

Fishery policy in the Marshall Islands

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Foreword

This document contains the report of a study on fishery policy in the Marshall Islands which was carried out at the request of the Government of the Republic of the Marshall Islands through the FAO FishCode Programme, under Project GCP/INT/823/JPN, "Responsible Fisheries for Small Island Developing States". It is based on the work of Mr Joe Stanley, FAO/FishCode Consultant, who conducted a mission to the Marshall Islands in September–October 2004. The study was completed under the supervision of the FAO Subregional Office for the Pacific (SAPA), the technical guidance of the FAO Fisheries Department/FishCode Programme and in close collaboration with the Marshall Islands Marine Resources Authority.

The *FishCode Review* series publishes results of studies, missions, consultations, workshops, meetings and other project activities undertaken through the Programme, in furtherance of the objective of facilitating implementation of the 1995 FAO Code of Conduct for Responsible Fisheries and related international fisheries instruments and plans of action. Individual issues in the series are distributed to appropriate governments, regional bodies, meeting participants and Programme partners. For further information on Programme background, publications and activities, please consult the Website at <http://www.fao.org/fi/fishcode.htm>

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ABSTRACT

A study on fishery policy in the Marshall Islands was carried out at the request of the Government of the Republic of the Marshall Islands (RMI) through the FAO FishCode Programme in September–October 2004. This report on the study provides an overview of the RMI economy and, within this context, the state of the fisheries sector in recent years. Current fisheries policy, development and management programmes are also considered, along with emerging fisheries-related issues. The report concludes with a summary of observations and recommendations.

Principal recommendations relate to: (i) formulation of a consolidated policy statement that embraces all fisheries jurisdictions and programmes and activities in the three subsectors of ocean fisheries, coastal fisheries and mariculture; (ii) greater emphasis on collaboration with the private sector and outer island communities in development and management of RMI marine resources; (iii) elaboration of a corporate plan for the Marshall Islands Marine Resources Authority (MIMRA); (iv) review of the Authority's existing budget layout and its possible recasting in a format that better reflects costs where incurred and outputs expected from each division; (v) adopting a cautious and transparent approach with regard to outer island income-generating activities, with attention to partnerships between communities and private business concerns and the use of incentives involving seed funding, technical assistance, transport facilitation and other support activities; (vi) action to implement operation of the MIMRA Revolving Trust Fund as soon as possible; and (vii) the need for a detailed review of capacity building and training needs for both the Authority and stakeholders in atoll communities, followed by elaboration of a long-term training and human resources development schedule as part of MIMRA's work programme.

Suggestions for possible short-term technical assistance projects are appended.

Keywords: fisheries policy; fisheries management; EEZ fisheries; coastal fisheries; marine fisheries; mariculture; small island developing States; South Pacific.

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Abbreviations/acronyms

ADB	Asian Development Bank
CCRF	Code of Conduct for Responsible Fisheries
CMI	College of the Marshall Islands
CTSA	Center for Tropical and Subtropical Aquaculture
EEZ	exclusive economic zone
FAO	Food and Agriculture Organization of the United Nations
FFA	South Pacific Forum Fisheries Agency
FNTC	Fisheries and Nautical Training Centre
GDP	Gross Domestic Product
JICA	Japan International Cooperation Agency
MIDA	Marshall Islands Development Bank
MIMRA	Marshall Islands Marine Resources Authority
NMFS	National Marine Fishery Service
OFCF	Overseas Fisheries Cooperation Foundation of Japan
RMI	Republic of the Marshall Islands
RMIEPA	Republic of Marshall Islands Environment Protection Agency
RRE	Robert Reimer Enterprises
SPC	Secretariat of the Pacific Community
WCPFC	Western and Central Pacific Fisheries Commission
UNCLOS	United Nations Convention on the Law of the Sea
USDA	United States of America Department of Agriculture

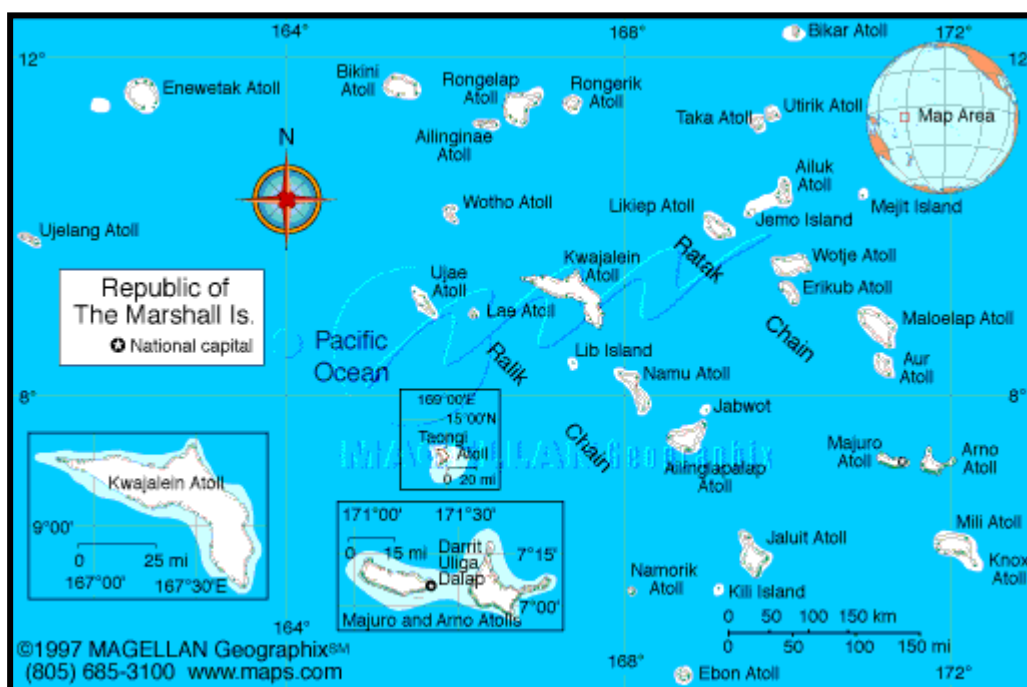
INTRODUCTION

1. This document presents the report of a study to review existing fishery policy, programmes and current developments in the fishery sector of the Marshall Islands.
2. The study was organized at the request of the Government of the Republic of the Marshall Islands (RMI) through the FAO FishCode Programme, under Project GCP/INT/823/JPN, "Responsible Fisheries for Small Island Developing States".
3. The study is based on a field mission conducted in September–October 2004, under the general coordination of the FAO Subregional Office for the Pacific (SAPA), the technical guidance of the FAO Fisheries Department/FishCode Programme and in close collaboration with the Marshall Islands Marine Resources Authority.
4. Terms of Reference for the study are shown in Appendix A, a list of persons consulted in Appendix B, and a list of documents reviewed in Appendix C.
5. The report begins with a brief review of the RMI economy in an attempt to place the fisheries sector in perspective vis-à-vis other sectors. Background on the fisheries sector itself is then provided, followed by a review of current fisheries policy and related fisheries development and management programmes. Current and emerging fisheries issues are then considered. The report concludes with a summary of observations and recommendations. Suggestions for possible short-term technical assistance projects are included in Appendix D of the report.

Background: the RMI economy

6. The economic situation of Marshall Islands is largely dictated by its geographic situation. Located in the Central Pacific Ocean (Fig.1), it consists of 34 atoll and reef systems made up of about 1 225 separate islands. The total land area is estimated at only 171 km², surrounded by about two million km² of ocean. Most of the land is only a few metres above sea level, and soils are generally poor. The population has grown steadily from 39 873 in 1980 to 50 840, according to the latest census in 1999. Estimated population size for 2004 is 59 000. Majuro atoll accounts for more than 20 000 of the total and Kwajalein atoll for more than 10 000 inhabitants. The balance of the population is widely distributed among the rest of the islands.
7. The economic situation of Marshall Islands is one of flux. This is particularly so in recent years, with the end of the first 15-year period of the Compact of Free Association with the United States and the beginning of a new one under revised terms and conditions.
8. The RMI economy is estimated to have grown steadily between 1999 and 2003. Growth during 2002 and 2003 was estimated at 5.51 percent and 5.50 percent, respectively, following a period of significant increase in government spending between 1999 and 2001 that has now been scaled back.
9. Recent years have also witnessed expanded activities in commercial fishing and processing activities in the country. The bulk of these activities take place in Majuro, and bring little apparent benefit to those living in outer atolls. Increasing economic opportunities in Majuro have been accompanied by an increase in the flow of people from the outer islands to the state capital. Results of recent household surveys indicate a gradual decline in the quality of life for Marshallese living in the outer atolls over the past two decades. Main factors attributed to this decline are an expanding population and the steady decrease in copra prices. The traditional income source of copra production has only remained viable because of the price subsidy paid by the Government.

Figure 1. Map of the Marshall Islands



10. The following table traces main economic indicators for the RMI from 1999 through 2003.

Table 1. RMI main economic indicators*

Item	Fiscal year**				
	1999	2000	2001	2002	2003
GDP (current prices, million US\$)	97.3	99.0	101.7	107.3	113.2
GDP <i>per capita</i> (\$, current)	1 914	1 879	1 863	1 894	1 924
GDP growth (% in constant prices)	0.8	(2.0)	(1.5)	4.0	3.0
Govt. revenues and grants (% of GDP)	67.3	74.7	96.1	93.0	90.6
Govt. expen. & onlending (% of GDP)	56.8	65.8	93.9	78.2	75.3
Overall fiscal surplus (% of GDP)	10.5	8.9	2.2	14.8	15.4
Merchandise trade balance (% of GDP)	(63.0)	(46.1)	(38.1)	(40.4)	-
Current account balance (% of GDP)	(7.9)	21.4	38.2	29.7	-
External debt (% of GDP)	101.2	87.6	65.9	54.24	-
Consumer price index (annual % change)	1.7	1.6	1.7	2.0	2.5
Population estimates	51 000	52 000	55 000	57 000	59 000

*Source: Marshall Islands Country Strategy and Programme Update 2005-2006, August 2004, ADB.

**Note: Fiscal year ends 30 September.

11. Other than figures on RMI merchandise trade balance, most of the economic indicators seem to portray a picture of reasonable economic performance. However, the situation is severely skewed by resources available under the terms of the Compact of Free Association. Without these resources, the local economy would be in extremely dire straits. And because the flow of these resources is not perpetual, standard economic indicators are misleading for purposes of economic management and comparison with other small island developing States.

12. Funding from the Compact arrangement during 2003 accounted for a total 33 percent of all government revenues, with Federal and other grants amounting to another 25 percent and the Nuclear Claims Trust to 11 percent. This funding situation continues to pressure the Government to promote development of products and services with local value adding. The following table shows the breakdown of GDP components among major sectors of the

economy, and highlights the significant contribution by the public sector to domestic economic activity.

Table 2. Contribution to Gross Domestic Product by sector, 1995-1999 (current prices: %*)

Sector	Year**				
	1995	1996	1997	1998	1999
Fishing	8.03	7.71	7.30	6.94	7.40
Agriculture	6.87	6.31	6.77	4.99	4.73
Manufacturing	2.56	1.54	1.70	1.56	1.71
Electricity, gas and water	2.04	2.65	3.05	2.11	2.31
Construction	10.17	6.83	6.83	11.11	10.95
Wholesale, retail, restaurants, hotels	17.03	18.29	17.59	17.83	17.70
Transportation and communication	6.22	7.11	7.80	5.29	5.67
Community, social and personal services	30.48	31.73	31.28	32.40	32.10
Sub-total	99.64	97.59	97.80	98.20	98.50
Other*	0.36	2.41	2.20	1.80	1.50
Total	100.00	100.00	100.00	100.00	100.00

***Source:** Marshall Islands, Meto 2000, and Economic Report and Statement of Development Strategies, ADB, April 2001.

** **Note:** Other items include import duties and less imputed bank services charges.

13. The breakdown of GDP by sector for subsequent years was not available to the reviewer. However, the contribution of the fisheries sector is generally accepted to have made major strides during the four years from 1999 to 2003. This is partly reflected in the tables given in the following section, including fish catches by foreign and local flag vessels, and those relating to the operations of PM & O tuna loining plant and other fish export operators. Some fishing activities may be included in the sector breakdown for Community, Social and Personal Services, where non-commercial or subsistence activity can be enumerated.

14. The high proportion of Government revenues and grants as a percentage of GDP has declined somewhat since 2001, when it peaked at 96.1%. Continued involvement by the public sector in the promotion of commercial enterprises, and in spearheading economic enterprises in partnership with private firms will be necessary for the foreseeable future, however, as only limited investment funds are available from the local private sector. There is also a dearth of specialized know-how and skills needed in certain business areas.

Background: RMI fisheries sector

General

15. The RMI has an Exclusive Economic Zone (EEZ) estimated at around 2 million km². Given that the country has a land area estimated at only 171 km², it is clear that the maritime jurisdiction offers immense comparative opportunities for economic development. Oceanic fish species identified as present in RMI waters and conducive to sustainable commercial exploitation include skipjack tuna, yellowfin tuna, bigeye tuna and blue marlin. There are also important bottomfish species available in inshore waters. Long exploited by the traditional fisheries, certain high value bottomfish species are now the targets of commercial exploitation.

16. Fisheries in RMI is regulated, promoted and managed in terms of resource sustainability by the Marshall Islands Marine Resources Authority (MIMRA). The Authority was approved by the Cabinet and established by Act of Parliament in 1988. The Act was amended in 1997, providing the Authority more autonomy from the Public Service structure

and enabling certain other changes, including in the composition of its Board of Directors. The Authority is funded through fisheries licensing and transshipment fees, which it collects directly. Surplus revenue is transferred annually to the Government General Fund.

17. The fisheries sector comprises two main sub-sectors: coastal (inshore and near-shore); and oceanic (offshore within the RMI EEZ). Coastal waters are defined traditionally to extend “as far as the eye can see”. Formal regulations, however, define these waters as stretching up to fifty miles offshore. Inshore fisheries areas are protected for game-fishing, and are defined as the sea and seabed to a distance of 5 miles from the atoll baseline. The rest of the EEZ is available under current licensing and other regulatory conditions for “oceanic” fishing. However, there is also significant interest in the RMI in mariculture, and a number of local parties are involved in this sub-sector, including MIMRA and the private sector.

Coastal fisheries

18. Coastal fisheries resources typically are exploited by households for their own consumption, and for sale to the urban areas. Coastal fisheries thus are important for subsistence purposes, and also generate some income for communities. According to the Meto 2000 Report, approximately 1 500 to 1 700 mt of fish per annum are harvested and consumed by households. This contrasts with estimates in the VISION 2018 Marshall Islands Fisheries Sector Master Plan, which puts yearly subsistence fisheries landings in a range of 3 125 to 5 470 mt.

19. Assuming subsistence fish landings as somewhere between the two estimates, say around 2 300 mt, then RMI annual *per capita* consumption of household fish catches was approximately 45 kg in 2000, representing the lower end of this consumption scale. This compares with *per capita* consumption rates estimated by Gillett and Lightfoot in a 2001 Asian Development Bank (ADB) report (“The Contribution of Fisheries to the Economies of Pacific Island Countries”) of 38.9 to 59.0 kg. Table 3 gives comparative consumption rates as estimated in that report.

20. According to the draft RMI VISION 2018 Fisheries Sector Master Plan, prepared in 2002, limited recent detailed information is available concerning the nature and status of artisanal and subsistence fisheries. However, it was clear from anecdotal evidence that subsistence fishing is a significant household activity in the outer islands. According to the results of a survey of 17 atolls carried out at the time, “...all but four recorded a greater than 85% household participation in fishing,” with the remaining four atolls recording 66-85% participation. Given the nature of subsistence on the outer atolls, it can be surmised that even the revised *per capita* consumption of household fish catches of 45.3 to 70.3 kg may be conservative.

Table 3. Estimated annual *per capita* fishery product consumption: 1990s*

Country	Consumption range (kg/year)
Cook Islands	47.0 – 71.0
Fiji	44.0 – 62.0
Federated States of Micronesia	72.0 – 114.0
Kiribati	72.0 – 207.0
Marshall Islands	38.9 – 59.0
	<i>RMI revised estimate:</i> 45.3 – 70.3
Nauru	46.7
Niue	49.0 – 118.9
Palau	84.0 – 135.0
Papua New Guinea	18.2 – 24.9
Samoa	46.3 – 71.0
Solomon Islands	32.2 – 32.7
Tonga	25.2 – 30.0
Tuvalu	85.0 – 146.0
Vanuatu	15.9 – 25.7

***Source:** Robert Gillett and Chris Lightfoot, *The Contribution of Fisheries to the Economies of Pacific Island Countries*, ADB, December 2001 (the RMI revised estimate calculated by this reviewer).

21. The contribution by subsistence fisheries to the economy calculated as the value of its productivity has been estimated at around US\$4 million per annum. This seems a fair estimate based on the retail value of fish, although based on the lower estimate of *per capita* consumption. Using the higher rate of consumption would place this contribution to GDP at around US\$6 million. Whichever way it is calculated, it is obvious that the sub-sector makes a substantial contribution to GDP, and plays a significant role in the welfare of the general population, especially in the outer atolls.

Oceanic fisheries

22. Essentially commercial in nature, oceanic fisheries in the open waters of RMI have typically been prosecuted by foreign fishing fleets. Since the ratification of EEZs through the United Nations Convention on the Law of the Sea (UNCLOS), RMI, like most other Pacific Islands countries, has sought to gain from this new jurisdiction by levying a rent or licence fee for the exploitation of its resources. Fisheries have primarily concentrated on the harvest of wild tuna and billfish species, including skipjack, yellowfin, bigeye and blue marlin. Commercial tuna operations mainly use longline, pole-and-line, and purse seine technologies. The volume of tuna caught by various methods within the RMI EEZ in recent years is shown in Table 4.

23. The Republic has also encouraged local participation in oceanic fisheries, although with mixed results. For example, a Government project for the purchase and operation of two large purse seine vessels was not financially successful. In the main, Government has chosen to seek revenues from licensing arrangements. This approach has involved access agreements with Japan, Taiwan, China and the US. Annual revenue accruing from fishing rights has varied between US\$1.5 million and US\$3.5 million over the past few years.

Table 4. Total tuna catch (mt) in RMI EEZ, by fishing method*

Fiscal year	Fishing method			
	Longline	Purse seine	Pole and line	total
1998	2 146.5	65 551.3	18 392.0	86 089.8
1999	4 828.6	23 742.9	3 943.8	32 515.3
2000	2 110.1	20 403.1	8 207.5	30 720.7
2001	4 176.4	36 324.4	16 242.5	56 743.3
2002	1 992.1	28 915.0	7 316.3	38 223.4
2003	1 149.3	2 442.5	39.0	3 630.8
Total	16 403.0	177 379.2	54 141.1	247 923.3
Annual Average	2 733.8	29 563.2	9 023.5	41 320.5

*Source: RMI Statistical Yearbook 2003

24. Purse seine activity within the RMI EEZ dropped drastically during 2003, resulting in a significant drop in overall catch volumes. During the past four years, however, there has been an active locally-based tuna fishery involving RMI-flagged vessels. Catch landings by these vessels is shown in Table 5 below.

Table 5. Total catch (mt) by Marshall Islands flag ships in the RMI EEZ

Fiscal year	Fish species			
	Bigeye	Yellowfin	Skipjack	Total
2000	0	933	6 625	7 560
2001	30	2 215	24 953	27 218
2002	128	1 057	37 057	38 242
2003	0	913	23 427	24 340
Total	178	4 207	92 062	73 020
Annual Average	44.5	1 051.7	23 015.5	18 255.7

*Source: RMI Statistical Yearbook 2003

25. Operations by locally-based fishing companies such as the KMI Fishing Vessel Agency and the Marshall Islands Fishing Venture also contribute to local value adding through fish processing and export shipments. Since 1998, however, the most notable development in fish processing and export has been the P M & O Tuna Loining Plant, processing locally landed fish for export as frozen tuna loins to the Star Kist tuna cannery in Pago Pago, American Samoa. As of late 2004, when this study was prepared, the plant was closed down for financial reasons. The following table gives a summary of the basic operation indicators for the PM & O Plant.

Table 6 PM & O Tuna Loining Plant Operations: 1999-2003*

Financial year	No. employees	Fish processed (st)	Fish value (US\$)	Feed produced (st)	Feed value (US\$)
1999	100	300	60 000	50	15 000
2000	300	10 000	2 500 000	1 600	480 000
2001	400	9 700	2 450 000	1 400	420 000
2002	50	10 200	2 550 000	1 750	525 000
2003	530	12 400	3 350 000	1 300	400 000

*Source: RMI Statistical Yearbook 2003

Mariculture

26. Mariculture development policy, like that for promotion and management of coastal fisheries, is largely influenced by the need to provide direct food security and income-earning opportunities for the rural populations. As noted above, the standard of living of Marshallese living in the outer atolls have steadily declined over the past twenty years.

27. There are also concerns about the capacity of the outer atolls' inshore waters to sustain the level of fish harvest that may be necessary to provide local income earning opportunities as well as a source for subsistence. In the short term options are out-migration, over-fishing, and/or alternatives like mariculture development.

28. RMI's well-recognized remote and pristine outer atoll lagoons are considered suitable for targeted commercial mariculture development. Two private sector companies have already demonstrated the commercial viability of farming and marketing black pearls, giant clams, soft and hard corals, and small volumes of ornamental fish. The black-lip pearl oyster and giant clam juveniles for the ornamental market have proven to have the greatest potential.

29. Public sector support via technical assistance for mariculture development has been significant. A number of initiatives have been implemented with the support of government and bilateral and international agencies. These agencies include: MIMRA; Ministry of Education; Sea Grant Program; Center for Tropical and Sub-tropical Aquaculture (CTSA); National Marine Fishery Service (NMFS); SPC; FAO; Overseas Fisheries Cooperation Foundation of Japan (OFCF); US Department of Agriculture (USDA); Land Grant Program; College of the Marshall Islands (CMI); and the University of Hawai'i.

30. Translating the desire to develop mariculture as an alternative source for income generation into viable options has numerous hurdles. Essentially it has to be export-based. This means there is the need to transport product from the outer atolls to urban centres, like Majuro, for onward shipment to markets. This requirement can be problematic because of the often delicate nature of the export animals, and the need to have them arrive at market destinations alive and well. For other species such as black-lip pearl oysters, there is also the difficulty of instituting necessary marketing and financial arrangements.

PAST AND CURRENT POLICY FOR FISHERIES DEVELOPMENT

General

31. RMI policies related to fisheries have been developed through extensive consultative processes with the private sector and outer atoll communities. Policies are articulated in a variety of documents, including the following.

- Fisheries Policy Statement of 1997;
- National Fisheries Development Plan of 1997;
- Meto 2000 Economic Report and Statement of Development Strategies published by ADB in April 2001;
- Strategic Development Plan Framework 2003-2018 of the Vision 2018 exercise, produced in June 2001;
- Marshall Islands Fisheries Sector Master Plan produced for the Vision 2018 exercise in November 2002; and
- Policy on Sustainable Mariculture Development in RMI of August 2004.

32. RMI fisheries policy is premised on the interrelated needs to:

- improve economic benefits within sustainable limits;
- promote responsible, private sector led developments; and
- strengthen institutional capacities within the country for responsible fisheries development and management.

33. As noted above, Government has delineated its fisheries into two broad sub-sectors: coastal (inshore and nearshore), and oceanic (offshore). Mariculture is treated as a separate sub-sector with distinct characteristics, even though it is conducted in coastal waters.

34. Government approved an umbrella statement of policy for the development of fisheries in RMI in 1997. It directed a restructuring of MIMRA, to allow it become a more autonomous and self-funding authority or corporate body similar to other government authorities like the Energy Company and the Ports Authority. The objective was to release MIMRA from the standard civil service restraints that regulate most public services, and allow it to be more corporate and commercially oriented.

35. To further release MIMRA from these “public service” bounds, its board of directors was restructured. Originally, the board comprised:

- Minister of Resources and Development (Chair).
- Minister of Foreign Affairs.
- Minister of Social Services.
- 2 Private sector representatives appointed by the President.
- Director of MIMRA (ex-officio).

36. Following the structural changes to the Authority, its Board of Directors was reconstituted to comprise:

- Minister of Resources and Development (Chair).
- Attorney General.
- Secretary for Foreign Affairs.
- Two fisheries sector representatives (appointed by the President).
- Director of MIMRA (ex officio and secretary to the board).

37. As a corporate body or authority, MIMRA was required to produce a corporate plan for itself, and to implement modern management methods. It was also tasked to prepare

management plans for designated fisheries, introduce community-based management approaches for coastal fisheries, and explore options for achieving greater economic benefits from industrial fisheries within the RMI EEZ. Funding for MIMRA operations would be sourced from the collection of transshipment and licence-to-fish fees, and from levying other charges for the use of MIMRA infrastructure such as the Delap dock, the Uliga dock, and the Majuro Fish Base and dock.

Policy on coastal fisheries

38. Coastal fisheries have been targeted as a priority in view of their contribution to community nutrition, food security and income-generation. The contribution to nutrition and food security is substantial, with locally caught fish consumption estimated at 45 – 70 kg per person annually. Considering that younger members of the population traditionally consume less fish than adults, the consumption rate for adults is considered to be around the upper quartile of this consumption estimate.

39. The estimated value of the coastal fishery, including shellfish and crabs, was estimated at around US\$4 million in 1999. Again, the estimate is conservative if considered from, say, purchasing power parity with industrialized economies. Income earning opportunities arise from fishing activities that supply the two urban centres, Majuro and Ebeye. However, not all atolls have ready access to the two population centres because of transportation difficulties. The situation is also not helped by the existing regime of economic incentives and disincentives, including perverse incentives that do not promote the long-term financial self-sustainability of the industry.

40. In addition to the common bottomfish species traditionally caught and locally consumed, other species have also been identified as having potential for income earning opportunities. These include: gamefish, deep slope snapper, beche-de-mer, trochus, handicraft shells, sponges, clams, seaweed and reef aquarium fish. Instituting arrangements to empower communities to be involved in the development, harvest and marketing of these inshore species for local consumption and for export is the focus of current government policy and development efforts.

41. Recent and ongoing activities by MIMRA involve developing resource management institutional arrangements in the outer atolls, and its continuing task of transporting fish from the outer atolls and selling them on behalf of outer atoll fishers in Majuro. Working alongside outer atoll governments and councils MIMRA, through its Coastal Fisheries Division and Planning and Policy Division, has held a number of awareness and training workshops to build the skills and knowledge of outer atoll leaders and communities at large with regard to marine resource conservation, development and management issues.

42. MIMRA has also been working with the College of the Marshall Islands (CMI) Marine Science Department to conduct surveys in the lagoons of some outer atolls in an attempt to measure the status of coral and fish stocks within these areas. Considering the number of lagoons and reef areas in RMI, such surveys so far have attempted to extrapolate findings from areas already explored to others considered to have similar environmental characteristics. The Divisions also work closely with the SPC Coastal Fisheries Management Programme, which espouses the application of community-owned approaches to coastal resources management.

Policy on oceanic fisheries

43. Opportunities available from the RMI's vast EEZ are considered underdeveloped. Exploitation of the tuna resources assessed to be commercially abundant has largely been left to foreign fishing vessels. Attempts at local participation in the industrial tuna fishery, like the government-sponsored acquisition of two purse seiners, did not prove financially viable.

Marshallese involvement by the local private sector has predominantly been small-scale, including participation by domestically-based longline fishing vessels. Otherwise, local involvement has been restricted to levying and collecting fisheries access fees from foreign fishing vessels.

44. More marked in recent years were onshore developments. Initial arrangements involving the lease of MIMRA docking facilities to a foreign company eventually closed down. A new leasing arrangement is in place, involving a Chinese company. The company operates up to 31 longline vessels for fishing within the RMI EEZ. It also has operations based in Pohnpei, the Federated States of Micronesia, and Koror, the Republic of Palau. Fish are exported to the US/Hawaii/Guam, Japan, and to Europe via Guam. The company operates three Boeing 727 freighter aircraft to transport its product from Micronesia. Major dry-docking repairs are carried out in China while some is carried out locally by the Pacific International Incorporated Company in Majuro.

45. Another locally-based onshore operation involves the KMI Fishing Vessel Agency. The company deals with reef fish, although the nature of its operations is industrial, and catches and buys mainly deep bottom fish such as groupers for export. Its main markets are Hawaii, Taiwan and Hong Kong. Operations suffer from the lack of dock and onshore facilities such as blast freezing and cold storage. It also has problems securing air cargo space on normal commercial flights. Most fish is therefore exported as second grade product, which sells for about half the price fetched by fresh first grade fish.

46. Oceanic fishing in the RMI EEZ was given a major boost with the establishment of the PM & O Tuna Processing Plant in 1999. By 2003 the Plant was employing 530 people and processing 12 400 mt per year of tuna with an estimated export value of US\$3 750 000 (Table 6 above). Operations proved technically feasible but not financially viable, and they closed down around mid-2004. As of late 2004, the company needed a substantial infusion of additional capital to keep it afloat.

47. Policy changes inaugurated for MIMRA, and also concerning financial and economic incentives to encourage industrial fisheries operations, has generated notable positive results. A major recommendation of policy reviews of the late 1980s, which has largely been taken onboard, is for the general investment climate in RMI to be foreign-investment friendly. For such investments to be sustainable long term, however, both macro- and micro-financial and fiscal policies need go hand-in-hand with policies for the development of fisheries.

48. In addition to policies inaugurated to encourage development, especially local participation in industrial and commercial fisheries, MIMRA is also responsible for RMI's obligations for resource conservation and management, including for trans-boundary species under various regional and international conventions, agreements and treaties. These commitments can involve significant time and effort, since they entail liaison and cooperation with regional and international organisations and with other countries of the Pacific region.

Policy on mariculture

49. The statement on Policy on Sustainable Mariculture Development in Marshall Islands, dated August 2004, is the latest national pronouncement on the development and management of marine resources. The policy aims at providing alternatives to traditionally harvested lagoon resources for nutritional purposes. It also encourages the development of alternative sources of household income in the outer atolls.

50. Three major concerns drive the policy initiative – namely:

- future levels of external funding cannot be guaranteed;
- the capacity of RMI to continue subsidising the price of copra is in doubt; and
- pressures on marine resources appear to be accelerating due to local and foreign commercial fishing.

51. The mariculture “vision” is described in the policy statement as involving:

- education and awareness that empowers communities;
- linkages between ecosystem management, community-based fisheries, and the preservation of biodiversity;
- outer island production that link operations with transportation;
- food security and gender equality;
- community and cultural foundations;
- income generation, leading to reduced dependency on government programmes; and
- availability of start-up capital.

52. Mariculture development has long been recognized in RMI as holding out commercial potential. Perhaps the new policy initiative adds a new dimension by emphasising more community involvement. Two commercial mariculture ventures have already demonstrated the financial viability of such enterprises. With its pristine and sheltered lagoons, the lack of major storm activity, and shortage of land for onshore aquaculture developments, mariculture seems an obvious choice as a development option.

53. Emphasis has been put on invertebrates, due to their relatively high value and the low level of technology necessary to rear them. Additional advantages are that they do not require manufactured feed, and hatchery production is also simpler than for marine fish. The focus is on locally occurring wild species, but these generally have not been well researched. Development therefore requires a precautionary approach and additional research, particularly as highly sensitive environments are involved.

54. Of major concern for mariculture development in the outer islands, just as for other coastal fisheries and non-fisheries activities, is the question of transportation links with the main urban areas. Creating community awareness, and imparting basic technical skills needed to properly run small mariculture farms, will be major challenges for mariculture development. There also appears to be a need for more coordination among the various programmes involved in the promotion and development of mariculture in the Republic.

55. Formal education, training, and research in mariculture have been carried out for over two decades in RMI, with the aim building up local capacity in the sub-sector. Efforts have included:

- Clam farm at Likiep, operated by MIMRA.
- Robert Reimers Enterprises (RRE) farms in Arno and Jaluit.
- ORA clam farm in Majuro.
- Woja pearl oyster hatchery in Majuro.

56. More recently the Department of Education, with financial assistance through an ADB loan, has established a hatchery and provides training to both teachers and students. Initially the project sponsored teacher training in aquaculture in Pohnpei, the Federated States of Micronesia, particularly involving pearl oysters and coral. At the beginning, the project sourced its oyster spats from the CMI. Now, the RRE has offered to buy all the spats participants in the project produce.

57. Establishing a private mariculture project requires the approval of the MIMRA Director and the RMI Environment Protection Agency (RMIEPA) Manager. Approval of the local government council in the area where the project is to be sited is also necessary. The policy document also lists what is considered the roles of the Government, private sector and communities. These relate in the main to how the policy statement may be implemented, including issues that need addressing, and concerns that need overcoming.

REVIEW OF CURRENT POLICY AND PROGRAMMES

Issues relating to MIMRA organization

58. It has been mooted that the two fisheries management divisions of MIMRA, Coastal Fisheries and Oceanic Fisheries, are so disparate and distinct that they should be separated institutionally. While the two may have quite separate stakeholders and approaches, one focusing on community participation and the other on regional and international mechanisms, they are both fundamentally concerned with responsible management of living marine organisms and thus have much in common. Institutionally, gains are realized through the use of common facilities, and through economies from sharing personnel and knowledge within MIMRA.

59. Extension services are considered one of the more basic and important functions of a Fisheries Department or Authority. This service is especially vital given ongoing efforts to involve communities in the development and management of marine resources within their jurisdictions. They can as well play a pivotal role in providing advice and training on new initiatives such as mariculture, and on best practices related to fishing gear, fishing methods, fish quality control, basic business skills, etc. Such a service would also be needed by the commercial private sector, if it was available. Extension services are not given sufficient prominence in the current structure and functions of MIMRA.

60. Although MIMRA was mandated by the National Fisheries Policy of 1997 to formulate a corporate plan, this does not appear to have happened yet. The lapse may be explained by the fact that numerous other related plans and reports have been prepared in the interim, all demanding extensive involvement of senior MIMRA staff. However, it is considered that a corporate plan as initially proposed would not only help MIMRA focus on its core business, but also allow it specifically to address issues and challenges detailed in various related plans

61. The corporate plan exercise should be undertaken simultaneously with the preparation of a succinct strategic statement together with a thorough review of MIMRA organisational structure and human resources requirements. In this connection a better delineation of functions and responsibilities within the organisation should be established, recognising areas of overlap and collaboration – especially those between the Coastal and Oceanic divisions. Depending on the outcomes of the corporate planning exercise, the organisational chart may be modified, and staff positions redefined. This exercise should be undertaken as a matter of priority because of existing and evolving jurisdictions and responsibilities within MIMRA, and also because additional responsibilities are in the pipeline, such as those relating to the West and Central Pacific Tuna Commission.

62. The corporate planning process must be consultative, involving all senior MIMRA staff. If objectives and goals are set through such an internal consultative process of agreement and understanding, using a workshop arrangement, staff will regard their duties and functions with a sense of ownership. Moreover, the exercise will help further to define and delineate regulatory, development and promotional functions, and how the integrity of each is maintained.

63. The budgeting format used by MIMRA is detailed and informative. However, it is difficult if not impossible to trace specific expense items to relevant cost centres, for example to the various divisions as currently depicted in the existing organisation chart, including Coastal Fisheries Management, Oceanic Fisheries Management, Policy and Planning, and Corporate Services. Depending on the outcomes of the corporate structure review done in conjunction with the corporate planning process, the next financial year's budget might be recast to reflect these main organisational groupings. Producing the authority's budget in an input/output format would also facilitate the measure of performance.

64. Although the MIMRA Board of Directors has been revamped (the Ministers of Foreign Affairs and Social Services being replaced by the Secretary for Foreign Affairs and the Attorney General), it is considered that the primary focus by implication remains largely the same – i.e. international issues and legal jurisdictions. This contrasts with the Authority's heavily development-oriented mandate for both coastal and oceanic fisheries. It seems probable that the Board's direction and management can be enhanced by replacing the two officials with, say, the Secretary for Resources and Development, and a representative of the outer atoll communities. It may be prudent at present for the Board Chair to remain with the Minister of Resources and Development to ensure needed influence. In time, however, the position might be relinquished to a member of the private sector.

Issues relating to the MIMRA work programme

65. According to the Marshall Islands Fisheries Sector Master Plan, "The stated primary purpose of the fisheries component (FSSMP) of the Environment, Resources & Development Master Plan is to provide an integrated plan for the sector, based on goals, objectives and strategies as defined in the broad framework matrix of Vision 2018". The Fisheries Sector Plan goes on to note that: "There is no shortage of consultancy reports undertaken, and reports produced, in relation to the fisheries and marine resources sector over the last 10 years".

66. The five main objectives for the fisheries sector have been identified as:

- maximize rents from fisheries resources within sustainable limits;
- develop income-generating opportunities in sustainable coastal fishing activities;
- develop sustainable management plans based on stock assessment of fisheries resources prior to any development activities;
- strengthen the Fisheries Nautical and Training Centre (FNTC) and diversify the employment opportunities for graduates; and
- enhance the capacity of the fisheries sector to increase production, processing, trade and exports in a sustainable way.

67. RMI's income from licence fees has fluctuated markedly on an annual basis over the past ten years. For the financial year 2000, for example, it amounted to US\$4 559 960. In 2004, it totalled US\$1 559 671 – a decline of some 67 percent. This reflects the volatile nature of the fishery and the corresponding level of foreign fishing effort in the RMI EEZ. Fees from locally based fishing vessels and from carrier vessels and transshipment amounted to US\$464 600 during 2004, demonstrating the importance of this source of revenue. Because of varying environmental conditions that affect the susceptibility of fish stocks to various gear, and fluctuating market prices, it can be expected that licence fees will again rise from its recent low levels.

68. Achieving the objective of developing income-generating opportunities in sustainable coastal fisheries faces major hurdles. These include the lack of convenient transportation links for fresh catches to reach the main urban areas, and the absence of shore facilities such as for blast freezing and cold storage, so that catches can be shipped as frozen product when transportation is available.

69. MIMRA has proceeded with the development of community management plans. However, this is a slow process, first because not all outer island lagoons have been subject to stock assessments, and second due to the very nature of the process itself. The situation is made more difficult by the limited human resources available for the task within MIMRA.

70. The main attraction of the Fisheries Nautical and Training Centre to trainees is the opportunity it offers to secure employment after graduation on a fishing, passenger or cargo vessel. Most of job opportunities are on on US flag vessels, where remuneration is above average and where RMI citizens have no problems with employment requirements. The

Centre was established in the early 1990s, primarily for the training of deckhand fishers and marine engineering fishers.

71. The Training Centre actively seeks job placements for its graduates. However, in recent years this has become harder and in 2004 about sixty graduates, equivalent to about three years' graduate output, were listed as possibly unemployed. In response, the Centre has developed training models that allow students to pursue more advanced maritime courses beyond the pre-sea induction course. More advanced training requires sea-time in order to progress to internationally recognized qualifications. One option for creating sea-time opportunities for trainees is to make its provision a condition for locally registered vessels. Another is to offer competitive wage rates so that the arrangement is more attractive to operators of foreign vessels.

72. At the time of this review the FNTC was still officially a part of the MIMRA. However, there are ongoing discussions about the possibility of affiliating it as part of the CMI. The proposal has merit in that it would place the Centre within a recognized educational institution, and also allow it more leeway in developing its training curriculum for a more open-ended employment market rather than just fisheries. This would be in keeping with the Centre's aim of "maximizing employment opportunities within the maritime sector".

73. Important progress has been made over the past decade towards the fifth major objective for the fisheries sector – i.e., to enhance its capacity to increase production, processing, trade and exports in a sustainable way. Catches by locally based vessels, and catches landed locally by other vessels, increased significantly with the establishment of the tuna loining plant five years ago and through the operations of the company that leases the MIMRA fisheries dock. In addition, the KMI Fishing Vessel Agency also contributes to production and export. However, as noted above, the loining plant closed down around mid-year 2004 due to financial difficulties.

74. Projects the size and complexity of the PM & O Tuna Processing Plant are few and far between. Invariably, because of the technology and the complicated financial and marketing arrangements entailed, highly skilled and experienced management is required to make such operations successful. MIMRA does not at present have such capability in-house, nor is it necessarily part of the Authority's role to be directly involved in such operations, which is in any case would tie up considerable financial resources. On the other hand, the Authority should try to build up its capability to promote the development of these sorts of value-adding ventures by local and international firms.

Issues external to MIMRA impacting its mission

75. The MIMRA is provided with a wide legislative mandate. It has also been delegated considerable responsibility for social and economic development by Government. It also has responsibilities emanating from various regional and international conventions and agreements. In order to meet all of these responsibilities, MIMRA needs a good enabling environment to develop and have in place necessary human, financial and other resources. But such an environment cannot be ensured by the Authority acting on its own, and this makes for a sometimes difficult mission.

76. Addressing regional and international obligations concerning marine resources management is largely in hand. This function is greatly enhanced and facilitated through cooperation with other parties to the respective arrangements, and through technical and training support available through international and regional programmes. Standardising methodologies such as fisheries supervision and surveillance, and data collection, aggregation and analysis, have all contributed to effective management in the Pacific region.

77. Establishing management regimes for responsible fisheries in the outer islands, coupled with the requirement to promote and develop related sustainable income-generating marine activities, has proved a much more daunting task. The move toward community

marine resources management plans is probably rendered easier by the fact that there is as yet rather limited commercial fishing, and that target species within the lagoons are still in a reasonably healthy state. Further resource assessments are needed in order better to benchmark the situation.

78. Developing community fisheries management plans is deceptively simple. Prepared with an eye on opening some income-earning avenues, the management tools and checks and balances must necessarily take into account the potential magnitude of increased harvest rates associated with the income-earning thrust. A successful and developing semi-commercial fishery can stress the targeted resources. At the same time, failure to generate income-earning opportunities renders the community management plan somewhat meaningless. The effectiveness of community management plans is not measured on how they are able to conserve resources alone, but also on how the community has benefited from resource harvest, and/or from alternative income-generating activities that are promoted in association with the plans.

79. The development of both coastal and oceanic fisheries that maximize local value adding for RMI needs an enabling investment environment, and further require supportive physical and financial infrastructure. Currently transportation between the outer atolls and the urban centres is a problem. And in spite of the vastly improved international air services out of Majuro, air cargo capacity constraints still hinder expansion of live and fresh marine product export.

80. Communities operating individually will not solve the national transportation problem. And income-generating opportunities will not be realized if products cannot reach their destinations in the condition the market demands. The volume and value of product from the outer islands, considering the need to harvest within sustainable levels, make it unlikely that any one island community can sustain production levels that satisfy any island-specific transport service. One option could be income-generating development in association with a commercial enterprise that provides such transportation as needed, and also supplies marketing services. Another could be further involvement by MIMRA.

Issues relating to the investment climate

81. Issues relating to social and economic incentives needed to drive outer island responsible resource management and income-generating activities are complex. New ventures will need some nurturing, with appropriate technical support provided through skilled MIMRA extension service officers. It is important for purposes of demonstration and confidence-building that the first few projects selected be successful. For this to happen, the whole process from planning through start-up, production operations, communications and marketing arrangements will need to be carefully thought out and well integrated.

82. Seed capital will be required on attractive terms, and made available with a minimum of official procedure through a revolving fund structure. Low interest rates with a "holiday period" related to project gestation and initial harvests, as well as the possibility of availing suspension loans after the project has operated beyond a certain time period, are some considerations that should be seriously taken into account. Loan security must also be flexible, perhaps even based on the personal guarantee of atoll councils, in addition to or without recourse to encumbering chattels.

83. Even paying loans, or for that matter transferring payment from the urban centres to the outer atolls, is a problem due to infrequent transport connections, and the absence of related on site service facilities. An arrangement may need to be worked out with the outer island councils that would help facilitate loan repayments through application of peer pressure to run successful income-generating projects and to keep to revolving fund terms and conditions of assistance. Principles adopted by various micro-funding operations elsewhere may be helpful reference points.

84. RMI has subsidized the price of copra for many years, owing to the steady drop in price levels. This price trend is expected to continue, unless a new application for (or health benefit of?) coconut oil is discovered. Copra remains the only source of income for most outer atoll communities; for alternative income-generating activities to be attractive, they must demonstrate a similar level of compensation, given comparable time and effort.

85. Some arrangement that bestows benefits similar to the prevailing level of subsidy for copra might therefore be considered for marine activities. These may not necessarily take the form of a direct price subsidy. As discussed above, they could involve favourable terms for financing, technical assistance, and marketing support.

86. MIMRA may have to be more extensively involved in outer-island income-generating initiatives than currently envisaged. Alternatively, in concert with its mandate to promote development that is private-sector driven, it may assist or broker an arrangement whereby a suitably positioned firm enters into partnership with the outer atoll councils on a commercial basis, in order to facilitate product transportation and related marketing functions. Government assistance through financial and other fiscal incentives might be considered, depending on the situation of such a commercial partner and the estimated costs and benefits of the total national enterprise.

87. Much has been said and written about the distorting effects of subsidies. These arguments are valid where subsidies are simply unnecessary or where they divert application of resources to alternative uses that are of greater economic benefit. Such is not the case here. The potential for sustainable economic use of existing outer atoll natural resources needs to be nurtured. Otherwise, infant industries will not be able to thrive and the depopulation of the outer atolls will continue apace.

88. Quite apart from special considerations for community-based marine resources development, the private sector in general needs a favourable climate for it to grow and prosper. Such an environment must include accountability and transparency in both private and public sector activities. A tax system conducive to hard work and the accumulation of capital for reinvestment is necessary, with tax collection evenly and effectively applied. Tax breaks may be considered for “special” projects based on realistic cost-benefit evaluations. Establishing a desirable business must be made simple, and sources of capital finance made available through competitive and even favourable conditions.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

General fishery policy statement

89. The Republic of the Marshall Islands’ general policy statements on the conservation, management and sustainable development of its fisheries resources are detailed and well developed, and comply with various conventions and agreements on the sustainable management of sea resources, including the FAO Code of Conduct for Responsible Fisheries.

90. However, policy vision has been fragmented by the practice of delineating fisheries resources as either coastal, oceanic or maricultural. While these fisheries have their differences, they also have much in common. A policy statement covering all fisheries jurisdictions, separate from outlines of individual work programmes and activities, would help MIMRA focus on its overall mandate in a more cohesive way. Developments in all three sub-sectors have progressed sufficiently that collapsing policy into a combined single document could easily be facilitated.

91. **Recommendation:** Rather than issuing separate policy statements included in different management plans separately for coastal, oceanic and mariculture fisheries,

formulate a combined statement in a single policy document that provides “at a glance” the overall guiding principles for MIMRA’s work programme.

MIMRA’s Board of Directors

92. MIMRA was reconstituted in 1997 to better reflect its legislated responsibilities of spearheading the development and management of Marshall Islands’ marine resources in collaboration with the private sector and outer island communities. One of the changes implemented was re-composition of the Board. Nevertheless, the new composition maintains the previous emphasis of legal and inter-governmental aspects of MIMRA affairs. These are important, especially with regard to the Authority’s oceanic management responsibilities. However, these aspects are already well-served, and continue to be supported by regional and international institutions. Furthermore, such specialized support, as it is the case with other agencies of Government, is also always available when requested.

93. **Recommendation:** It is recommended that the Attorney General and the Secretary for Foreign Affairs be replaced on the MIMRA Board of Directors by the Secretary, Resources and Development, and a representative of outer island communities. To further enhance and empower the private sector as a partner with Government in economic development, the Chamber of Commerce should be enabled to choose two representatives for the Board. These suggestions may involve changes to the relevant legislation.

MIMRA corporate plan

94. The Fisheries Policy Statement of 1997 required that MIMRA produce a corporate plan. Numerous other plans have been elaborated in the interim, perhaps taking precedence in terms of corporate resources over the preparation of a corporate plan document. Given the wide-ranging programme of activities in which the Authority is presently engaged or anticipating, it is time for the organisation to undertake a corporate planning exercise involving review of its vision, mission, goals and objectives against its policy statement. In the process the existing organisational structure must be reviewed and revised as appropriate, with attention to individual job descriptions and allocation of necessary resources. The corporate plan can then be reviewed and revised annually or bi-annually as needed.

95. **Recommendation:** The MIMRA should seek external technical assistance to help undertake an exercise to produce a brief corporate plan document through a participatory process that ensures its “ownership” by management and staff.

Financial statements as management tools

96. The format for financial statements and budgets currently adopted is detailed and informative. However, it only breaks down by division salaries and wages and add-ons. “Other” operating expenses may also need to be related to where they occur, such as by divisional cost-centre. This may involve, for example, recasting the budget by using the existing format but applied for each division, with “overheads” accounting for expenses that are not directly attributable to a division. The suggested change would allow management to better monitor each division’s budget against their programmed activities and expected outputs.

97. **Recommendation:** It is recommended that the Corporate Services Division review the existing layout of the Authority’s annual budget with a view towards recasting it in a format that better reflects costs where they are incurred and outputs expected from each division.

Outer atoll activities

98. MIMRA is investing heavily in formulating its outer island work programmes, involving both coastal fisheries and mariculture research and development. Their ultimate success will rest on the establishment of viable and sustainable income-generating marine activities. Regrettably, the main constraints to success are beyond the resources of MIMRA to overcome especially in connection with the problems of sea and air transportation between the outer atolls and the main urban centres and between the main centres and the export markets.

99. **Recommendation:** It is recommended that MIMRA take a cautious and transparent approach in order to avoid inflating community expectations with regard to outer island income generating activities. Chances of success may increase by encouraging partnerships between communities and private business concerns. The Authority can also encourage “foreign” investment from the urban areas while it concentrates on resource management issues. In either case, MIMRA will need to consider in detail a “package” of incentives involving seed funding, technical assistance, transport facilitation, and other support such as onshore processing and storage services.

MIMRA extension services

100. The thrust of MIMRA’s current and proposed work programmes, especially the significant emphasis given to community-based development in the outer atolls, will need a well-trained and competent cadre of extension service officers. These officers must act as advisors on an array of matters pertaining to the community and individual developer needs for information and technical assistance. In the past, extension services have been hampered by infrequent and expensive transport services. It has also not been easy to organize, train and manage such services because officers have been attached either to the local government or to the Authority. Extension officers will need to be trained in a variety of non-traditional fisheries areas, including mariculture and fish processing.

101. **Recommendation:** Based on needs and objectives identified through the corporate planning exercise, MIMRA should seek technical assistance for the attachment of an Extension Services Specialist to the Authority, who would undertake staff training and further development of the Authority’s extension service function.

MIMRA revolving trust fund

102. The concept of a revolving trust fund to be managed by MIMRA was published in December 1999. Thus far, the Fund has not commenced business. The idea is to provide seed finance for micro-projects in the outer islands. Examples from around the region and elsewhere show that micro-project trust funds can be successful, providing that administrative procedures are applicable to the local situation and not unwieldy and burdensome. At the time of this review, transfer of the fund for administration by the Marshall Islands Development Bank (MIDB) was being mooted. This would be a prudent move, given the Bank’s lending expertise. As originally conceived, MIMRA must assist in the processing of loan applications by providing technical inputs required by the applicants, communities, and loan processing officers.

103. **Recommendation:** It is recommended that arrangements for the operation of the MIMRA revolving trust fund be finalized as soon as possible. Because there may not be many applicants that qualify for assistance at the beginning, the capital of the fund may be built up gradually. It is also important that project evaluation criteria are realistic, so that loan conditions such as interest rates, holiday periods, gestation or income streams, and repayment schedules are also realistic.

Other needed technical assistance

104. In addition to the corporate planning exercise and specific extension service training, there are other areas of MIMRA's work programme and functions that would benefit from technical assistance. It has been suggested that the Authority's databases are in need of upgrading, and that a resources economist should be added to the staff of the severely under-resourced Policy and Planning Division. Community projects will require general extension training as well as training in very specific areas, including for example quality control, proper fish and marine product handling and storage, and appropriate methods for processing surplus product such as fish salting and drying.

105. **Recommendation:** A detailed review of the Authority's training needs should be conducted, along with a review of the training needs of stakeholders in atoll communities. This review should be undertaken as part of the corporate planning exercise. A long-term training and human resources development schedule should then be incorporated as part of MIMRA's work programme. Some suggestions on possible short-term technical assistance projects that the Authority may wish to consider requesting from FAO or other appropriate regional, international and bilateral donors are provided in Appendix D.

APPENDIX A

FISHERY POLICY STUDY IN THE MARSHALL ISLANDS: TERMS OF REFERENCE

Under the supervision of the FAO Sub-Regional Office for the Pacific Islands (SAPA) in Samoa and the technical guidance of the FAO Fisheries Department/FishCode Programme and in cooperation with the Government authority concerned (Marshall Islands Marine Resources Authority: MIMRA), other relevant government authorities, non-government organizations and private sector in the Marshall Islands, associations, and with due reference to requirements to promote responsible fisheries as set out in the FAO Code of Conduct for Responsible and its related international plans of action and technical guidelines the consultant will:

1. Conduct a fishery policy study in the Marshall Islands with reference to:
 - Effect of the ongoing transition on the economy of the Marshall Islands.
 - Meto 2001 (five-year national development plan) and Draft Sector Review.
 - Relationship between the fisheries sub-sector and other agriculture sub-sectors focusing on conflicting policy and development issues.
2. Review the past and current national fisheries policy, management, development and strategic plan(s) (e.g. Fisheries Development Plan, Tuna Management & Development Plan, Study on Shark Fisheries Management Plan, Aquaculture Development & Management Plan and relevant reports) together with their implementation programmes and activities.
3. Assess the impact of fisheries development (inshore and offshore fisheries resources) to date, including technical, economic, social, environmental and institutional aspects.
4. Recommend on how planned fisheries activities and projects should be designed to further improve its effectiveness, development impact and sustainability based on the findings in the above items 1, 2 and 3.
5. Recommend on whether current level of funding allocated for fisheries development is sufficient to further improve fisheries management and development.
6. Identify and recommend appropriate fisheries projects (e.g. TCP, TeleFood, etc.) to be formulated and implemented in cooperation with FAO based on the findings of this consultancy.
7. Report preliminary findings to the Government prior to the departure from the Marshall Islands, and submit to SAPA Samoa and to the FishCode Programme Coordinator, FAO/Rome a full report formatted in accordance with FAO style in MS WORD upon completion of study, for formal submission to the Government of the Marshall Islands.

Qualifications:

The consultant should have appropriate tertiary qualifications with strong background in fisheries management and economics and a good understanding of inshore and offshore fisheries in the Pacific region, as well as thorough familiarity with the Code of Conduct for Responsible Fisheries and its related international plans of action and technical guidelines. The consultant must be capable of working constructively and efficiently with the

Government agencies, private sector and other personnel as required. The consult must have demonstrated analytical, technical writing and computer skills and the ability to prepare concise and accurate report.

Language:

English

Duration:

Four weeks (three weeks in Marshall Islands and one week for work preparation and report writing at home base).

APPENDIX B

PERSONS CONSULTED

Hon. John Silk,	Minister of Resources and Development
Frederick Muller,	Secretary, Ministry of Resources and Development
Rebecca Lorennij,	Assistant Secretary, Ministry of Resources and Development
Raynard Gideon,	Acting Secretary for Foreign Affairs
Danny Wase,	Director, Marshall Islands Marine Resources Authority (MIMRA)
Glen Joseph,	Deputy Director – Oceanic Fisheries, MIMRA
Danny Jack,	Deputy Director – Coastal Fisheries, MIMRA
Terry Keju,	Chief of Policy and Planning, MIMRA
Florence Edwards,	Chief of Coastal Fisheries, MIMRA
Saturnino Acibo,	Chief of Corporate Services, MIMRA
Manabu Echigo,	OFCF Expert, MIMRA
Ryutaro Yamamoto,	JICA Expert, MIMRA
Clyde James,	Aquaculture Specialist, MIMRA
Houston Lomae,	Intern Student, Policy and Planning, MIMRA
Larry Muller,	Principal, Fisheries and Nautical Training Center (FNTC)
Carl Hacker,	Director, Office of Planning and Statistics
Yumi Crisostmos,	Director, Office of Environmental Policy and Planning Coordination
John Bungitak,	General Manager, Environmental Protection Agency
Amon Tibon,	Managing Director, Marshall Islands Development Bank
Rome Angel,	General Manager, Bank of Guam, Majuro
Mark Canney,	Project Manager, ADB/Education Skills and Education Project
Jimmy Kemem,	Director, National Training Council
Karl Fellenius,	Marine Science Instructor, College of the Marshall Islands (CMI)
Dr Sylvia Pinca,	Marine Science Instructor, CMI
Dean Jacobson,	Marine Science Instructor, CMI
Dr Diane Myazoe,	Dean, CMI
Dr Manoj Nair,	Aquaculture Research Scientist, CMI
Dr Irene Taafaki,	Centre Director, University of the South Pacific (USP)
Jerry Ljang Bin Yang,	Base Manager, Marshall Islands Fishing Venture (MIFV)

Nicole Baker,	Strategic Planning Consultant, Ministry of Resources and Development
Yen Sheng,	KMI Fishing Vessel Agency
Steve Why,	Marshall Islands Conservation Society (NGO)
Ramsey Reimers,	Chief Executive Officer, Robert Reimers Enterprises
Phil Marshall,	Chief Accountant, Robert Reimers Enterprises
Billy Fisher,	Vice President, PM & O Tuan Processing Plant
Daniel Kramer,	President, Majuro Chamber of Commerce (MCC)
Dolores Kattil,	Vice President MCC & General Manager, MI Tourism Authority
Don Hess,	Secretary, MCC
Karina Aliven,	Treasurer, MCC
Jerry Kramer,	Chairperson – Government Relations, MCC
John Hawley,	Chairperson – Transportation, MCC
Kirtly Pinho,	Chairperson – Tourism MCC and Chairman, MI Tourism Authority
Bill Weza,	Manager – Special Projects, MCC
Danny Lee Munro,	Chairperson – Education, MCC
James Myazoe,	Chairperson – Business and Trade, MCC

APPENDIX C

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APPENDIX D

TECHNICAL ASSISTANCE PROFILES

D.1 Corporate planning assistance

Introduction

The RMI Fisheries Policy Statement approved by Cabinet in 1997 stated that: “A Corporate Plan, including a Mission Statement, will be developed by the Marshall Islands Marine Resources Authority (MIMRA)”. The intention was to ensure that the programs and functions of the Authority remain responsive to the fisheries sector needs of the country. Numerous plans relating to the fisheries sector and its sub-sectors have since been produced, but not a corporate plan for MIMRA as envisaged.

The need for the corporate plan referred to in the Fisheries Policy Statement of 1997 is now all the more apparent. The Authority’s work programme and functions have continued to grow over the past five years. The new emphasis and thrust of its coastal community fisheries development programmes have expanded significantly, and will continue to gather momentum.

The Authority’s oceanic fisheries responsibilities also continue to expand. While management mechanisms, including the observer programme, catch data statistics, and surveillance and compliance activities are well developed with the assistance and cooperation of regional organisations like the Secretariat of the Pacific Community (SPC) and the South Pacific Forum Fisheries Agency (FFA), responsibilities relating to the operations of the newly created Western and Central Pacific Tuna Commission will again add to the Authority’s own workload.

Identified need

MIMRA needs to undertake an evaluation of its organisation structure against existing and proposed work programmes. All aspects of its mission need to be clearly related and inter-linked as parts of a well-defined entity, including policy directions, mission objectives, implementation strategies, and action or work plans.

Outline of corporate planning process

The corporate plan project should not be considered as a one-off exercise, but designed so that after the initial event, it becomes part of MIMRA’s management system – a way of “organising today for better performance tomorrow”. The aim of corporate planning is to develop strategies which, when translated into annual operating plans, such as budgets, will achieve the objectives of the organisation.

It is proposed that the plan be expressed in two or three years, to be reviewed occasionally and changed as necessary. The following planning process and activities may be considered:

- Review of MIMRA’s operating environment.
- Define its mission.

- Set objectives.
- Assess the organisation's strengths and weaknesses.
- Develop strategies to achieve objectives.
- Develop actions to operationalize the strategies.
- Develop performance indicators to measure success/achievements.
- Develop monitoring and control mechanisms.
- Periodically review and evaluate.
- Report results and outputs to appropriate authorities.

Outcomes

The main outcome of the exercise will be a formal, written Corporate Plan. This document, preferably succinct, will contain all the main elements of the planning activities and process listed above.

The other main outcome, equally important, will be an established system of management goal setting, priority resource allocation, performance review and reporting.

Required skills

MIMRA management should be assisted in this corporate planning exercise by a team of at least two specialists. One should have extensive experience in corporate planning, preferably with experience in the Pacific Island Countries. The other should have experience in fisheries agencies or organisations, preferably with experience in the Pacific Island Countries and issues relating to fisheries in the Pacific region.

Implementation timeframe

The corporate planning exercise should be undertaken as soon as possible, and scheduled so that most if not all of the senior management members of MIMRA are available to take part and be consulted. There must be commitment by the senior executive of MIMRA to the principles of corporate planning, participation and consultation. The plan document needs to be understood and owned by MIMRA staff.

Potential sources of technical assistance

Technical assistance may be available from FAO. Other potential sources of assistance include the Forum Fisheries Agency, Forum Secretariat, or bilateral donor partners and agencies.

D.2 Technical Advisor

Introduction

The responsibilities and functions of MIMRA have undergone major changes and growth over the past five years. More recently, there has been a concerted drive to develop new areas of responsibilities and work programmes within the coastal fisheries area. This is

recognized as a major undertaking, especially underpinning Government policy to create income-generating opportunities in the outer atolls based on the sustainable development and management of coastal marine resources.

Coupled with the promotion and development of fisheries-related employment opportunities in the outer atolls are responsibilities demanded by international and regional fishery resource management agreements and conventions. While these have been facilitated with the assistance of regional and international inter-governmental agencies and organisations, nevertheless the workload associated with these responsibilities continues to grow in both human resource demands and in technical sophistication.

The requirement to place emphasis on developing marine resources in partnership with the private sector, promoting greater involvement by locals in the commercial development of fisheries in the country, also places additional responsibility on the Authority to assist in facilitating an investment environment for both urban and outer island development.

All these demands on the Authority require a well-resourced and technically competent organisation.

Identified need

The Authority has reacted as best it can to the demands of its expanding work programme over the past few years. There has been scant opportunity for serious consideration of long-term organisational and human resource implications. With limited executive resources, senior staff have not had sufficient opportunity for in-depth organisational analysis necessary to ensure a well-functioning, effective and efficient operation as required by MIMRA policy guidelines.

Personnel comprising the Authority's senior management do not have time to spend on extra technical and administrative duties without compromising existing functions. It is also considered that given the current stage of organisational development for MIMRA, it is appropriate that expertise in the areas of corporate and organisational development, and human resource development, with particular reference to organisations of a nature similar to MIMRA, be sought through technical assistance programmes.

Outline of technical assistance

The proposed Technical Advisor will work as counterpart to senior management, responsible directly to the MIMRA Director. S/he will act principally as technical advisor to management in all areas of the Authority's operations, but more especially in organisational and human resource development. Responsibilities will include staff training in supervisory and management aspects of the Authority's responsibilities. The Advisor will also provide advice to management on developing issues relating to marine resources management and development. The Advisor will combine both advisory and line functions as required by the Director.

Required skills

The Technical Advisor must have extensive experience in a fisheries regulatory and/or development organisation. Formal qualifications in a marine-resources field along with management experience in middle and senior management positions will be a requirement. The Advisor must have working experience in the Pacific Islands, and be familiar with fisheries management and development issues in the region. Proven ability to work at a senior management level, as well as with staff at all levels, will be desired.

Outcomes

The Technical Advisor will work with MIMRA for a period of at least twelve months. S/he will be required to provide periodic progress reports to the Director, based on an approved work programme and activity schedule, which the Advisor will prepare and submit for approval by the MIMRA Board of Directors at the beginning of the assignment. On consultation with and approval of the Director, the Advisor's work schedule may be reviewed and varied as circumstances dictate. An end-of-assignment report will be prepared by the Advisor outlining achievements, and also advising on other areas of need that have been identified.

Implementation schedule

The Technical Advisor should be recruited as soon as possible. This position may be filled so that the incumbent is on board when the corporate planning exercise recommended in this report is undertaken. It may be advantageous, if practicable, that the Technical Advisor be a member of the corporate planning team. Both assignments, however, need also take into consideration workflow cycles and the Authority's reporting requirements and financial year.

Potential sources of technical assistance

Assistance may be available from the FAO, regional inter-governmental organisations such as the Forum Fisheries Agency, the Secretariat of the Pacific Community, or bilateral donor countries and agencies.

D.3 Extension Services Specialist

Introduction

The MIMRA is going through a period of immense challenge. Its coastal fisheries programme, involving both fisheries within the lagoon areas and development of income-generating mariculture micro-projects, is a significant undertaking. Developing and instituting resource management regimes in partnership with outer atoll communities involve an array of specific activities.

Already, MIMRA has worked alongside marine scientists from the College of the Marshall Islands (CMI) in preliminary resource assessment surveys in some of the outer islands. This task is immense, if all or most islands are to be covered. Two outer island communities have also been engaged by the Authority in jointly developing marine resources management and development plans.

Implementing plans for the sustainable development and operation of income-generating activities as envisaged by its policy statement and work programme will require MIMRA to provide well organized and targeted extension services that will offer technical, management and basic business advice to outer island stakeholders.

Identified need

Substantial effort will be needed for MIMRA to organize, develop and operate an Extension Services Division that can competently and efficiently deliver the advisory services necessary to ensure income-generating micro-projects started under its initiative in the outer islands are technically feasible, commercially viable, and environmentally sustainable.

The core extension service already within the Authority is dispersed and on some islands is shared with local governments owing to logistical and financial resource considerations. The quality of the service can be affected by various difficulties associated with coordination from MIMRA headquarters, very remote from many outer islands.

The development of quality extension advisory service delivery is crucial. This aspect of the Authority's functions is not confined to community initiatives but must also be able to cater for the commercial private sector as required. In many respects, extension service officers are the MIMRA's front line personnel, who influence how the Authority is publicly perceived.

The extension services section of MIMRA should be involved from the beginning when community initiatives are conceived and developed. This will allow a deeper appreciation of the communal issues involved, and enable direct involvement by extension officers from the outset.

Extension services by necessity must be sufficiently skilled and competent in delivering technical and related management and business advice. They must also have a grasp of the basics of all related disciplines to be able to provide effective advice in most areas of project development and implementation.

Description of technical assistance

MIMRA has a wide-ranging work programme linked to coastal fisheries, oceanic fisheries, and mariculture. Most of the activities within these sub-sectors involve recently introduced concepts and approaches to resource development and management. Promoting greater private sector involvement in commercial fisheries in the country has been difficult. Community income-generating marine activities will pose similar if not greater challenges.

The Fisheries Extension Services Specialist will develop a work schedule based on the overall work programme of the Authority. S/he will develop a schedule of training needed both in-house and elsewhere as needed. The Specialist, however, will conduct most of the in-house training with assistance from MIMRA senior officers. The Specialist will also develop an organisational structure for the extension services section that will be able to respond and service the needs of stakeholders engaged by the MIMRA work programme.

As extension service training officer, the Specialist will coordinate and arrange training programmes with the assistance of a designated local counterpart. Training modules involving specialized technical areas of fisheries, to mechanical and gear maintenance, and basic business skills such as record keeping, may be outsourced either locally or overseas depending on the availability of such skills.

Outcomes

The Fisheries Extension Specialist will be recruited for a period of at least twelve months. At the end of the technical assistance assignment s/he will have developed a core extension service group within MIMRA with the basic necessary knowledge and skills to operate and deliver technically competent extension advice to communities and the private sector.

Implementation schedule

The Fisheries Extension Specialist should be recruited after the proposed corporate planning exercise, and when the proposed Technical Advisor has also been hired. This will ensure that extension service development is guided by the Authority's overall strategies and work programme activities. S/he will have extensive experience in community and commercial fishing activities, with formal qualifications in a related area.

Potential sources of technical assistance

Technical Assistance to implement this proposal may be requested from specialized agencies of the United Nations such as the FAO, regional inter-governmental organisations like the SPC and the FFA, or bilateral donor agencies and governments.

D.4 Marine Products Quality Control and Processing Specialist

Introduction

The strong emphasis on assisting the promotion of income-generating opportunities for communities in the outer atolls through the sustainable development and management of coastal marine resources, coupled with the mandate to further the involvement of Marshallese in the commercial and industrial fisheries, will require from MIMRA an enhanced and dedicated advisory service in various areas of fisheries harvest, handling, storage, and processing.

Such services will in particular be essential to outer atoll communities, which are not accustomed to quality control measures needed for marine products intended for urban and overseas markets. To ensure that those initial income-generating micro-projects become financially successful and sustainable, skill in fish handling, blast freezing, freezing and storage, and processing (including gilled and gutting, filleting, salting and drying, and packaging) must be available as part of the required training for emerging entrepreneurs.

Similar, if more sophisticated training, will be necessary to assist the private sector enter competitive export outlets and create niche markets.

Identified need

MIMRA does not have the specialist skills needed to develop advisory services in state-of-the-art quality control and processing for marine products. To build up such a capability within the Authority it will be necessary to recruit a specialist in the field.

In the area of quality control, such aspects as fish handling at time of catch, cleaning, icing, basic processing such as gutting, filleting, packing and storage, as well as other related quality considerations, will be given priority. In seafood processing, loining and filleting, salting and drying, packaging and storage, and transporting requirements will be emphasized. The two aspects of the Specialist's functions are closely related, and may be separated or combined as necessary.

Description of the technical assistance

The Quality Control and Processing Specialist will have extensive experience in this field, preferably in tropical conditions. S/he will also have formal or professional qualifications in a related field, such as in food technology.

The Specialist will be recruited for at least three months. During that period s/he will train MIMRA extension officers in the basics of quality control and seafood processing. The Specialist will also undertake training exercises targeting interested members of the private sector and outer atoll communities with maritime income-generating projects.

Outcomes

At the end of the Quality Control and Processing Specialist's assignment relevant staff of the Authority will be capable of providing basic quality control and processing advice to its private sector partners. In addition, sufficient publicity will have been given to this aspect of fisheries operations, targeting the Marshall Islands population at large.

Implementation schedule

The Specialist will need to be attached to MIMRA so as training benefits will be maximized. This must be synchronized with the related training activities of the enhanced extension services section recommended elsewhere in this report. This may require the Specialist to be onboard when a few outer atoll income-generating fisheries projects are starting up. Sufficient interest from the private sector in the urban centres must also be generated so that local participants participate in training workshops and activities.

Potential sources of technical assistance

Technical Assistance may be requested from specialized agencies of the United Nations such as FAO, or from regional intergovernmental organizations such as the SPC or FFA, or from bilateral donor countries and agencies.

FAO FishCode Reviews

1 Pintz, W.S. Tuna and bottom fishery licence management: Tonga. *FAO/FishCode Review*. No. 1. Rome, FAO. 2003. 35p.

Fish are now the largest single export from the Kingdom of Tonga. However, expansion of the industry faces severe infrastructure constraints, and granting substantial numbers of new longline licences without resolving the constraints could seriously affect all Tongan commercial fisheries.

2 Gillett, R. Aspects of fisheries management in the Maldives. *FAO/FishCode Review*. No. 2. Rome, FAO. 2003. 61p. (*Restricted distribution*)

The inshore marine resources of the Maldives, an atoll environment, are being increasingly exploited for baitfishing, food for local residents, consumption by tourists, exports and non-extractive uses such as dive tourism. This situation must be reconciled with the limited nature of the resources.

3 Die, D.L.; Alió, J.; Ferreira, L.; Marcano, L.; Soomai, S. Assessment of demersal stocks shared by Trinidad and Tobago and Venezuela. *FAO/FishCode Review*. No. 3. Rome, FAO. 2004. 32pp.

The FAO/WECAFC Workshop on assessment of demersal stocks shared by Trinidad and Tobago and Venezuela (2002) initiated an assessment of the shrimp stocks shared by the two countries. The main conclusion of the assessment is that some shrimp stocks are being severely overfished and are suffering as a result.

4 Gillett, R. The marine fisheries of Cambodia. *FAO/FishCode Review*. No. 4. Rome, FAO. 2004. 57p.

Excess fishing effort and associated declines in abundance of target species are the most serious problems facing Cambodia's marine fisheries: resource sustainability will require restrictions on resource access.

5EN FAO/FishCode. Seminar on responsible fisheries management in large rivers and reservoirs of Latin America. *FAO/FishCode Review*. No. 5. Rome, FAO. 2004. 72p. [En]

This report of the Seminar on Responsible Fisheries Management in Large Rivers and Reservoirs in Latin America (2003), attended by experts from member countries of the Commission, observers from other regional bodies and representatives from local fishing communities in El Salvador, presents the principles of responsible fishery management in Latin America as well as a selection of national reports.

5SP FAO/FishCode. Seminario sobre ordenación pesquera responsable en grandes ríos y embalses de América Latina. *FAO/FishCode Revista*. No. 5. Roma, FAO. 2004. 78 p. [Sp]

El Seminario sobre Ordenación Pesquera Responsable en Grandes Ríos y Embalses de América Latina (2003) se efectuó en San Salvador en asociación con la novena reunión de la Comisión de Pesca Continental para América Latina (COPESCAL). Participaron expertos de países miembros de la Comisión; observadores de otros organismos regionales y representantes de comunidades pesqueras locales de El Salvador. Se presentaron dos documentos sobre los principios de la ordenación pesquera responsable en grandes ríos y embalses en América Latina y una selección de informes nacionales.

6 Swan, J. National Plans to combat illegal, unreported and unregulated fishing: models for coastal and small island developing states. *FAO/FishCode Review*. No. 6. Rome, FAO. 2003. 76p.

These case studies for use in FAO regional and subregional workshops were prepared in accordance with the FAO International Plan of Action to Prevent, Deter and Eliminate IUU Fishing. The "Republic of Galactia" and the "Alpha Islands" are fictitious, but the fisheries profiles presented draw on typical existing circumstances.

7 Kuemlangan, B. Creating legal space for community-based fisheries and customary marine tenure in the Pacific: issues and opportunities. *FAO/FishCode Review*. No. 7. Rome, FAO. 2004. 65p.

The laws of Pacific Island countries generally support traditional fisheries management with only modest efforts to encourage the use of customary marine tenure-based community fisheries management. Government commitment for the role of customary marine tenure in community-based fisheries management, with support from interested stakeholders, will complement efforts for promoting sustainable utilization of fisheries resources and improved livelihoods in the Pacific region.

8 FAO/FishCode. Report of the Workshop on Development of a Management Plan for Tomini Bay Fisheries, Indonesia. *FAO/FishCode Review*. No. 8. Rome, FAO. 2004. 31p.

Tomini Bay fishery resources are still considered to be underexploited, but annual catches have increased dramatically over the past ten years. In the absence of a fisheries management body, The FAO/Government of Indonesia Workshop on the Development of a Management Plan for Tomini Bay Fisheries (2003) provided a starting point for addressing responsible fisheries issues and laying the groundwork for a fisheries management plan

9 FAO/FishCode. Report of the National Conference on Responsible Fisheries in Viet Nam, Hanoi, Viet Nam, 29–30 September 2003. *FAO/FishCode Review*. No. 9. Rome, FAO. 2004. 94p.

This national conference was organized in the context of increasing problems faced by Vietnamese fishers in maintaining and improving their livelihoods through coastal and offshore fisheries; some coastal fish resources in particular are being heavily over-exploited.

10 Stanley, J. Institutional review of the National Fishing Corporation and the Fisheries Department of Tuvalu. *FAO/FishCode Review*. No. 10. Rome, FAO. 2004. 47p. (*Restricted distribution*)

The economic growth and development of Tuvalu depend on its marine resources and especially its relatively rich tuna resources. Although the primary concern of the government is the sustainable economic development and management of tuna, there is also potential for the development of other marine products, particularly deep bottom fish.

11 García Mesinas, A. Lineamientos para un Código de Ética de Pesca y Acuicultura para El Salvador. *FAO/FishCode Revista*. No. 11. Roma, FAO. 2004. 59p. [Sp] (*Restricted distribution*)

Este documento presenta los resultados de un proyecto llevado a cabo a través del Programa FishCode de la FAO a petición del Gobierno de El Salvador para desarrollar los lineamientos a nivel nacional del Código de Ética de la Pesca y Acuicultura. El trabajo se realizó coordinado a través de la Oficina Regional de América Latina (RLC) y la Representación de FAO de El Salvador.

12 FAO/FishCode. Report of the National Workshop on the Code of Conduct for Responsible Fisheries and its practical application to coastal aquaculture development in Viet Nam. *FAO/FishCode Review*. No. 12. Rome, FAO. 2004. 47p.

The National Workshop on the Code of Conduct for Responsible Fisheries and its Practical Application to Coastal Aquaculture Development in Viet Nam took place in Hué from 3 to 4 October 2003. The Workshop aimed to build awareness among national and provincial stakeholders about the need to develop and implement an Aquaculture Code of Conduct for

Viet Nam. Coastal aquaculture in Viet Nam, particularly shrimp culture, has developed rapidly in recent years. Although shrimp farming has brought many benefits to coastal communities, it is associated with high social and environmental risks.

13 FAO/FishCode. Report of the National Seminar on the reduction and management of commercial fishing capacity in Thailand. *FAO/FishCode Review*. No. 13. Rome, FAO. 2005. 59p.

The marine capture fisheries sector is more capital intensive than is appropriate for Thailand's resource endowment, and there is an urgent need for fishing capacity reduction for improved fisheries management and protection and conservation of fish habitats and other threatened coastal resources. Failure to achieve this will have serious consequences for the most vulnerable people in coastal communities, fish consumers and society at large.

14 FAO/FishCode. Reports of the regional vessel monitoring systems workshops: Southwest Indian Ocean, Central America, the Caribbean and Southeast Asia. *FAO/FishCode Review*. No. 14. Rome, FAO. 2005. 91p.

Four regional workshops on vessel monitoring systems (VMS), respectively covering the South West Indian Ocean, Central America, the Caribbean and Southeast Asia, were organized and implemented in succession from September 2003 to October 2004. The workshops were intended to promote the use of VMS as an additional instrument for the management of fisheries, both at a national level and in cooperation with regional fisheries bodies. They comprise one aspect of FAO's larger set of activities to implement the International Plan of Action (IPOA) to Prevent Deter or Eliminate Illegal, Unreported and Unregulated (IUU) Fishing. The document includes a CD-ROM.

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Fisheries play a key role in the economy of the Republic of the Marshall Islands (RMI) and in the lives of its people. Substantial tuna resources are exploited from the country's vast exclusive economic zone, largely by foreign fishing vessels operating under licence. Coastal fisheries are important for subsistence purposes, and also generate income for atoll communities. RMI's well-recognized remote and pristine outer atoll lagoons are considered suitable for targeted commercial mariculture development. The Marshall Islands Marine Resources Authority is investing heavily in formulating its outer island work programmes, involving both coastal fisheries and mariculture research and development. A cautious and transparent approach is needed, with attention to partnerships between communities and private business concerns and the use of incentives involving seed funding, technical assistance, transport facilitation, and other support activities.

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