



OCEANIA

AN OVERVIEW OF THE INVOLVEMENT OF WOMEN IN FISHERIES ACTIVITIES IN OCEANIA

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Abstract

In the Pacific Islands, an estimation of 70 to 80% of the catch from inshore fisheries is used for subsistence purposes. It is uncertain what percentage of that is taken by women, although a recent study in Samoa found that 18% of all village fishers are female, who harvest around 23% of the total weight of seafood. Aside from traditional activities such as inshore harvesting and seafood processing for the family, women are becoming increasingly active in small businesses involving marine resources.

Australia and New Zealand possess established commercial fishing industry sectors, and women's involvement in fisheries in those two countries tends to be different from their largely subsistence and artisanal involvement in the majority of Pacific Island countries and territories. Countries with large-scale, on-shore processing facilities show a relatively large percentage of women employed in the commercial fishing industry—in New Zealand about 34% of the fishing industry workforce are women.

This paper brings together information from the vast region of Oceania, including Polynesia, Micronesia, Melanesia, Australia and New Zealand. It also examines research and development needs; government policies with regard to women's role in fisheries; and constraints that affect women's involvement in fisheries management and development in Oceania.

Introduction

Oceania includes Australia, New Zealand and the Pacific Islands—a region with enormous differences in geography, culture, language, available resources, and economic development. Australia and New Zealand are considered to be developed countries, with prosperous economies. The Pacific Islands, on the other hand, are usually considered to be developing economies. In many, economic development is hindered by isolation from markets, lack of natural resources, and minimal infrastructure. Trade deficits are often made up for by remittances from expatriates, and by foreign aid and assistance. Many have a large subsistence sector that contributes substantially to household food security.

The Pacific Islands are often grouped into the three sub-regions of Polynesia (southeast), Micronesia (north) and Melanesia (west), based on their ethnic, linguistic and cultural differences. Spread over 30 million sq km, more than 98% of which consist of ocean, the islands feature great geographical diversity. Melanesian islands tend to be large, mountainous and volcanic (with rich soils, mineral deposits and plentiful marine resources), while the Polynesian and Micronesian islands are smaller with fewer resources. Some, such as Kiribati, Marshall Islands (Micronesia), Tokelau and Tuvalu (Polynesia) consist of low-lying atolls, only one or two meters above sea level.

The geography of the islands has influenced the degree of dependency on marine resources. Seafood is not as important in the subsistence diets of the larger Melanesian islands as it is in the smaller countries (Coyne et al. 1984). For many countries however, particularly in land-deficient Micronesia and Polynesia, fresh fish and invertebrates caught in coastal waters are a staple source of protein. The world average per capita seafood consumption is around 13 kg—in the Pacific Islands it is estimated to vary from around 20 kg per year in larger island countries such as Papua New Guinea, to over 200 kg per year in the low-lying coral atoll nations such as Kiribati, the highest per capita seafood consumption in the world (Gillett and Lightfoot 2001). These figures include locally harvested fish and invertebrates as well as imported seafood products. Marine resources remain an important part of the diet for many Pacific Islanders, and increasingly provide income to communities with few other available economic opportunities.

Traditionally, fishing beyond the reef was the domain of men, while women concentrated their activities on fishing and collecting invertebrates within lagoons and inshore areas. The same is still practised today, although in many countries women can be found fishing from boats, usually with husbands or brothers. Women continue to be responsible for much of the processing and marketing of their own and their husbands' catches.

Pacific Island states have been keen to encourage the development of offshore fishing activities, to generate income and to reduce pressure on inshore resources. Because the offshore fishery primarily involves men, most initiatives have concentrated on supporting men's activities in development and management of fisheries in the region. Until recently, little has been done to document the activities of women, to identify women's potential for involvement in development and management opportunities, or to assess problems such as overharvesting or the impact of development on women's fishing areas.

In Australia and New Zealand, as in the Pacific Islands, women's issues and concerns have received scant attention within the fishing industry, and women's contributions have been largely invisible until very recently. Coastal Aboriginal and Torres Strait Islander communities in Australia, and Maori communities in New Zealand, were traditionally dependent on marine resources and continue many of their customary fishing activities today. Women's involvement in fisheries in those communities is closely aligned with that of women in the Pacific region.

Australia and New Zealand also possess well-established commercial fishing industry sectors, and women's involvement in commercial fisheries in those two countries tends to be different from their largely subsistence and artisanal involvement in the majority of Pacific Island countries and territories. Areas with large-scale, on-shore processing facilities show a relatively large percentage of women employed in the commercial fishing industry. In addition, in Australia and New Zealand women have substantial, but largely unrecognized involvement in family-based fishing businesses, where they are often responsible for tasks such as correspondence, record keeping, organizing the sale of the catch, and ordering supplies.

Australia and New Zealand also have a substantial recreational fisheries sector, in which women play a role, both in participation in the sport or recreation, and in providing goods and services to the sector.

Inshore Fisheries in the Pacific Islands

An estimation of 70 to 80% of the catch from inshore fisheries in the Pacific Islands (reefs, estuaries and freshwater) is used for subsistence purposes, with the remaining 20% going to commercial markets

(Dalzell et al. 1996; Gillett and Lightfoot 2001). Very few studies have examined the subsistence contribution to inshore catch, an area of fisheries in which women are traditionally involved. However, there are studies that suggest women's contribution to be substantial (Avalos 1995; Rawlinson et al. 1995; Passfield et al. 2001). Traditional fishing activities in the Pacific Islands are generally segregated, with men focusing on offshore areas, and women's activities confined to inshore areas. Aside from traditional activities such as inshore harvesting and seafood processing for the family, women are increasingly taking up economic opportunities offered by small businesses involving marine resources. When domestic commercial fisheries develop, they are often employed in various capacities onshore. Women also play a significant role, directly and indirectly, in the three main aquaculture industries in the region—pearls in Cook Islands and French Polynesia, prawns in New Caledonia, and seaweed in Kiribati and Fiji.

Polynesia

The Polynesian nations of the central Pacific include Tonga, Samoa, American Samoa, Cook Islands, Wallis and Futuna, French Polynesia, Pitcairn Islands, Niue, Tokelau, and Tuvalu. Polynesian islands vary from volcanic islands with some fertile land to low-lying coral atolls or phosphate rock islands. Most have barrier or fringing reefs, often with large protected lagoons.

In Samoa, women and children collect many species of shellfish, sea cucumbers, sea urchins, octopus, crabs, and seaweed from the inshore area at low tide. Often, the only tools are a bush knife or short stick for probing coral holes or prising up shellfish, and a bag or container for the catch. A recent study of subsistence fisheries in Samoa found that 18% of all village fishers are females who harvest around 23% of the total weight of seafood (Passfield et al. 2001). Considering women are responsible for collecting most of the marine bivalves and other invertebrates in Samoa, they would provide close to 20% of the per capita seafood consumption of 71 kg per year (made up of 44 kg of fish, 13 kg of invertebrates and seaweed, and 14 kg of canned fish).

In Niue, an elevated former atoll with a very narrow fringing reef, women collect at least 40 different invertebrate and three seaweed species for food, including chitons, limpets, vermetid snails, nerites, drupe shells, bivalves, crabs, sea urchins, and sea cucumbers (Lambeth and Fay-Sauni 2001). Many other species are collected for shell craft. At first glance, the rugged coastline and small reef flat area would appear to have few resources that could be utilized, but up to half of its fisheries production (fish and invertebrates) is estimated to come from the fringing reef (Dalzell et al. 1993). As well as harvesting invertebrates, Niuean women fish with homemade rod and lines and join the rest of the community in catching juvenile goatfish, *Mulloidides flavolineatus*, when the fish school in shallow waters from December to March. As in many Pacific Islands, it has long been taboo for women in Niue to go out on boats. Although this is slowly changing, their involvement in fisheries is still mostly confined to harvesting from the small reef flat, processing their own and the men's catch, and some marketing activities (Tuara 2000).

In Tuvalu, women's role in fisheries has changed with the introduction of the outboard motor—men now find it easier and quicker to provide regular supplies of pelagic fish for the family and for sale. Women see less need to supplement the family diet with seafood from their inshore fishing and collecting activities and feel that fishing with motorboats is a distinctly male occupation (Lambeth 2000). Women collect more now for enjoyment and as a social activity with other women, but they remain the main processors and marketers of fish and fish products.

In the small French Territory of Wallis and Futuna, geography has dictated traditional roles of men and women. On Futuna, villages are built around a very narrow coastal strip and gardens are planted on the mountainside, which rises abruptly from the coast. To work the gardens means a steep climb and extended time away from the home, and agriculture is an almost exclusively male job. Men fish from small boats (mainly trolling and bottom fishing) and use cast nets and spear lobsters, but it is the women who provide the daily catch of seafood. The island of Wallis, on the other hand, is relatively flat compared with Futuna

and gardens are in convenient spots, relatively close to the villages. Agriculture is not exclusively a male activity on Wallis, and women are not involved in fishing to the same extent as Futunan women.

Micronesia

Micronesia includes the Federated States of Micronesia (FSM), Guam, Palau, the Commonwealth of the Northern Mariana Islands, Kiribati, Marshall Islands, and Nauru. Much of Micronesia is characterized by small, remote and widespread island states and territories with few natural resources.

Kiribati consists of 33 coral atolls (with the exception of Banaba, a phosphate rock island), spread over a vast area of the Pacific, straddling both the equator and the international dateline. It is widely believed that women's fishing activities in Kiribati are confined to reef gleaning (Taniera and Mitchell 1995); however, women also use gill nets, rods and lines, traditional fish traps and catch octopus at night using hooked metal rods and coconut frond flares or kerosene pressure lamps as a light source. Traditionally, women also caught fish using poison from the sea cucumber, *Holothuria atra*.

In South Tarawa, this poison has sometimes been replaced with tobacco. Women are the main harvesters of the bivalve, *Anadara sp.*, with the 1400 tonne yearly harvest making it one of the largest fisheries in South Tarawa. In the outer islands many women are also involved in *Eucheuma seaweed* farming—an export industry of considerable importance to many communities. Women undertake much of the processing and marketing of fish for domestic consumption in Kiribati, a role often overlooked in development project planning.

In Palau, women have always played an important part in harvesting marine resources through their reef-gleaning activities, especially in bad weather when the men were unable to go fishing. Matthews and Oiterong (1991) found that women regularly collect eight species of sea cucumber, four species of sea urchin, seven species of mollusc, three species of crab and more than 15 species of fish. Many more invertebrate species are collected when they can be found. Palauan women are now broadening the scope of their fisheries activities, with an increase in the marketing of their produce and, for some, the use of small motorboats for fishing (Lambeth 1999).

In the Federated States of Micronesia, women's involvement in harvesting and fishing varies across the states, with women in Kosrae and Chuuk being very involved in inshore fishing and collecting, while women in Pohnpei and Yap are less so. Even within the state of Yap activities vary, with outer island women much more likely to collect from the reef and fish with hand lines than the women of the main group of Yap islands. Yap has very strong taboos, rituals and prestige associated with different fishing methods, gears and areas, and the type of fishing or collecting done by women and children ranks at the bottom of the scale in terms of prestige (Falanruw 1992). On Kosrae, on the other hand, men were traditionally involved in farming and occasional fishing beyond the reef, while women were regular providers of seafood for the family through their netting, hand lining and reef gleaning activities. Net fishing was a varied and highly developed activity practiced by Kosraean women, with different nets designed for specific fishing techniques, marine habitat, tide, and number of people (Des Rochers 1992). By the early 1990s, these varied techniques and specialized gear had been replaced almost entirely by the use of monofilament gill nets, but women have maintained their involvement in inshore netting.

Like most women in Polynesia and Micronesia, women in the Marshall Islands collect shellfish, crustaceans and other invertebrates from the lagoons and inner reef areas. Women are also responsible for primary and secondary processing, while marketing is limited to selling their produce through retail shops and handicraft outlets in the capital, Majuro. In general, it is culturally taboo for Marshallese women to go on fishing boats (Tuara 1998).

Melanesia

Papua New Guinea (PNG) accounts for 84% of the land area of the entire Pacific Islands region, with the Solomon Islands, Vanuatu, New Caledonia and Fiji forming a further 14%. The larger islands and more productive land available in Melanesian countries offer greater subsistence and commercial alternatives to marine resource production compared with many other parts of the Pacific. However, fish and invertebrates (marine and freshwater) still play an important role in the diet and economy, and women's involvement in harvesting, processing and marketing is substantial.

As in other Pacific Islands, women in Fiji are involved in subsistence fishing and are increasingly becoming involved in the commercial fisheries sector. A study by Rawlinson et al. (1995) found that Fijian women were the most active fishing group in the country. Women dominate the subsistence fishing sector and, with their daily fishing activities and generations of knowledge, have an intimate knowledge of the coastal zone. More recently, they have entered the lucrative *bêche-de-mer* (processed sea cucumber) fishery as divers. Women are also the dominant sellers of crustaceans, molluscs and seaweed in Fiji. The freshwater clam, *Batissa violacea* or kai, is collected largely by women and forms the basis of the largest single domestic fishery in Fiji.

Fishing methods and equipment are generally simple, many involving the use of hands and simple tools. The methods and skills, however, are diverse and require an intimate knowledge of the environment and the species targeted. In addition to the collection of invertebrates, women net fish, set up barriers and traps, and use handlines. Seasonality of different species and the effects of lunar cycles, winds and other natural phenomena on marine species are well known and used to advantage when fishing. Women can often identify fish species by how they bite or nibble on the line, and subsequently change hooks, bait and lines to suit the particular fish (Vunisea 1996).

There is a great diversity of coastal and marine environments in PNG, ranging from large delta flats, mud flats and mangrove swamps, to fringing coral reefs and narrow lagoons. The range of small-scale fisheries activities reflects the diversity of the country's environments, and includes reef gleaning, spear fishing, shallow-water hand lining from dugout canoes, netting, and trapping in the larger rivers. Two major river systems, the Sepik/Ramu and the Fly/Purari, are extensive and account for most of the annual freshwater fish harvest. Subsistence harvesting is the most important component of PNG's domestic fishery, but commercial prawn trawling and small-scale tuna long lining are becoming increasingly important (FAO 1998).

Women's harvesting activities in PNG are mainly confined to shallow inshore areas, with an emphasis on invertebrate collection. Although information on subsistence production is scarce, the collection of invertebrates, both commercially (*bêche-de-mer* as well as trochus and other shellfish) and for subsistence purposes is thought to exceed finfish harvesting. Women catch a substantial proportion of the annual catch weight of marine resources - reported in Chapman (1987) and Avalos (1995) as more than 25% - and are dominant in the processing and marketing sectors.

In New Caledonia, subsistence fisheries still form an important part of the traditional lifestyle for the local kanak people. Two forms of fishing are recognized: collective fishing for special gifts or ceremonial exchanges, and individual fishing for family consumption. Collective fishing is carried out by fishing clans, using nets and catching large quantities of "custom" fish. Targeted species included unicorn fish, mullet, turtles and dugongs. Individual fishing can be practiced by anyone, as long as it is in an area recognized as belonging to his or her tribe, which is usually the lagoon area directly in front of the land belonging to the tribe. Women fish for mangrove crabs, hand line from shore or boats, and collect from the reef. Catching mangrove crabs with traps or hooked sticks provides important income for many women. Women are also involved in the successful prawn farming industry, especially in post harvest operations. Commercial fisheries are becoming increasingly important in New Caledonia, and mainly involve men, although there are a few women who run small fishing boat operations with their husbands. Recreational fishing from the numerous small pleasure craft berthed in Noumea is also an important activity, especially for Europeans and New Caledonians of European descent.

The Tuna Fishery in the Pacific

The tuna fishery in the western and central Pacific Ocean represents an important resource for the people of the region, providing financial returns, employment and food security. In terms of volume and value, the tuna fishing area of the Pacific region is the most important in the world. A third of the world catch of tuna, estimated to average 3.6 metric tonnes a year with a value of USD1.9 billion, is reported to come from the Pacific region (Gillett et al. 2001). In the face of increasingly overexploited inshore areas, domestic commercial harvesting of tuna is seen to be one of the few alternative areas with development potential in the region.

Tuna industry development across Pacific Island countries varies greatly and is influenced by features such as scale of economy, geographical location, access to markets, available land for onshore development, and population dynamics, among other things. Many countries are currently unable to support the logistics and economics of large-scale processing facilities such as canneries and loining plants, and therefore largely depend on the returns from access fees charged to fleets of distant water fishing nations. For many countries in the region, access fees make up a substantial portion of government revenue.

Whilst the level of industry development may be low compared to Asian countries such as the Philippines and Thailand, it nonetheless provides employment and investment opportunities for countries with few other viable alternatives.

In terms of employment, women in the Pacific are rarely seen to be directly involved in the harvesting sector of the tuna industry. The few women that hold roles in the harvesting sector are more likely to be boat owners rather than crew, captains or other male-dominated roles. Women are well represented in the processing, marketing and administrative area of the industry, although largely in low-paid rather than managerial or supervisory positions.

Up until recently, at the cannery in Western Province, Solomon Islands, approximately 600 of the 2,298 workers were women fish processors (Nelson and Tuara 2000). In Fiji, women make up the bulk of cannery workers (90%) and in other tuna processing establishments, they comprise between 30 and 80% of the workers (Arama 2000).

Until the closure of the Solomon Islands cannery (as a result of the economic downturn caused by ethnic tension), the five tuna canneries in the Pacific were estimated to employ 5% of all formally employed women in the region (Gillett et al. 2001). Women also hold a large proportion of jobs in the increasing number of export firms in the region. Women perform tasks in the marketing and administrative areas of the tuna industry, and are represented in many of the areas indirectly linked to the tuna industry such as businesses servicing the industry, and government and non-governmental agencies concerned with fisheries, environmental and social issues.

Constraints and Areas of Need for Women in Pacific Island Fisheries

When thinking of fishing in the Pacific Islands, many people tend to think of fishing from canoes or boats, spear fishing, diving for giant clams and *bêche-de-mer*, and other activities women are not traditionally involved in. The collection of seafood from the reefs and mangroves, the use of handlines and nets in shallow waters, and the preparation and sale of fish and shellfish have often been overlooked as fisheries activities by researchers and training providers. This has affected the way the fisheries sector is supported, both nationally and regionally, and the manner in which management and conservation of marine resources is approached. Part of the problem has been the way in which the terms "fishing" and "fisheries" have been interpreted in the Pacific, and the emphasis placed by donors and governments on commercial fisheries development and management. Most Pacific Islanders have a number of different terms for the various fisheries activities practiced by men and women, but "fishing" is sometimes thought to only mean those activities practiced by men. Cultural taboos against women's involvement in men's fishing activities (and sometimes vice versa) still exist in many countries and tend to reinforce both men's and women's views that fishing and fisheries is a predominantly male activity.

The emphasis placed by donors and governments on commercial fisheries development, especially offshore fishing where women have virtually no involvement, has also contributed to the lack of recognition and support of women's role in fisheries. The drive for the development of the formal economic sector in the Pacific has meant support for commercial fisheries development has been given priority over subsistence and small-scale artisanal fisheries activities.

Women's harvesting activities continue to be mostly small-scale, and their involvement in commercial fisheries is limited.

National programs of support to the fisheries sector also tend to be demand driven, and women rarely approach government fisheries agencies for assistance with their fisheries activities. This is often because of their own perception that what they do is not really a part of "fisheries", and that fisheries agencies only deal with men's activities; and the fact that it is often against the social norm for women to ask for assistance.

Pacific Island fisheries agencies are now becoming increasingly concerned about declining catches of fish and invertebrates in the most accessible inshore areas, but few have the staff or resources to address the problems. Women are one of the largest groups of users of inshore reef areas, and yet their contribution to fisheries production remains largely undocumented and unsupported.

Generally though, it may be said that the entire domestic fisheries production, particularly subsistence, is undocumented in most places. Where good figures do exist, there are usually gender-disaggregated data available. In addition, subsistence-harvesting activities are often unmanaged, with impacts on marine species and habitat poorly understood. Despite women's involvement in harvesting, processing and marketing, women are still poorly represented in national fisheries agencies, fisheries training courses and fisheries meetings; and are often not included in fisheries development and management planning processes.

More information on subsistence fisheries production, consumption and environmental impact is needed, with the analysis of the differing activities and contributions of men and women. Household and creel surveys collect fisheries data such as seafood consumption, economic data, and fishing activities, and provide important sex disaggregated data on fisheries production and consumption. This allows for the development of profiles that show differences in fishing areas, species, fishing effort, economic or nutritional contribution between the activities of men and women—data needed for determining the gender impact of development activities, and also for planning management strategies. These types of specialized surveys do, however, require funding and expertise beyond that available to most national fisheries agencies.

More research is needed on the differing contributions of men's and women's activities to household food security and GDP. Agriculture and fisheries are far more dominant features of Pacific Island economies than they are in larger, more developed economies. Despite Australia's large landmass, coastline and exclusive economic zone (EEZ), agriculture, forestry and fisheries accounted for only 3% of its GDP in 2000; compared with 17% for Samoa. Agriculture and fishing account for over 20% of GDP in many Pacific Island countries (Parry 2001). Statistics publications often combine agriculture and fishing data, or forestry and fishing data, making it impossible to analyze the separate characteristics of each. In addition, current international classification standards for agriculture and fisheries do not adequately reflect the economic structure of a typical Pacific Island country. Existing classifications make it difficult to separate out men's and women's varying degrees of involvement in vastly different fishing activities such as gathering shellfish or trolling for pelagic fish. The Statistics Programme of the Secretariat of the Pacific Community (SPC) is currently working on a regional standard classification for agriculture and fishing activities in the Pacific that will overcome these problems.

A further problem with fisheries statistics is the lack of an accurate picture of women in fisheries employment. This is caused by: a) the concept of using "main unpaid activity" for defining the subsistence sector, as it misses the importance of secondary activities—for example, even for women who do considerable

fishing, childcare may be recorded as the main unpaid activity; and b) placing commercial fish processing (where many women are employed) in the manufacturing sector (Gillett and Lightfoot, 2001).

Encouraging women to enroll in marine biology and fisheries courses is important in order that more women are able to be employed in national fisheries agencies in the future. At the same time, fisheries agencies need to be encouraged to support and manage the fisheries activities of women as well as men.

While there are overlaps in roles between women and men in fisheries, there are also obvious differences. The different roles and potentially different impacts of development on men and women need to be understood and addressed if fisheries management and development aspirations of the island states are to be realized. Subsistence and artisanal harvesting and, to a lesser extent, commercial fisheries, contribute greatly to food security in the region. In addition, the tuna industry provides significant employment for men and women in what often were previously semi-subsistence communities. The impacts, both positive and negative, can be different for men and women. Employment can provide wage and benefit packages that can contribute to family welfare, although women are more likely than men to spend their wages on children and family.

The social outcome of women becoming waged earners is not always ideal, because they are often expected to maintain their traditional gender roles within the home and community in addition to full-time work. Domestic responsibilities, child care and community responsibilities, in addition to working full time, has been referred to as "women's double day" and places burdens on family dynamics and women's health. The spread of sexually transmitted disease, including HIV/AIDS, is an issue of concern, particularly for the tuna industry and its management. The risks of contracting these diseases are obviously higher among those involved in the sex trade, but spouses of seafarers are another high-risk group. Strategies to overcome or minimize negative impacts need to be addressed at the planning stages of tuna industry development.

Constraints to ensuring sustainable development of the tuna industry in the Pacific include low levels of education, weak public sector administration, rigid cultural gender roles and a profit-driven private sector with an incentive to disregard social and environmental responsibilities. Potential negative impacts can be identified and minimization strategies suggested, but considerable hurdles exist regarding the adoption of those strategies. It is sometimes difficult for national fisheries agencies to identify their role in addressing the impact of fisheries development on health, labor or environment, particularly when there is little history of dialogue with and between the different departments responsible for those areas.

In recent years, formal tuna fishery management planning has become a national activity, and this has involved the study of the different impacts of tuna fishing industry development on men and women. The Forum Fisheries Agency (FFA) provides assistance to its member countries in support of the preparation of national tuna development and management plans. This gender analysis has, however, been included at the instigation of the donor agencies, and there remains a degree of doubt about the necessity or appropriateness of this component by national policy makers and some stakeholders. In some Pacific Island cultures, gender and related concepts such as equity and women's empowerment may be seen as potential attacks on culture and tradition.

Existing Policies and Support for Women in Fisheries in the Pacific Islands

Very few Pacific Island governments have policies in place specifically addressing women's role in fisheries, although most have policies encouraging the equal and active participation of women in development activities. In addition, donor agencies and regional organizations increasingly require projects to assess gender issues at the planning, implementation and monitoring stages of projects. Donor preferences and requirements, along with a slowly increasing awareness of women's involvement in fisheries, have led to a few steps in the region towards supporting women's fisheries activities. Some fisheries courses

are actively encouraging women participants in what were previously men-only courses, or are designing fisheries courses that specifically target women. In a few countries such as Kiribati, Tonga and Samoa, fisheries agencies have increased the employment of female fisheries officers and are including women in fish handling workshops.

The Pacific Platform for Action (PPA) is a regional statement developed by Pacific women and men and endorsed at a regional women's conference in New Caledonia in 1994. The document looks at key issues in the region that must be addressed if the goals of equality and sustainable development are to be realized. The aim is to accelerate full and equal partnership of women and men in all spheres of life. One of the 13 key issues listed in the document is agriculture and fishing, with the strategic objective being "to promote and support women's participation in agriculture and fishing (both paid and unpaid activities) and to recognize women's role in food security" (SPC 1995). This document assists women's agencies throughout the region to focus their work on the key issues, but it is highly unlikely that national fisheries agencies are aware of the document or would feel the need to incorporate the recommendations into their work plan.

Some countries have implemented women in fisheries programs, mostly with the assistance of outside agencies such as SPC's Women in Fisheries Development Project. As a result, fisheries agencies in Niue and Nauru have created new positions for women's fisheries development officers. In other countries, non-governmental agencies have set up support schemes for women in fisheries, such as the Women in Fisheries Network in Fiji. The University of the South Pacific has done a considerable amount of work with women, through its Canadian-funded Post-Harvest Fisheries Project. A collaborative project between this project and SPC has seen the introduction of a fisheries elective in the SPC Community Education and Training Centre course for young Pacific Island women.

Women's Role in Fisheries in Australia and New Zealand

Australia and New Zealand have industrial economies and infrastructure capable of exploiting their marine resources, and as a consequence have more established domestic commercial fisheries than Pacific Island countries. Women's involvement in fisheries tends to reflect this, with increasing numbers of women employed in the commercial fisheries sector, and a small number having achieved powerful positions in the industry and on industry decision-making bodies. Despite this, there remains a lack of information about women's involvement and contributions to the industry.

Australia

By international standards, Australia's fishing industry has comparatively few people working in it. Australian seas are generally low in nutrients compared with other world regions and this contributes to the low production of its waters—production is well below that of neighboring nations such as Indonesia and New Zealand. Despite having a small total production, Australia's fisheries are economically valuable, due to the contribution of highly priced species such as abalone, prawns, scallops and rock lobster (Kailola et al. 1993).

More than 110,000 people are employed in the seafood industry in Australia: 28,000 in the commercial fishing industry capture sector; 60,000 to 70,000 in seafood-dependent operations on land (processing, marketing and sales); and 10,000 in the aquaculture sector. Women form only a small percentage of vessel owners and crew in the wild-catch sector, but are better represented in the processing or post-harvest sector, and in aquaculture. This is partly because these shore-based activities are more compatible with women's home and family responsibilities than are vessel-based fishing activities. Many women are involved in family-based fishing businesses where they are responsible for managing the business from a home office while their partners go to sea.

A recent survey of more than 200 women involved in the Australian commercial fishing industry (both government and private sector) revealed that 41% of respondents were joint or sole owner-operators of fishing businesses (Aslin et al. 2000). Most respondents wanted better status and recognition for their work and the majority reported barriers to involvement and progression in the industry. Barriers included practical ones (time constraints, child care responsibilities, conditions on boats), and discrimination or prejudice from men in the industry.

As with Pacific Islanders, coastal Aboriginal and Torres Strait Islander communities have always been dependent on marine resources and continue many of their traditional practices today. Research in southern New South Wales indicated that up to 90% of Aboriginal adults regularly collect fish and shellfish from their local area (FRDC 2000). Aboriginal women are a major contributor to these activities. The continuing nature of traditional activities forms the basis for current and future land and sea title claims by indigenous people. Female traditional owners are likely to be significant winners if these claims succeed, with the result that they may gain additional property rights in Australia's coastal and marine environment in the future. These claims are likely to exacerbate conflicts already experienced between commercial, recreational and traditional fishing sectors, but may ultimately lead to more equitable allocations of marine resources.

Since European settlement of Australia began, indigenous people have also been engaged in commercial fishing as well as continuing traditional fishing practices. They provided many of the crew, divers and skippers for the early *bêche-de-mer*, trochus and pearl fisheries of northern Australia. Australian Aboriginal and Torres Strait Islander men and women were divers, working under difficult and dangerous conditions, in the early days of the pearling industry.

As many as 20 to 30% of all Australians participate in recreational fishing in Australia, with women and girls forming an estimated one-third of these recreational fishers (FRDC 2000). Direct and indirect expenditure on recreational fishing is estimated to be AUD2.9 billion, making it a major national industry with considerable lobbying power (McIlgorm and Pepperell 2000). Recreational fishing generates jobs in the tourism, tackle, boating, charter and diving sectors, many of which have a large services component where women are well represented as employees.

New Zealand

Fisheries in New Zealand are predominantly commercial and recreational, with a small subsistence component. New Zealand's capabilities for exploiting its marine resources, combined with its temperate continental shelf and nutrient run-off from land, ensures more productive fisheries than those of the Pacific Islands or Australia. Temperate continental shelf fisheries have lower biodiversity but much higher biomass-per-species compared with coral reef areas and account for 90% of all world fisheries (Adams et al. 1999).

Maori have strong cultural ties to fisheries and this has been recognized in common law and legislation. Fisheries are managed by a quota system, in which an annual total allowable catch is set for commercial species, within specific quota management areas. Following the settlement of Maori fisheries claims against the Crown in 1992, and the passing of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, Maori have become the biggest player in New Zealand's commercial fishing industry, controlling over half of all commercial fishing quota (FAO 1999).

Over the last six years, employment in the seafood industry in New Zealand has risen by 14%, with jobs in the processing sector increasing by 41%. This growth is a direct result of an increasing proportion of catches being taken by New Zealand-operated rather than foreign owned vessels, and an increased commitment to value-added processing (Statistics New Zealand 2000).

The seafood industry in New Zealand directly employs over 10,000 people, with fish and shellfish processing plants accounting for around half of this. Around 66% of the seafood industry workforce is

male, and 34% female. Men dominate the wild-harvest and aquaculture sectors while women are well represented in the seafood-processing sector. Within the sectors, there are more women in lower-paid positions such as administration, fish processing, packing and checking, rather than managerial positions. Forty per cent of men, compared to 14% of women, employed in the industry earn over NZD30,000 per year (Information Resource Centre 1998).

Wives of fishermen have always played an active role in the onshore business side of fishing operations, doing everything from paperwork to mending nets and making lobster pots. There is a huge amount of unrecognized voluntary support work that keeps small fisheries businesses operating. Over the past two decades there has been an increase in the number of women working in the harvesting sector, with husband and wife teams working together in small fishing operations and, more recently, second generation children taking over the boats and working as crew or skippers.

One recent change in the role of women in fisheries has been their entry into the political arena, with two women being voted on to the New Zealand Federation of Commercial Fishermen's executive in recent years (Yvonne Powell, pers. comm. 2001). As women are often shore-based they are able to attend management meetings, keeping the business abreast of changing requirements and ensuring the fisher's perspective is not overlooked.

More fisheries training courses are now available around the country to help men and women qualify for seagoing work, or seafood processing onshore and at sea. Over a third of the seafood industry workforce in New Zealand has completed nationally recognized training. A one-year project has been designed by the Seafood Industry Training Organisation to increase the number of women in fishing industry training. Of the current 1,500 industry trainees, 35% are women (SeaFIC 2001).

An estimated 20% of New Zealand's population participates in recreational fishing, a figure including men, women and children. Goods and services based directly or indirectly on the recreational fishing sector provide jobs for many men and women.

Existing Policies, Support and Areas of Need for Australia and New Zealand

Australia and New Zealand have several government policy initiatives to address women's disadvantage and under-representation in natural resource management, including fisheries. National, state and territory governments are guided by equal employment opportunity, anti-discrimination, and workplace diversity legislation and policies. Many government agencies have sections devoted to addressing women's issues. In Australia, fisheries fall under the umbrella of the Women in Rural Industries Section, within the Commonwealth Department of Agriculture, Fisheries and Forestry.

The Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) was set up to develop integrated and sustainable agricultural and land and water management policies, strategies and practices for the benefit of Australian and New Zealand communities. The Council is supported by the Standing Committee on Agriculture and Resource Management (SCARM).

In 1998, SCARM produced a national plan entitled "A vision for change", designed to improve women's representation on statutory boards and committees, advisory panels and on the staff of government natural resource management agencies (SCARM 1998). This was followed by complementary State and Territory action plans. Statistics on women's representation in the natural resource management sector indicate a slight improvement, with the percentage of women on statutory boards and committees within SCARM agencies overall increasing from 18.9 to 20.1 between June 1999 and June 2000 (SCARM 2001). As the emphasis is on rural women in the agriculture sector, it is difficult to separate out the impact on women's involvement in marine resource management. New Zealand similarly combines fisheries with agriculture when it looks at the particular problems faced by women in primary industry, with the emphasis predominantly on agriculture and livestock sectors.

While many appropriate policies and plans have been formulated, rhetoric is not matched by sufficient action and there is a lack of genuine commitment to advance women's interests from many senior players in government and politics.

There remains a serious lack of information about women's involvement and contributions to the fishing industry in Australia and New Zealand. Women's issues and concerns have also received scant attention within the fishing industry and their contributions remain largely unrecognized. One of the primary needs is for a systematic collection of data on gender-related aspects of the industry. This could, for example, include the number of women who are owners or joint owners of fishing businesses; women's ownership of property and capital (gear, vessels, fishing licenses, fishing quota); and the number of women working in different industry sectors (aquaculture, wild-catch, fish processing, retailing, fish restaurants, fishing charters etc.). Collecting this information is complicated by the fact that the wild-catch sector is divided into many different fisheries operating under various regulatory regimes, and managed by a range of agencies.

Women in Fisheries Development or Gender and Development?

One of the problems with setting up special "women in fisheries" programs is the tendency for this to separate women's issues from fisheries issues. Successful fisheries development and management needs to deal with the entire community involved in harvesting, processing and marketing marine resources. Having specific "women in fisheries" programs can reinforce the tendency of national fisheries agencies to only work with men. Issues relating to women tend to get offloaded onto the women in fisheries program, or onto women's agencies that have no experience, resources or expertise in fisheries.

Fisheries agencies, however, can also encounter problems if they try to establish programs dealing specifically with women. Nearly ten years ago, a project was set up in Papua New Guinea (PNG) to support women's fisheries activities in coastal communities. The project was initially located at the PNG Department of Fisheries and Marine Resources (DFMR), with considerable informal input from the Women's Division of the Department of Home Affairs and Youth (DHAY). The fisheries department had trouble running what was essentially a technical fisheries project as well as a women's project. Much of the opposition came from women in the field who expected a project involving women to go through DHAY, while DHAY also believed they should control and implement the project (Fairbairn-Dunlop 1992). The project was eventually moved to DHAY about three years ago, where it was later terminated due to lack of staff and resources.

In the late 1980s, the SPC set up the Women's Fisheries Development Project (WFDP), managed by one officer, to support and encourage the involvement of women in fisheries in the region. Requests for assistance were almost entirely initiated by national women's agencies, rather than fisheries agencies, and the project worked predominantly through national women's focal points. While this was necessary at the time, the section did face the danger of creating complacency among national fisheries agencies and other sections within SPC's Marine Resources Division. The tendency was for them to not actively bring more women into their work, because one small section of SPC would be taking care of the fisheries concerns of women around the region.

In order to discourage this, WFDP undertook a number of strategies to ensure women's needs and perspectives were considered in all relevant fisheries activities, both at the national and regional level. One was changing the name of the Women's Fisheries Development Section to the Community Fisheries Section (CFS), reflecting the need to consider all sectors of the community in fisheries development and management. Secondly, the section strongly encouraged women's agencies to put their requests through their national fisheries department, and recommended counterparts from both agencies to be involved in the work. This has helped create linkages between national women's and fisheries agencies in some countries, and has made women less uncomfortable with turning to national fisheries agencies for assistance. Some fisheries agencies are now more inclined to consider the role of women in the

management and development of domestic fisheries. Finally the CFS encouraged and became more involved in collaborative work with other sections within SPC, and with regional organizations.

The emphasis on community support and involvement, rather than adding "women only" components to fisheries projects, is closely aligned with the aims of gender planning—promoting equal opportunities for men and women. However, unlike explanations of the gender and development approach, the idea of addressing the needs of the entire community is more easily understood by fisheries agencies, especially in the Pacific Islands. Gender concepts are poorly understood, difficult to explain without unhelpful jargon, nearly impossible to translate in most languages (including SPC's other official language, French), and in many cases, are perceived to be just "women in development" dressed up in different terms.

Future Directions

Although there have been some initiatives to support women's involvement in fisheries in recent years, on the whole, women's contributions to the fishing industry in Oceania are under-recognized, and their potential contributions are not being maximized.

The questions that need to be asked by those responsible for fisheries development and management in the region are "who are the target groups for fisheries development and management?" and "do we need special skills or people to work with them?" If fish market operators are predominantly women, seafood-handling training should include them. In the Pacific Islands, inshore fisheries management initiatives should include species and areas used by women, and women need to be involved in the planning processes and included in awareness programs. This does not mean national and regional fisheries agencies necessarily need special women fisheries officers in order to successfully work with women. It does help if they have more women fisheries officers as part of their general technical staff, and it may mean that male staff need to be encouraged to support women's fisheries activities.

Most national fisheries agencies will continue to require assistance in conducting specialized surveys aimed at addressing the lack of information on inshore fisheries production and consumption, and on women's involvement and contributions to fisheries in the Pacific Islands. Research should be relevant to the needs of national governments; standardized as much as possible; and made easily accessible and understood by those it is meant to assist. Often, these important requirements are lost in the desire for scientific rigor and academic acceptance.

To improve the accuracy of fisheries statistics, national fisheries agencies need to develop closer links with statistics agencies and actively involve themselves in the planning stage to ensure that useful fisheries data are obtained. Gillett and Lightfoot (2001) suggest that the lack of knowledge of the volume of production of small-scale fisheries is a major factor causing an underestimation of fishing contribution to GDP. They suggest that an alternative to using specialized surveys for estimating subsistence production is to use surveys outside the fisheries sector. At little cost, production information could be collected through the national census, nutrition surveys, agriculture censuses, household employment and income surveys, and poverty studies. Sex disaggregated data should naturally be a part of the information collected by both the statistics agencies and other surveys.

In Australia and New Zealand, information is needed on gender-related aspects of the fishing industry. The current practice of combining fisheries under women in rural industries or women in primary industry makes it difficult to separate out the contribution of fisheries, and also fails to take into account other aspects of the fishing industry such as processing or marketing. In Australia, a study will attempt to gather better information on women's current contributions to the fishing industry. The emphasis should be on obtaining gender-related information, the respective contributions and differing needs of both men and women in the industry.

Encouraging more women to participate in fisheries training can be accomplished by either offering training specifically for women, or promoting their involvement on established courses.

The advantages and disadvantages of providing training courses specifically for women, as opposed to running mixed courses, should be examined for both regional and national training courses. Evaluation of SPC fisheries courses involving women suggests that, in some circumstances, segregated courses are needed, while in others mixed, courses are useful. The most important factor is to avoid having one sex in the extreme minority on the course.

The inclusion of women as a minority on a course usually attended by men can be a problem, especially in the Pacific Islands. Women's behavior and ability within the course may be judged more severely than that of their fellow trainees; women participants are usually quiet and do not assert themselves as much as they would in an all-female class; and, if there are practical exercises usually associated with "men's work", the women will sometimes step back and leave it to the men. The aim should be to have at least several women in a course involving a dozen participants, rather than just one or two.

Mixed courses can be very useful for increasing awareness of the differences and similarities in men's and women's fisheries activities, and for introducing men and women to areas of work outside of their usual roles. Even if participants never use those skills again, they gain a much broader understanding of what "fisheries" means. Courses just for women can also be valuable. Participants are often more relaxed and less shy at speaking up in a group, and the course content can be adapted to suit their specific activities and needs. The most appropriate course for the situation, mixed or separate, will vary according to target group, country and course content.

In the Pacific Islands, problems associated with the use of terminology and difficult concepts such as gender can be avoided by using explanations that fit the situation. Emphasizing the need for the entire community to be involved in fisheries development and management is one way of promoting equal opportunities for men and women. The concept of "family and development" is a useful way of introducing gender equity concepts in familiar terms. Discussing social and environmental impacts of development on the community can link aspects of gender analysis in project planning, without actually using the terminology. It is also important to ensure those carrying out gender studies of fisheries are familiar with the region, and preferably with fisheries.

When considering the need for affirmative action and the establishment of women in fisheries projects, the successes and failures of the past need to be taken into account. Overall, despite some failures, women in fisheries projects have served to raise the awareness of women's involvement in fisheries in the region, and have added to the pool of information on their role in fisheries. Perhaps now is the time to explore alternatives, or to move on to the next stage. One potential strategy to ensure women's needs and perspectives are considered in all relevant fisheries activities, is to create a cross-cutting position or agency within the sector to take over from "women only" positions or agencies. The emphasis would be on equal opportunity and involvement of men and women in development and management activities, rather than the specific promotion of women's involvement.

This was a strategy considered at one time by SPC when looking at future directions for the Women's Fisheries Development Section. At the time, it was not possible within the donor-funded, project-driven work program of SPC. The aim was for this crosscutting agency to take a part in all activity planning by other sections, and to take part in the activity where necessary. Government policy could reflect this crosscutting strategy rather than developing policies specifically addressing women in fisheries. This would fit in well with existing equal opportunity and gender equity policies.

Despite the gaps and areas of need, the contribution of women to fisheries development and management in Oceania is very slowly becoming more recognized and supported. National and regional fisheries agencies and private enterprises are beginning to see that sustainable and equitable development of the fishing industry means both men and women need to be involved in project planning, be given access to relevant training opportunities, and be involved in management initiatives. Continuing the practice of supporting women's involvement in fisheries through specific "women only" projects needs to be balanced with promoting equal opportunities for men and women in all projects.

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