIs. It has been said that the lack of technical capability has often made the tasks difficult to elaborate on development proposals as well as to implement projects.

The government has recognised this and with the recent approval of the ADB loan, institutional training has been considered an important component of the project. This includes; the strengthening of the Maritime Training Centre as well as procurement of a training vessel. Other technical and management training have been also mentioned.
important to provide practical technical implementation of development and management programmes.

Institutional (Administration) Strengthening

The importance of fisheries development and management has recently focused on the need for administration and manpower strengthening. As a result MIMRA has engaged a commercial fisheries specialist to act as a Senior Fishery Advisor on all matters relating to fisheries development and management proposals.

The MIMRA has also appointed a new Deputy Director to strengthen the Administration and implementation of the ADB funded fisheries programme. As a condition to ADB funding the MIMRA will be required to restructure its programmes aimed at providing long term training of manpower and stimulating development growth in the private sector.

There are presently less than 18 offices working with the MIMRA.

Annex 1

Officials Met

Republic of Palau

Mr Victoria Uherbelau Director BFA- Ministry of State
Mr Noah Idechong Chief MRD
Mr Theofanes Isumu Fisheries Officer MRD
Mr Yukio M. Shmull Chairman PMA
Mr David K. Idip Director BR & D
Mr Franny Reklei Manager PFA

Others

Dr. Anraku Masateru Chief Fisheries Advisor OCF- Suva, Fiji.
Mr Barerei R. Onorio Fisheries Advisor OCF- Suva, Fiji
Mr Katsumi Kira Fisheries Expert OCF-MRD
Federated State of Micronesia

Mr Peter Sitan   Executive Director   MMA
             President   NFC
Mr Bernard Thoalaug   Deputy Director   MMA
Mr Craig Hedson   Fisheries Biologist   MMA
Mr Moses Nelson   Administrator   DR&D

Republic of Marshall Islands

Mr Danny Wase   Director   MIMRA
Mr Dannay Jack   Deputy Director   MIMRA
Mr Capital Bani   Chief Fisheries Officer   MIMRA
Mr Xavier Myazoe   Data Monitoring   MIMRA
Mr Mike White   Fisheries Advisor   MIMRA
Captain Willie M. Poznsaski   Instructor   MIMC

Abbreviations

BFA  Bureau of Foreign Affairs
MRD  Marine Resources Division
BR&D  Bureau of Resources and Development
PFA  Palau Fishing Authority
PMA  Palau Maritime Authority
MMA  Micronesian Maritime Authority
NFC  National Fishing Corporation
MIMRA  Marshall Islands Marine Resources Authority
MIMC  Marshall Islands Maritime Centre
OFCF  Overseas Fishery Cooperation Foundation

Annex II

References:

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South Pacific Development Assistance Needs, by Michael P. Shepard (DR) & Les Clark March, 19984.

ADB/Inforfish, Global Tuna Industry Update, 1991


Review of the Structure, 1997-DMR by Peniasi Kunatuba. FFA Report No.4/88

Acknowledgements:

I acknowledged all the assistance provided to me by the officials I met. I remain thankful.
Part II: RECORD OF THE FIELD TRIP AND DISCUSSIONS WITH OFFICIALS MET.

Departed Henderson Airport, Honiara on Tuesday 16 February on Air Nauru flight number 122 at 12.45 am bound for the Republic of Nauru. Arrived in Nauru at 3.35 am. After a minor confusion regarding the luggage for Guam, I decided to take an hour rest prior to the Guam flight which was scheduled for 9.00 am.

The flight was on schedule so the plane departed Nauru at 9.00 am bound for Guam via Korsrae, Pohnpei, and Chuk. The plane arrived Guam at 2.15 pm the same day. Actually it was a good flight but was not an economical one because all along there were only five passengers on board.

In Guam I decided to spend a night at the Hotel Mai Anna because it is the closest to the airport and convenient for early morning departure.

I left Guam the next morning (Wednesday, 17 February) at 7.50 am on Air Continental flight no. 951 for Koror, Republic of Palau, only to have a short stop over in Yap. The plane arrived at Koror at 9.35 am. After completing the immigration and customs formalities I proceeded to the outside terminal expecting someone from the MRD to meet me. I was not surprised when no one was there to meet me. I later learned that the fax regarding my trip has never been received although I was assured that it has gone.

I wondered around the terminal to try and enquire about Mr Noah Idechong, Chief, Fisheries MRD when a gentlemen kindly approached me and introduced himself as Mr Marcello Brel.
He asked me if I needed any help. After I introduced myself he assured to take me to the office of MRD. Mr Brel later told me that he also works with the Bureau of Natural Resources, Agriculture and Forestry Division and he has been to PNG, Bulolo Forestry collage in the late 1970’s.

At the MRD’s office I was greeted by Mr Noah Idechong, Chief, Office of Marine Resources Division and Mr Theofanes Isamu, Fisheries Officer. Mr Idechong apologised and informed that he has not received my fax regarding my trip. Despite this he welcomed me to the Republic of Palau.

He also told me that the OFCF mission led by Dr Anaraku, Chief Fisheries Advisor and Mr Barerei Onorio, Fisheries Advisor both of OFCF office, Fiji in Koror to carry out a rehabilitation and maintenance programme of all the refrigeration equipment and engines installed by OFCF a few years ago.

Mr Idechong regrettably informed me that he was preparing to leave for US the next day (Thursday 18 February) which left us only a very limited time to discuss fisheries development and activities.

He assured me that Mr T. Isamu should be able to make arrangement for me to see a number of people, including Mr Victoria Uherbelau, Director, Bureau of Foreign Affairs.
I informed Mr Idechong that my trip can be summarised as a familiarisation visit to acquire a first hand knowledge of the past and present development activities as well as to discuss future prospects where desirable FFA may be of possible assistance.

I also explained the role and functions of the Fisheries Development Service. Mr Idechong acknowledged the remarkable efforts made by the Agency in recent years which have been the basis for much achievements and improvements today. He then elaborate briefly over his programmes and said much work is yet to be done on a number of projects to establish that they are operating sustainably and economically. In particular he referred specifically to the small-scale commercial fisheries operations and Micronesian Mariculture Demonstration Centre (MMDC) on giant clams.

Mr Idechong stressed that success to development is the need to have adequate staff with the qualities to implement the fisheries programmes. He said training is an important programme and it has to be carefully implemented to avoid projects being held back or delayed due to lack of staff. He added that training programmes should not be done in isolation of job environment and staff appraisals.

As regards research needs Mr Idechong said that lack of qualified and experienced marine biologist has been a problem and as result research needs although identified in the James Crossland Report, 1991, they have not been prioritised for reasons made above. Efforts for research has been largely dependent upon SPC and FFA assistance in recent years.

I also sought his views regarding our attempts to establish a training database and a consultant database. Although, he was appreciative and supportive he showed no commitments at this stage as to how this would be done.
I also brought to his attention regarding the FFC23 preparations and the concerns raised by CDP regarding the i. progress of aerial photography and survey programme, ii. developments with respect to the work on the maritime limits and, iii. Information received from US does not appear to add anything to the information the CDP has already had. He responded that FFC23 preparations are well on schedule and suggested to me to discuss it further with Mr Uherbelau, Director, Foreign Affairs. On the later he was not surprised and since he was leaving he asked me also to raised the concerns with Mr Uherbelau.

We finished the day at the Belau Yatch Club, with some Palau sashimi and .......

On Thursday morning 18 February, Mr Theofanes Isamu picked me up from the West Plaza Hotel at 8.00 am. He informed me that he had arranged for me to meet with Mr Franny Reklai, Manager, Palau Fishing Authority at 10.30 am and Mr Yokio Shmull, Chairman, Palau Maritime Authority Board at 2.00 pm. Prior to this he was going to show me around to see the MMDC, clam hatchery project and the aquarium project.

At the MMDC Mr Isamu showed me around the hatchery where giant clams were raised. Mr Isamu said the aim of MMDC was to develop and demonstrate the techniques for larval rearing of giant clams. The major species cultured have been the Tridacna gigas, Tridacna derasa and Hippopus hippopus. In 1991 US $177,000 was received from US Department of Interior, Commercial operations. Since than US Department has been the main funding source. He added that rearing techniques have been greatly improved which has resulted in high survival rates of metamorphoses. MMDC has now demonstrated the technology however the next phase is to establish that clam culture is a viable profitable commercial industry.

There are presently five people working for the MMDC, two expatriates and three nationals. The clam meat and shells are marketable, shells for decorative and meat for consumption.

Mr Isamu said that funding support from ICOD in 1990/91 (CAD $26,000) was used to carry out training workshops for farmers from Yap and Koror. Trainees were provided with yearlings and broodstocks to plant on their reefs at the end of each workshop. Since than over 8,000 T. derasa have been distributed to farmers.

He than took me to the aquarium project where he showed me their displays of marine animals. The marine animals include trochus, beche-de-mer, turtles (hawksbill), milkfish (Chanos chanos), rabbit fish, and groupers. Mr Isamu said that each year over 7,000 people mainly tourists visited the area charged only a small fee to see the facility. He said the facility needs improvement and upgrading however funding has been a major constraint.

At 10.30 am I was taken to the Palau Fishing Authority office to talk to Mr Franny Raklai, Manager, (PFA). Mr Reklai was once a professional fishermen. He was recently appointed to manage the operations of the PFA. Mr Reklai said PFA is a business arm of the government which has appointed board of directors by the President. PFA has sixteen employees and the main focus of the operation has been to concentrate on reef fish purchases and marketing. It also manages the affairs of the PFFA after it was disengaged for financial losses.

Mr Reklai said that he plans to integrate the fish marketing system in order to be competitive. The PFA facilities were established under the Japanese Grant Aid through OFCF.
Included were also a number of fibre glass boats which have been rented out to fishermen to use.

After the lunch I returned to MRD office and at 2.00 pm I met with Mr Yukio M. Shmull, Chairman of the Palau Maritime Authority (PMA). I explained the purpose of my visit and asked him to elaborate on the functions of the PMA. Mr Shmull explained that the functions and responsibilities of PMA has been to handle licensing of foreign fishing vessels outside the 12 miles. It involves in negotiations with DWFNs. PMA has a board appointed by the President. Presently, PMA has no secretariat and for this reason MRD has played a very important role to ensure information is provided to PMA to carry out its responsibilities. He expressed great satisfaction on FFA technical advice in the access negotiations which he said were very beneficial.

I concluded to say that FFA has a long term mandate to work for improvements in the fisheries sector and if there is anything the Agency can do assist please let us know.

On Friday 19 February, I was picked up from the hotel at 8.00 am. At the MRD office Mr Isamu advised me that he has tried to arrange for me to visit the two fishing companies (PITI & PMIC). For some reason this did not occur as we were unable to make an appointment on time. I could not see Mr Uherbelau as well because he was sick. I decided to go through some of the documents given to me by Mr Idechong before he left and since I was to leave on Tuesday 23 February, I made sure to talk to Mr Uherbelau on Monday 22 February.

At 1.30 pm I briefly met with Mr David K. Idip, Director of Bureau of Resources and Development at the office of MRD.

Mr Isamu picked me up from the hotel at 7.30 am on Saturday, 20 February to visit two privately operated fish markets. I was very impressed with the way the fish were handled. The fish were handled fresh in ice. We also visited the Palau Fishing Authority fish market to observe and to try and compare the operations.

We returned to the hotel at 12.00 pm. Mr Isamu informed me that he has arranged for us to visit a community fishing project on Sunday, 21 February.

On Sunday morning we departed at 10.00 am on our way to visit the community fishing project in one of the outer islands. However, rough weather forced us to turn back. Alternatively, we decided to do some trolling.

On Monday morning (22 Feb) Mr Isamu arranged for me to meet Mr Victoria Uherbelau, Director of Bureau of Foreign Affairs, at 3.00 pm. I met Mr Uherbelau in his office as was scheduled. I briefly went through the purpose of my trip which he acknowledged. I also raised DD's concerns with regards to the FFC23 preparations and any assistance that the Agency could do to possibly assist. Mr Uherbelau informed me that the preparations are well under control, except that the hotel he has arranged as a venue for the meeting is still being rebuilt after fire destroyed some of the rooms. At about 4.30 pm we visited the hotel to check for ourselves on the progress.
The management of the hotel assured that the work is progressing well and that the reconstruction and renovations of some of the rooms should all be ready by the time of the FFC meeting. We returned to Mr Uherbelau's office at 5.30 pm. He later invited me for a dinner at the West Plaza Hotel which I have very much appreciated.

Departed Koror on Tuesday, 23 February at 2.15 pm on Continental flight number 984 for Guam. Arrived Guam at 5.10 pm and spent a night at the Hotel Mai Anna.

Departed Guam on Wednesday, 24 February at 8.10 am on Continental flight number 956 for Pohnpei, FSM. Arrived Pohnpei at 12.36 pm. At the airport I was met and taken to the Hotel Pohnpei. After I had checked in at the hotel I telephoned Mr Bernard Thoalaug, DD MMA to advise of my arrival. He informed me that he had sent Mr Craig Hedson to pick me up to take me to his office.

At the office of MMA I met Messrs B.Thoalaug, and Peter Sitan, Outgoing Executive Director. We spend the afternoon discussion fisheries development issues and opportunities.

Mr Sitan briefly explained the roles and functions of a number of organisations involved in the fisheries matters. These organisations include MMA, DMR-Department of Resources & Development, State Government Fisheries and NFC of FSM.

Before we ended the day, Mr Thoalaug suggested if I was interested to observe a longline transhipment on Thursday morning, 25 February. As this was my first opportunity I told Messrs Sitan and Thoalaug that I would very much like to see the process.

Mr Sitan recapped that FSM benefited about US $15 million dollars each year through access arrangements and licensing of foreign fishing vessels. He said fisheries earnings contribute 80% of the Gross National Product (GNP) and this has been a tremendous achievement.

Market opportunities are good for both the domestic and export fish products and these have been advantaged by the fact that FSM has a good geographical location to major fish markets and with the support of international flights each day one can be assured of a consistent supply. This is particularly important for the longline operations which is targeting the sashimi market and is highly vulnerable to quality he added.

Mr Sitan also expressed his appreciation on the Agency's work which has contributed to the achievements he mentioned. He assured of continued cooperation and collaboration with the Agency on fisheries matters. As he was due to vacate the office he also assured confidence that his successor Mr Thoalaug will continue to collaborate with the Agency on fisheries matters of both national and regional interest.

On Thursday morning 25 February, I was picked up from the hotel at 8.00 am by Mr Hedson (Biologist). He informed that there was a transhipment at 9.00 am. At the MMA office Mr Thoalaug and Sitan informed me that since they were attending a meeting it may be beneficial for me to accompany Mr Hedson to observe the transhipment at the waterfront in preparation to airfreight the longline catches of bigeye and yellowfin tuna.
At the water front Mr Hedson measured the length of each fish unloaded and weighed while I observed the process. The determination of a good quality longline catches really begin soon after landing on board the vessel at sea. The raw material must be handled carefully to avoid bruising and damage and for this reason speed and efficiency is important in processing tuna for the *sashimi* markets. On board the vessel the tuna must be cleaned, gutted, washed and chilled immediately after catching.

After a day or two the catch is brought ashore for quality inspection, weighing and packing in dried ice ready for shipment by air through to Guam and or Honolulu. At the shore, handling must be as fast as possible soon after unloading. Tuna for *sashimi* markets is graded both on visual characteristics and fat content of the flesh. Sampling of fat is done by cutting a small flap at the tail region to inspect colour and the oil content.

I noticed during my observation that the quality inspection was provided by the companies (Taiwanese) own quality control personnel. Consideration should be made for member countries to be encouraged to develop their own capabilities for such purposes (reasons for technological advancement in the fishing industry and independent quality assessments and pricing).

We returned to the office at 10.30 am as an appointment has already been made for to meet Mr Mosses Nelson, Administrator MRD.

At the office I was introduced to Mr Nelson who welcomed me to FSM. Mr Nelson briefly went through his activities. He said the main aim of the MRD is to promote development, management and enforcement activities through the state fisheries operations which arc responsible for fishing activities in the territorial waters. The activities of the MRD include: 1. Fisheries Extension, 2. Aquaculture for giant clams, trochus and sponges, 3. Inshore research and conservation. He said inshore research suffered the most due to lack of qualified staff to implement any planned research and monitoring programmes of the inshore marine resources. Concerns have already been raised about over-fishing of some sedentary resources in some parts of islands, he added.

I raised the issue on training and asked him how he views the importance of it and opportunities he may have identified for possible future consideration. Mr Nelson in reply said that training is an important tool for improvement of performances however the programmes at present are administered through the Training Division of the Office of Personnel and Administration. He said training offered through the regional organisations such as the attachment programme with the Agency are extremely valuable.

I raised the issues on training and consultant databases. I explained that the two have different uses but could be extremely valuable source of information for assessing future training and consultant needs. I promised to send him the formats once they have been finalised and approved.

I thanked Mr Nelson for his time and look forward to further contact him on fisheries development and training matters.

In the afternoon I met with Mr Thoalaug once again to recap my discussions with Mr Nelson.
On Friday 26 February, I met Mr Thoalaug to discuss future ongoing and new development opportunities. Some opportunities discussed were institutional strengthening, training, small-scale fisheries research and development, and the longline fishing operations. ADB is proposing a major fisheries programme (est. US $6.0 million) for FSM. It is hoped that future development assistance needs would be determined through this process as well as incentives for better facilitation of industry development.

I was invited to Mr Peter Sitan's farewell party on Saturday, 27 February on behalf of the Agency. Mr Sitan resumed as President, National Fishing Corporation of FSM on Monday, 29 February.

I left on Sunday 28 February at 1.10 pm on Air Continental flight number 956 for Majuro via Kwajalain. Arrived at Majuro at 5.10 pm.

Once again no-one was waiting for me at the airport, so I decided to enquire for Mr Danny Wase, Executive Director, for MIMRA. An old man named Captain Willie M Poznsnaki met me and told me that he knew Mr Wase as they both work in the same ministry. He was kind enough to take me to his motel.

Captain Poznsnaki is an instructor at the Marshall Islands Maritime Centre. He teaches seamanship and deckhand training.

At the motel he told me that Mr Wase was due to leave for Tokyo, Japan on Monday 1 March to attend a symposium. I asked if he could take me to meet briefly with him on Monday morning prior to his departure.

Monday, 1 March was declared a national holiday for the Republic of the Marshall Islands to observe the date the US tested the atomic bomb on the Bikini island. At 8.00 am Mr Poznsnaki took me to MIMRA office to check if Mr Wase was in. I was fortunate to meet Mr Mike White, Fisheries Advisor for MIMRA. Mr White told me that Mr Wase will be leaving for Japan at 10.00 am and if I wish I could briefly meet him at the airport.

Captain Poznsnaki took me to the airport where I met Mr Wase. Mr Wase apologised that he would be unable to see me to discuss what he plans. He directed me to see Mr Dannay Jack, Deputy Director, MIMRA on Tuesday morning to discuss fisheries development activities. Mr Jack formerly of Interior Department was recently appointed as a Deputy Director of MIMRA replacing Mr John Bungitak (former DD).

On Tuesday, 2 March Capt. Poznsnaki took me to MIMRA to meet Messrs Dannay Jack, DD, and Mr Capital Banil, Chief Fisheries Officer. The two officers welcomed me to the RMI. However, Mr Jack informed me that a mission from Republic of China (ROC) (Taiwan) has also arrived and that they were to meet with them in the morning. The mission from Taiwan visited the RMI to discuss a pole and line fishing operation proposal. He suggested I returned in the afternoon to meet with them.

Mr Jack gave me fisheries development plans by JICA of Japan and ADB Appraisal reports on fisheries projects proposed under its 5 years development programme. He also suggested that Capt. Poznsnaki take me around to see the longline vessels brought from Hawaii and...
dock facilities. In doing so I briefly met with the General Manager. I was not able to speak to him in great details about his operations as he has also other visitors to talk to.

At 1.30 pm I returned to MIMRA office where I met Mr Jack. I briefly went through the reasons of my visit and what I had intended to do in the next few days. Mr Jack raised a lot of questions about FFA's role and programmes it intends to promote to support the initiatives by member countries. The reason he raised these questions was to learn more about the regional fisheries issues as he has been only a month with MIMRA and it was important that he understands the functions of the Agency. Note: Mr Dannay Jack will be attending the FFC23 meeting and it would be an opportunity to meet him and fill him with any other details of FFA's functions and work programmes.

I also met very briefly with Mr White, (FA). Mr White wanted to know latest developments with regards to cannery proposals in the region. He did not think Marshall Islands (technically) is capable of having one due to serious water problems although subject such as this is high in the list of political priorities.

I spend some parts of Wednesday (3 March) and Thursday (4 March) with Mr Jack discussing the Outer Islands Fisheries Centres (OIFCs), the ADB Fisheries Projects, training and private sector participation in the industry. Mr Jack said that the development of the OIFCs under the Japanese Grant Aid has forced some difficulties. He elaborated that now the Arno Atoll Fishing Centre has been completed MIMRA is faced with difficulties to find operating funds. He enquired for the possibility of using the EDF to fund the initial operating costs. I told him that a project proposal would be required with relevant costing to be submitted through their Foreign Affairs requesting the use of EDF for such a purpose.

Departed Majuro, at 7.00 am on Friday, 5 March for Nadi, via Tarawa and Funafuti. Although, the flight took almost 10 hours I conclude to say that I have very much enjoyed the trip and I look forward to contribute to any future development assistance needs of the three countries visited.

Returned to Honiara from Nadi on Saturday 6 March.

---------------------------------------------------------- PartII: Field trip report ROP, FSM
& ROMI. w flsja/17

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