



MARINE RESOURCES DIVISION
INFORMATION SECTION

Women in Fisheries

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INFORMATION BULLETIN



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NOTE FROM THE CO-ORDINATOR

Welcome to the first issue of the Women-in-Fisheries Special Interest Group (SIG) Bulletin. This SIG was established as a result of Recommendation No. 10 of the 26th Regional Technical Meeting on Fisheries (RTMF), held at SPC headquarters in Noumea from 5 to 9 August 1996.

The purpose of this SIG is to provide a channel to exchange ideas, knowledge and experience. As an information and communication channel, this Bulletin will provide articles of interest and concern to women directly involved in fisheries activities. This group includes women who harvest, process, or market marine resources; are crew on vessels; employed in fisheries departments and institutions; undertaking marine studies and/or research; and otherwise engaged in the fisheries sector. In addition, this SIG is written for and about individuals and agencies which support such women.

This first edition takes an in-depth look at the activities of women involved in fisheries in Fiji. The articles discuss details of the techniques and technology utilised by the women, and describe the constraints that prevent their effective participation in the fisheries sector. Although women in Fiji often go out daily to harvest resources, and thus have a wealth of knowledge on the marine environment, they are often excluded from the decision-making process concerning resource use. As harvesters, processors, sellers and managers of marine resources, women are well equipped to make decisions pertaining to fishing, to be incorporated into the market economy and, as skilled fishers, to participate in fisheries management planning.

Because of women's increased participation in fisheries and the numerous constraints they face, they employ adaptive fisheries strategies to support their fishing activities and in the process carve niches for themselves in the whole development process. (cont'd on page 2)

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Through the establishment of this Bulletin we hope to identify networks, groupings and systems or methods that women have adopted to adapt to the changes brought about by the modern economy.

The success of this Bulletin, like the other SIG bulletins, will depend on reader support and contributions. We want to hear from you and welcome pictures or stories on any issues relating to women in fisheries:

- details of fishing techniques and equipment;
- information on research activities;
- information on courses and conferences;
- news on what's available in terms of literature (papers, books);
- questions and requests for information; and
- contact addresses and other relevant information about institutions and individuals who should be receiving this Bulletin.

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WOMEN'S FISHERIES DEVELOPMENT PROJECT



In the coastal communities of Pacific islands women perform a range of activities associated with the harvesting, processing and marketing of marine resources. They fish in the lagoons and reef areas, catching fish, collecting seaweeds, and gleaning for shellfish, crabs, sea-eggs and other invertebrates. Women clean, dry, salt and smoke the fish, and are often solely responsible for the selling of seafood at the market. In addition, women make and repair nets, fashion hooks, and may work as crew on fishing vessels.

In recognition of the important role played by women in the fisheries sector, member countries of the South Pacific Commission requested that a regional project be set up to help women from Pacific Island countries and territories participate more effectively in, and benefit from, fisheries activities. In 1991 the SPC Women-in-Fisheries Programme was established within the Post-harvest Section of the Coastal Fisheries Programme.

In 1995, the Project was transferred to the newly established Women's Fisheries Development Section. Since 1995 the Project has undertaken:

- ☞ Familiarisation visits to Vanuatu, Solomon Islands and Fiji to determine the role of women in fisheries, including the constraints to development, and possible areas of assistance;
- ☞ Familiarisation visit to Papua New Guinea to view the work of the national women-in-fisheries project;
- ☞ Appraisals in Kiribati and Tonga to identify and prioritise the training needs in fisheries in both countries;
- ☞ Workshops in Kiribati and one workshop in Tonga as follow-up to the appraisal work;
- ☞ A household survey of residents living on Aitutaki, Cook Islands, as part of the baseline survey work for a lagoon management plan;
- ☞ A socio-economic survey of the participation of women in the freshwater clam fishery in Ba Province, Fiji;

- ☞ Production of the video: *Shellcraft: An income-generating venture for women "The Cook Islands Experience"**;
- ☞ Current production of two training manuals: *Setting up a small-scale business: A guide for women in fisheries* and *Practical methods for preserving seafoods: Salting and drying*.

The Project was originally funded by the Canadian Government, with a number of training activities being funded by UNESCO and the New Zealand Government. Since February this year, funding is being provided by the Governments of New Zealand and Australia.

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Fisherwomen from New Caledonia



A Cook Islands woman and her two sons are filmed for the shellcraft video tape as they collect shells to make shell jewellery

* Free copies of the video in English were mailed to Fisheries Departments and Women's Affairs Departments, as well as National Councils of Women of SPC member countries and territories. The French version will be mailed out soon to French-speaking members).

WHAT'S HAPPENING OUTSIDE THE REGION



Women in fisheries in Indo-China

Source: M. C. Nandeeshha (*INFOFISH International* 6/96)

In Indo-China, women participate not only in the traditional fisheries sectors of fish processing and marketing, but also in the non-traditional sectors of aquaculture, fisheries research, education and extension. PADEK, a non-governmental organisation active in community development, organised a national workshop on Women in Fisheries in Vietnam in November 1994.

The workshop provided new information on the role of women in the various sectors of fisheries, and highlighted areas of similarity in fisheries, tra-

dition and culture in the countries of Indo-China. A follow-up workshop was held from 6 to 8 March 1996. The objective of the seminar was to assess the situation of women in fisheries throughout the countries of Indo-China, identify problems and develop programmes to overcome the problems experienced. Papers presented at the seminar addressed such issues as the division of labour between the sexes, food security, cultural and lifestyle issues, extension and training, credit programmes, conservation and resource management, women in research and education.

Aquaculture promotion and gender: A case study in Vietnam

Source: Jaap Voeten and Bert-Jan Ottens (*EEC Bulletin* vol. 9 no. 3)

From September 1995 to June 1996, the Vietnamese Women's Union (VWU), in collaboration with the Dutch development organisation ProFound, implemented the pilot project 'Training of trainers to promote women's small-scale aquaculture enterprises in rural areas of Northern Vietnam'. Taking the integration of gender and technology as a starting point, WWU and ProFound formulated project activities to assist women in promoting small-scale aquaculture ventures as a means of generating

income, improving food security, and strengthening the position of women. The project followed the typical Vietnamese integrated farming system of garden/pond/animal husbandry. The target group consisted of poor women from rural areas in two Northern provinces of Vietnam. The project was funded by the Gender and Development (GAD) Desk of the Commission of the European Communities.



WHAT'S HAPPENING WITHIN THE REGION



Fiji

Workshop on Sustainable Utilisation of Coastal Marine Resources, 24–25 July 1996, Nadoria Village, Rewa

Source: Summary of the report by Aminio Raimuria, Fisheries Officer—Central/Eastern

A two-day workshop was held for 15 women and 10 men from Nadoria village to promote awareness of their practices as fisherfolk and the link with sustainable coastal resources management. The workshop included lectures (supported by audio-visual materials), as well as visits to fishing grounds.

The topics addressed included the impacts of fishing on mangrove areas, coral reefs, streams, rivers and estuaries; the need to include women as resource-management decision-makers in village meetings; and the role that resource users can play in developing sustainable resource-use policies. In addition, sessions were held outlining fisheries regulations to participants.

A field demonstration by participants showed their present harvest techniques. This led to a discussion by lecturers on how to ensure that such techniques can be made environmentally sensitive and can avoid undue health problems for fishers.

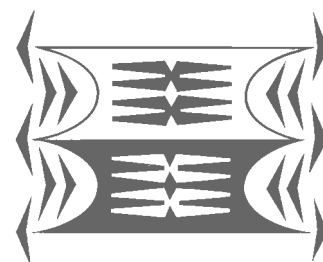
The workshop was initiated and funded by the Marine Studies Programme of the University of the South Pacific in collaboration with the Women and Fisheries Network, the Fisheries Department Central Division, and the Nadoria Village Women's Interest Group.

Workshop for Naisogovau Youth Training, 31 July to 2 August 1996, Naisogovau, Dravo, Tailevu

Source: Summary of the report by Eloni Takali, Acting Fisheries Technical Officer—Central

Seventeen youth from Naisogovau attended a three-day workshop which was organised and funded by the Fisheries Division. The Ministry of Youth provided fishing nets for the practical training exercise. The workshop was aimed at providing skills and knowledge to the youth to help them establish a group fishing project. Practical in nature, the workshop contents included exercises and lectures on net-making, outboard-engine repair and maintenance, fisheries business management, regulations, fish handling and quality control, and resource management.

The workshop was introductory in nature. A week-long training programme for youth-group representatives from a number of areas has been proposed for the future.



 **Vanuatu**

In 1996, the Vanuatu Fisheries Department was able to obtain funds through the FAO Technical Co-operation Programme (TCP) which enabled the commissioning of a consultancy to study the participation of ni-Vanuatu women in the fisheries sector. The two-month consultancy by Ms Patricia Kailola produced the comprehensive technical report *An*

assessment of the role of women in fisheries in Vanuatu which was presented to Dorosday Kenneth, Director of Fisheries in December 1996. Copies of the report have been distributed for discussion to representatives of the Department of Culture, Religion, Women's Affairs and Archives; and the National Council of Women.



A woman prepares fish for sale at the Natai fish market in Vanuatu

 **Marshall Islands**

At the request of the government, Patricia Tuara, SPC Women's Fisheries Development Officer, travelled to the Marshall Islands to carry out a national study on the participation of women in the fisheries sector. The two-week study took place from 17 to 30 May 1997, and will result in a national report.

Follow-up activities include the organisation of a training workshop, and assistance in the development of a small-scale income-generating venture. While in the Marshall Islands, Patricia will be working with Evelyn Lanki of the Ministry of the Interior and Social Welfare.

Women as managers of resources

Story by South Pacific Action for Human Ecology & Environment (SPACHEE)

A contingent of informal educators from the Fisheries and Forestry Departments and the environmental non-government organisation SPACHEE visited Narewa village on the coast of Rakiraki in Ra on the north-eastern side of Viti Levu.

They did not find it unusual that there was an absence of women amongst the group invited to participate in the day's discussions. Invitation letters had only been sent out to the Chiefs and spokespersons or **matanivanua** of the **yavusa** and to village headmen or **turaga ni koro** who were naturally men.

The women only began appearing later to prepare and serve lunch. They were expected to leave at the completion of their task to forage for their families' dinner.

The SPACHEE officer invited the women to stay and participate in the afternoon discussions and it was obvious that they did so with much reluctance. The planning and decision-making processes are entirely the responsibility of men in most traditional Fijian villages. The day's education programme was perceived as being just that: an education programme for the menfolk, to assist them in their day-to-day decision making.

During the SPACHEE officer's presentation on the importance of mangroves to island ecosystems, she noticed some laughing amongst the women. When they were asked what the commotion was about, this is what one of them replied, '*mo ni raica mada na ka keimami dau cakava tiko ki na neimami veidogo e mata-sawa, ni keimami dau la'ki siwa.*' ('see what we do to our mangroves when we go fishing')

She explained how each women would pull out an average of 20 mangrove shoots each time they ventured out to sea for fishing and collecting seafood. She added that they killed the mangroves to clear their way to the sea and the nearby reefs.

'If we had mangrove swamps in front of the village, it would be very hard for us to find a way through them to get to the reefs,' she said.

Coincidentally, their attending the afternoon session of discussions made them realise that by uprooting mangrove shoots, they were contributing to the erosion of their coastline. An elderly man in the group complained about how the playground along the beach on which they used to play when he was child is virtually non-existent today because the most part of it now constitutes the beach.

The relationship between women and the environment is one issue that needs to be addressed when dealing with rural communities in Fiji. In a survey conducted by the Fisheries Division and the Commonwealth Scientific & Industrial Research Organisation (CSIRO), data collected showed that Fijian females were the most active fishing group, while women as a whole in Fiji expended more than half the fishing effort observed during the creel survey.

Their efforts were concentrated in rivers and lagoonal areas. Most of the fishing efforts carried out by males were targeted towards catching fish and invertebrates for sale. In other words, women made up most of the subsistence fishing effort, whilst males were concentrated more towards commercial fisheries.

Although men are the decision-makers, women in Fiji are more closely linked to their environment because they are the fishers, collectors of firewood and medicinal plants and often tillers of the land. It will be a landmark in the fisheries industry in Fiji if women are recognised for the important role they play in Fiji's fisheries and are included in the planning and implementation processes of this industry.

Future facilitators of education programmes such as workshops and group discussions should keep in mind that the presence of women is just as important as that of men.

In the case of Narewa village, if the women had not attended that afternoon discussion, they would have kept on uprooting the mangroves and would not have learnt about the role that mangroves play in the coastal ecosystem and how it affects their lives.



The dilemma in coastal fisheries management in Fiji

Source: Vina Ram-Bidesi, Ocean Resources Management Programme, February 1997

Studies on customary marine tenure systems have recently gained a lot of importance in the face of the limited success of the more centrally controlled contemporary fisheries management systems. Fisheries managers and researchers are trying to develop new management paradigms which would involve integrating aspects of traditional systems and modern practices into what is known as co-management.

In the wake of this awareness, the traditional fishing-rights owners in Fiji are increasingly realising the need for conservation of their marine resources. Access to fishing grounds by outsiders is being scrutinised and permits are often turned down as an immediate step to regulate the amount of fishing effort.

Licensing is one of the most important indicators of determining the level of fishing effort. In Fiji, a fisherman who seeks a licence needs to outline all the specifications of his fishing operation, such as vessel size, capacity, crew size, type of gear and the area of fishing. The level of fishing activities in a specific area is thus determined by the number and type of licences issued. In most coastal areas, there is further additional fishing effort by the so-called 'subsistence' fishers. This includes nearly all individuals in coastal areas who are within the 'economically active' age-group (14–64 years) and who have exclusive customary fishing rights. Their fishing is considered as more sporadic and limited to meeting household food needs, thus posing little threat to the coastal environment.

In practice, very seldom are regulations enforced or monitored or checks carried out on the level of effort and type of gear used. In coastal areas accessible to urban centres, a majority of fishers are semi-subsistence operators who often sell surplus catch for cash to meet their other immediate food and household needs. Most of the women fishers fall into this category of operators. In other words, there is a rapid increase in fishing effort by the resource owners themselves, for food and income. Introduced modern technologies such as gillnets, spear guns, diving gear, nylon lines and motorised boats are gradually replacing the traditional gear and equipment they once used.

The community relies on customary fishing practices and norms to regulate the level of fishing by individuals within the coastal communities. Norms include customary taboos, closed areas and restricted access, which people observe diligently, but an individual is free to fish as much as he or she likes depending

upon the time available, physical conditions and access to fishing gear and technology. The influence of western ideologies, education and changed consumer preferences creates increased demand for cash, which, in turn, places direct pressure on resource harvesting. Daily fishing activities are therefore self-regulated by an individual's need. Chiefs who regulate fishing effort often do not reside in the same village and even if they do, they do not regulate the daily fishing activities of their people.

While the customary tenure systems are an effective tool in regulating the access to resources by outsiders, they may not necessarily be as effective a tool on their own in regulating daily activities of fishers in the face of increasing modernisation. Furthermore, custom and culture themselves are dynamic and, unless traditional institutions are strong, the tenure systems can become complicated with the interplay of both modern and traditional demands.

An effective integrated management system based on custom, culture and fishers' experience, together with contemporary regulations based on sound scientific principles and involving both the state and resource owners, is essential.

Fishers who are resource custodians and their leaders who have authority to make decisions must develop their own community operational rules in order for their fisheries to be sustainable. This would require a more integrated approach to fisheries planning. Their overall resource-use patterns of both land and sea need to be determined, in order to optimise the benefits from them. For example, farming can be seen as a seasonal option when fishing is limited. Fisheries officers must realise that limiting the number of commercial licences is itself only partially effective and that it does not reflect the true level of fishing effort in coastal areas.

A large volume of catch which comes to the urban markets in Fiji is from semi-subsistence operators, the majority of whom are women. There is very little, if any, documentation on these women's fishing practices.

An example of this dilemma is seen in the Verata and Kubuna areas of Fiji. According to the Acting Director of the Fisheries Department in Verata, commercial fishing activities have been totally banned, while in Kubuna, there are 10 handline fishermen, 3 net fishermen and one coral harvester (*Fiji Times*, 27 February 1997).

In Ucuivanua village, which is one of the major fishing villages in Verata, officially there are no commercial fishing activities. However, recent studies and observation in the village indicated that several villagers were engaged in commercial harvesting. Three households had freezers full of lobsters and high-value fish such as snappers, groupers and emperors. These were regularly supplied to restaurants, middle-men and other retail outlets. Fishing is a major source of income for the people of Ucuivanua. Women are also active, regular fishers who sell a variety of marine products at the Suva Market (Vunisea, 1996).

Likewise, in Dromuna village in Kaba, most households own gillnets and fish regularly for both subsistence and surplus for sale. Catch is supplied to the Muaikaba Fishing Co-operative. In Vatani village in Kaba, several villagers participate in coral harvesting. Women from both Kaba and Vatani are actively involved in fishing for both subsistence and the market (Veitayaki, et al., 1995).

In the official records, these village fishing activities are still categorised as subsistence and thus there is very limited documentation on the nature and extent of their production.

Fishing regulated through traditional custom has been an important means of livelihood in both the Verata and the Kubuna areas. However, due to the increase in demand for income generated through fishing, the operational aspects of the traditional regulations need to be strengthened, more adequately outlined and effectively integrated into resource management guidelines.

As the coastal fisheries in Fiji come under increased threat of being over-exploited, management strategies ought to be strengthened immediately in order to avoid the collapse of important fisheries resources, and to improve the health of fish stocks.

While 'commercial' activities as classified by the Fisheries Department become highly regulated to control the amount of fishing, on the other hand the level of subsistence activities has increased and is currently the dominant type of fishery.

It is therefore important for fisheries managers and extension workers to be aware of the significant social, environmental and economic role of subsistence fishing and find means to incorporate it into the mainstream fisheries development planning. Only when such priority is given, will the crucial role of women in fisheries become obvious.

Another associated problem that is being overlooked in the process is that most of the subsistence fishing is carried out close to the coastal and inshore

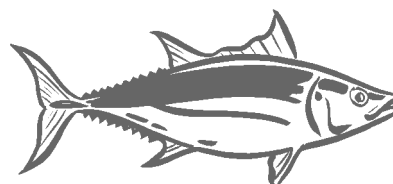
areas. Women, in particular, target smaller fish and other invertebrates which are mostly lower down the food chain but are consumed as food by the larger pelagic and demersal fish such as snappers, groupers and emperors. This practice, in turn, affects the more economically important species by 'ecosystem overfishing'.

A comprehensive appraisal of the subsistence fishery would reveal not only the resource status but the nature and extent of subsistence activities and their key players. This would also help to determine the sustainable rates of exploitation more objectively.

Operational guidelines at the community level would require establishing a preliminary database on fishing communities in terms of ownership and use of fishing gear and equipment by individual households, taboos, and other customary practices that promote sustainable resource use and need to be observed. Such crucial data would in turn help in guiding the harvest levels by individual households. They would also provide a better assessment on whether resource rent could be derived from outsiders or not. This is a more objective process of harmonising the interest of various stockholders in the fishery with the aim of providing sustainable coastal fisheries geared towards catering for food and the nutritional security of the coastal communities.

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Women's fishing participation in Fiji (with emphasis on women's fisheries knowledge and skills)

by Aliti Vunisea, University of the South Pacific

As in other Pacific Islands, women dominate in the subsistence fishing sector, with increasing involvement in the local commercial fishery. As fishers for home consumption, women contribute significantly to the nutritional needs of the family. In addition, the commercialisation of previously subsistence target species results in women actively participating in the market economy. Thus socially-defined women's fishing participation as subsistence fishers has to accommodate the change the subsistence fisheries are undergoing.

In the traditional context, fishing methods and technologies were socially or communally organised and monitored. Fishing was a way of life, with fishing activities defined within traditional societal roles. Although major participants in social activities or happenings, women were predominantly disadvantaged by traditional restrictions or taboos. The ocean sustained people's livelihood; thus its sustainability was entrenched in beliefs, customs or traditions. Such traditions or customary practices mostly require men's participation, while women, who are normally described as not actively involved in these traditional rituals, substantially provide support for the family and continue with normal community commitments.

Changing fishing patterns and emphasis have resulted in increased fishing effort and the acquisition of modern fishing methods and technologies. In the process traditional fishing techniques and technologies, which were a safeguard against misuse or over-exploitation of resources, are either bypassed or just totally lost.

The shift in focus in fishing practices and emphasis has been influenced primarily by the monetary needs generated by modernisation and people's changing lifestyles and food preferences. Apart from this, enormous consumption needs exert pressure on marine resources by increasing coastal populations and peri-urban and urban populations who depend on the local market for their seafood supply.

Also obvious is the increase in fishing effort and sophistication in fishing technology due to competition for resources by local commercial (licensed) fishers. Under current regulations, licensed fishers are allowed to fish up to the high-water mark, which is described as state-owned. To indigenous Fijians or custodians of **I qoliqoli** (traditionally defined fishing areas) the near coastal areas, including reef flats, are **i kanakana** or customary subsis-

tence fishing areas. Thus increased fishing activities within the inter-tidal zone by licensed fishers have encouraged intense fishing participation by locals.

Traditionally, fishing techniques or technologies were largely governed by species availability and natural factors such as the weather, seasons, winds, tides and moons, while current fishing focus for areas affected by commercialisation is largely influenced by the market demand (price on the market, availability of buyer, preservation possibilities).

Women's commercial involvement, although small-scale, is regular, consisting of weekly selling of molluscs, crustaceans and a diverse range of coastal edible species. For example, women from the Verata area sell ark shells (**andara, kaikoso**) almost weekly (at an average of about 10 bags per week, 30 kg per bag), at the same time sending 6–8 bags of **kaikoso** to buyers from the Western Division (fortnightly). Women's rate of fishing and subsequent selling, mostly occurring on a weekly and, during certain seasons, on an almost daily basis is more regular than men's fishing activities. They also harvest a diverse range of species when compared to men, whose efforts are focused on a narrower range of more lucrative species such as beche-de-mer, octopus, lobsters and larger reef fishes.

Official statistics and documentation, however, do not portray women's fishing and local commercial activities as important, because their fishing participation is usually interpreted as basically subsistence and without monetary significance. The changing face of the subsistence sector and the gradual commercialisation of basic marine food sources have been substantially overlooked. The influence of commercialisation is evident in increased fishing effort, the presence of middle buyers in villages and selling within the community. This trend has resulted in the lack of regard for women's fishing participation and at the same time the neglect of their fishing activities on the reef and coastal ecosystems.

Traditionally, there were defined gender roles in fishing, with women fishing the shallower coastal areas while men ventured out to the deeper seas. Thus women were associated and more familiar with the immediate coastal and reef areas. Men, on the other hand, engaged mostly in ritualised fishing activities which were only occasionally practised for specific traditional occasions. These traditional fishing ventures, which were mostly practised in deeper-sea areas, involved men from the master fishers'

clan, and usually targeted certain species only (turtles or specified finfish species).

Currently women increasingly fish into previously male-defined fishing areas and male-related fishing activities, with fishing effort becoming more pronounced to meet both consumption and market needs. Beche-de-mer is now also increasingly being dived for by women. Women's fishing activities, coupled with men's fishing participation, exert enormous pressure on reef resources.

In Verata, women sometimes fish five days a week, with Wednesdays, Thursdays and Fridays being commercial fishing days. Men whose wives are not fishers also fish specially for marketing purposes on the same days. The area has extensive foreshore flats, with prominent sheltered inshore and offshore reefs that provide the base for its rich diversity of marine species. With the current rate of exploitation, some important reef species may be depleted or totally lost.

Women's fishing methods

Fishing methods employed by women on coastal flats are generally very simple, with tools and technologies primarily traditional. In most cases women still catch fish barehanded or use simple nets and lines. Likewise when gleaning, gathering or diving for certain species, sticks or rods are the only equipment used. Women's fishing methods may sound and look simple, but in reality they are complicated; they require extremely adroit use of the senses, and skilful utilisation of fisheries knowledge.

In addition, the intimate knowledge and understanding the women have of their immediate environment enable them to easily identify and catch prey. Women are able to discern rock, seagrass and mud types where certain species are found. And for that matter they are also very familiar with areas colonised by certain species. Thus when women are out fishing or gleaning on the reefs, they don't just wander about but are clustered in different locations depending on the species they are after. At the same time there is a difference in areas fished, as women frequent the outer reef areas for commercial fishing purposes while fishing for subsistence is mainly confined to the immediate nearshore areas.

Fishing methods employed by women revolve around a few principles or basic methodologies. Inland or freshwater fishing generally includes net-fishing, setting traps, stupefying fish and diving for or gathering freshwater mussels. Coastal fishing basically includes gleaning on reef flats, line-fishing, net-fishing and the setting of traps and stupeficients. Some of these fishing methods are described below.

Inland fishing techniques

Small hand-nets and larger nets are commonly used by women when fishing in groups along rivers, lakes and ponds. Nets are firmly lodged in mud or sand, while women feel into holes, under grass or weeds with their bare hands.

Women have an amazing ability to grip and pull fish or eels out from their hideouts. Those that escape are trapped in the nets. Larger nets are used to block off creek or stream openings. Fish are then chased into these nets by splashing on the surface of the water.

Another variation of net-fishing is when a group of about 10 to 16 women wade around in a lake, in waist-deep water, removing weeds and grass. The activity is continued until the water becomes muddy, thus stupefying fish and eels.

Consequently fish either swim to the surface to get to clearer water, try to escape along the dry banks or lie still at the bottom of the lake. When a woman steps on a fish, she keeps her feet on it, dives down and grips it by the gills before killing it. Fish that escape to the surface of the water are caught in nets, while those that escape to the banks are caught barehanded.

Line-fishing is also commonly employed by women. There are many variations of line-fishing, depending on location. In inland areas, short rods are sometimes used. Bait includes worms, fish, octopus, shellfish and hermit crabs (**kasikasi**). Like their counterparts living along coastal areas, women are familiar with the best times, winds and weather for fishing. In inland areas, line-fishing is resorted to after major floods or during rainy weather, when fish leave their abodes and feed in calmer areas of ponds and rivers.

Women often identify fish by how they bite or nibble on the lines. For instance mullets nibble the bait (dough), spotted scad only touch the bait very lightly, while the mangrove jack and tilapia pull strongly or grab the bait. When a fish is hooked, it is then pulled in by constant tightening and slackening of the line until the fish tires. Once the type of fish feeding is identified, the lines, bait and hooks are changed. Thus when line-fishing, women are armed with an assortment of lines and hooks.

Another major resource of inland locations is the freshwater mussel (**kai**), which is usually dived for to depths of two to three metres, using goggles and small wiremesh baskets or pieces of cloth (**sulu**). When diving for **kai** women have a **sulu** tied around their waists, with the other end loosely tied around their necks. The **sulu** then forms a kind of



Surveyors carry out village surveys during the socio-economic study of the freshwater clam (*kai*) fishery in the Ba Province, Fiji

pouch where the *kai* is stored while women fish. If full, the weight of the *sulu* could drag the wearer down. In the course of my research, a young mother died in Nadali village from this practice.

Coastal fishing activities

For coastal locations, gleaning and collecting on the sand flats are women's major fishing activities. In addition to this women also line-fish, set traps and net fish along nearshore areas. Gleaning includes the collection of a wide range of species along reef flats. Women know exactly where to look for certain species and how to dig, prise or pull them out from their abodes.

In outer islands, such as Totoya in the Lau Group, women depend primarily on their skills. Traps are set on fringing reefs to herd fish into shallower areas before they are chased and caught barehanded. Traps set along the shoreline, which are usually circular or oval, are normally checked during neap tides or rainy and stormy weather, when certain species may take refuge in enclosures.

Gleaning basically includes gathering on sand or reef flats, picking, digging or prising off shellfish from sand or rocks. A diverse range of techniques is employed by women when gleaning along reef and sand/mud flat areas. Spider conches, some beche-de-mer species, seaweed, sea hares, jellyfish and other such species are collected on the dry reef flats or shallow lagoon-



A fisherwoman shows the *kai* she has collected while diving

al areas. Recently, however, species of beche-de-mer are increasingly dived for in deeper lagoonal areas or in outer reef areas. Pen shells, ark shells and sea worms are dug up from under 2 cm to 6 cm of sand. Hands or simple rods are utilised for this purpose. Some shellfish, such as the different types of oysters which are cemented onto rocks on the reefs, are removed or cracked open by hitting the shellfish with another rock. *Tridacna*

species, which are now commonly dived for at reef edges or slopes, are removed from rocks they adhere to using diving goggles and steel rods.

There are many variations in the methods of line-fishing employed. Some exceptional ones include **siwa nunu**, **siwa qalo** and **basikeli**. They are all various ways of line-fishing on foot. **Siwa nunu** is also fishing on foot, but in waist-to neck-deep water.

In **basikeli** women are suspended in water and line-fish. In this case the fisher sees the fish before the line is thrown out. Since the water is deep, women stay afloat by treading water while fishing. This is why the fishing style is likened to bicycle riding.

Women also have unique ways of adapting methods and gear to suit the occasion. In Totoya during moonless nights, the huge bay adjacent to the village is covered with lights. Women have discovered that certain mackerel species have a taste for flour dough. Coupled with this is a weakness for bright lights.

Thus on such nights women are out in punts in the bay, with their pressure lamps suspended from sticks firmly lodged in the boat. The lights attract the fish, which come in masses. Women drop their lines over the side of the boat and the fish snap them up. The villager call this type of fishing 'Korea' because it is likened to the method of Korean fishermen who use lights to catch baitfish in Fiji's lagoons.

Net-fishing techniques are numerous, with most of the activities conducted in groups. Small hand-nets or scoop-nets (**taraki**), larger hand-nets (**lawā cua**) and throw-nets (**lawā cola**) are the most common in rural villages. In some of their netting activities women use stupeficients (**duva**). The stem of the plant is usually crushed until fine, then mixed in water and stored in bottles which are broken on shallow lagoon areas, resulting in the poisonous mixture flowing over a larger area and stupefying fish. Although nationally banned, **duva** is still used in some places.

As for net-fishing in inland locations, two or four women stand guard at the nets while the others come from the opposite direction, beating or splashing the water to chase fish into waiting nets. The nets are lifted when there is a lot of movement within them, showing that fish are trapped, or when the other women come up to the edges of the nets.

At other times scoop-nets are placed around rocks while the women feel with their hands into crevices and holes to either catch fish or chase them out. Fish that are not caught are trapped in the waiting nets.

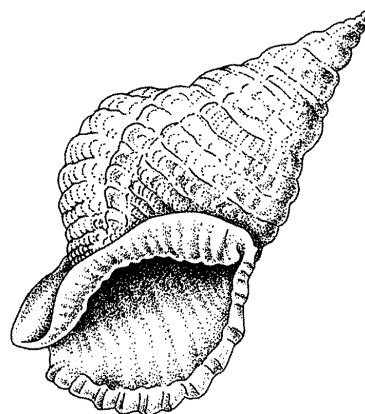
In other method of net-fishing a group of more than ten women form a semi-circle; holding scoop-nets in their hands, they move landward, thus forcing fish to shallower water or forming a human trap and finally catching the fish with their nets or on the dry sand.

Other specific fishing activities vary depending on the location, marine habitat, target species, season and accessibility to markets. There is, however, a marked difference between fishing activities conducted in rural isolated areas and those in rural locations with access to urban centres.

Fishing in more remote areas is more sporadic, with fishing pace and effort only sufficient to cater for consumption needs. In near-urban areas, on the other hand, there is an evident concentrated effort in fishing activities, with techniques and target species influenced more by market demand and opportunities. At the same time, people's distribution priority has changed, with the best part of the catch sold in urban centres and only the surplus consumed.

Because women's fishing activities are simple and do not involve the use of sophisticated technology, they can be termed sustainable in the sense that locations fished occasionally vary. Their target species also vary and are usually seasonal, giving certain species time to regenerate. Because women use simple fishing gear, the impact of their fishing activities is likewise minimal.

There is a need to understand and promote the fishing methods that women are using. Development schemes and conservation strategies should attempt to include women's basic fisheries knowledge. At the same time attempts should be made to enhance women's knowledge and skills. Women's fishing activities, although small-scale and involving simple techniques, could contribute positively to the sustainable utilisation of nearshore marine resources.



Up against several barriers

Source: based on the draft of a thesis by Aliti Vunisea of the University of the South Pacific, Suva, Fiji

The women of Fiji still remain critically disadvantaged in the country's fisheries development process.

As in other Pacific islands, women in Fiji dominate subsistence fishing and are also increasingly involved in the local commercial fishing sector. The importance of women's fishing activities is evident in the vital contribution of the subsistence and small-scale commercial fisheries in Fiji.

The women's involvement in other fisheries sectors is diverse. It has increased significantly with the emergence of fish processing as a growth area within the manufacturing sector in the post-coup years in Fiji. The expansion in the industry during this time has largely been attributed to the contribution of women workers.

Total employment (staff and management) for the Pacific Fishing and Canning Company (PAFCO) in 1993 was reportedly over 1,000, with the majority being female production workers paid hourly.

In addition, women's inclusion in the production process—they make up about 90 per cent of the total workforce in the cannery—is said to be a replication of the practice of assembly lines, which utilise women's manual skills and efficiency.

Women form the core of the industrial fisheries labour force through their involvement in post-harvest or processing activities. This mode of involvement conforms to perceived gender biases in development, where women are largely employed in areas pertaining to traditional labour divisions.

Given the increasing emphasis on the exploitation of the migratory tuna, and the attempt by Pacific Island countries and territories to process their own catches, there will most probably be greater involvement of women in commercial fishing in the near future.

Women contribute significantly to the artisanal fisheries sector, especially through small-scale village-based commercial activities. This increased participation can be attributed to the growing commercialisation of non-finfish species, especially shellfish.

According to the Fisheries Division Report for 1993, for the past three years, sales of non-finfish (shellfish, crustaceans, octopus, beche-de-mer, seaweed, etc.) have totalled an average of 2,000 t, worth US\$4.5 million. **Kai** or freshwater mussels, which are exclusively harvested and marketed by women, comprise about 48 per cent of this volume.

The main sales outlets for artisanal fishers are municipal markets, hotels, restaurants and cafés, butchers and fish merchants, retail shops, supermarkets and roadside stalls, with women dominating selling activities. The past years have witnessed a decrease in finfish sales at municipal markets, with non-finfish becoming more popular.

Despite the women's contributions, their participation in the artisanal sector is hardly acknowledged. Except for the 22 non-fish gleaning licences issued to fisherwomen in the Northern Division, most women fish without licences and are thus largely categorised in the subsistence sector.

Post-harvest activity

In addition to their own fishing activities, women also provide the necessary post-harvest activities for men's catches. Although formal production has, in most cases, doubled in intensity and volume, processing and preservation activities remain unchanged. Hence, major processing activities such as smoking, drying and salting are still traditionally practised by women.

In addition, the preservation, distribution and marketing of catches remain the responsibility of women. Therefore, artisanal fishing could be described as being principally dependent on women's support. Increased modernisation and associated commercialisation in the rural areas of Fiji will eventually make women get more involved in the future development of the artisanal fisheries sector.

Subsistence fishing is an essential component of the fishing industry in Fiji. For the substantial rural coastal populations and communities situated alongside inland waters, this fishing sector is a major source of food. In addition, increasing urban populations are also dependent on marine food sold in local markets.

Fishing methods employed by the women on the coastal flats are generally very simple, with tools and technologies primarily traditional (see description in the article on page 10 – 13).

Amazing ability

The women's commercial exploitation of **kai** has become very organised. For instance, some villages along the Rewa River, the largest river in Fiji, are entirely dependent on **kai** as a commercial resource. Over the years the villages of Nakini, Naganivatu,

Natoaika, Deladamanu, Nacokaika and Kasavu have organised a fishing programme whereby villages do not fish at the same time.

The villages are divided into two groups, which take turns at fishing and selling in the market. In this manner, an oversupply in markets is avoided, and the women are also free to attend to other duties during their week off fishing.

For coastal locations, gleaning and collecting on the sand flats are the women's major fishing activities. Other specific fishing activities differ, depending on the location and accessibility to urban markets. In fact, there is a marked difference in the use of time between areas participating in the commercial economy and those fishing basically for subsistence.

For example, in Totoya, the women's activities are very flexible and selective in nature. The species targeted depend principally on the season and the weather. For instance, during the south-east trade winds, the women exploit octopus on the dry reef flats. When it is the season for seaweeds, their collection is the women's main activity.

Apart from the sporadic nature of fishing, the technology used also differs from one area to another. For example, netting is still widely practised in isolated rural areas, while in urban locations, where there is a greater emphasis on selling, the women do not net regularly. Surprisingly, netting is still significantly used by the women who reside on the coastal fringes of the main towns.

Other methods include the setting up of barriers, fish fences and traps. Stone weirs or **moka** are usually erected within the coastal area to catch fish that feed with the tide. Fish fences are still used, especially along estuarine locations.

Net-fishing

Net fishing is commonly used in isolated rural locations and is only occasionally used near urban areas. The use of large gill-nets has greatly increased with the availability of faster and bigger boats, but it is an activity restricted to male fishers.

In areas such as Nukui, where net fishing is an important activity, a wide range of practices exists. For example, in **qoli rai** the nets are put out to encircle the catch when a school of fish is sighted. This is usually done within the outer reefs.

At other times, large nets are used to catch fish hiding under rocks. For this method, rocks are usually surrounded by nets while **duva**, or fish poison, is crushed and squeezed into the water around the rocks. Since this is practised on the outer reefs, the

larger species get trapped in the net when they try to escape.

The **yavi ran**, or leaf drag, is widely practised in Fiji, with variations, depending on the location. Both men and women participate in this activity which, in most cases, is for communal purposes. Customarily, men and women swim towards the shoreline, a few of them holding the drag-net. When they near the shore, those with the drag close in towards one another. When the shallower areas are reached, the fish are harvested using both hands and scoop-nets.

Gleaning and collecting are the major fishing activities of women in the subsistence and small-scale artisanal sector. Surprisingly, these activities are not confined to women in rural areas, as women residing in semi-urban areas also extensively gather or collect from urban foreshore areas.

Gleaning includes collection of a wide range of non-fish along the inshore coastal areas. Bivalves, crustaceans, octopus, seaweed and other miscellaneous items are usually the target of these gleaning activities. Lately, some previously caught species are being neglected. This decline in harvest is because such species now hold little economic value. Examples are **ibo** and **vertuna** (sea worms), **dio** (oysters) and **ivoce** (a small edible brachiopod). Once, most of these species were coastal delicacies and were usually eaten raw.

Traditionally, there has been a complementarity in the organisation of Fijian labour, with women being engaged in domestic duties and nearshore fishing or foraging activities, while men farmed and were responsible for deep-sea fishing.



At least in Totoya and Nasau, men worked in gardens and only occasionally fished. Recent developments have led to a transformation of such roles, with the emphasis in production becoming focused primarily on economically productive activities and men engaging more in fishing activities. The traditional context of labour division can no longer be casually applied to all rural situations.

Generally, it can be argued that women have been largely disadvantaged in institutionalised fisheries development in the Pacific Islands. Apart from traditional and social constraints, they are hindered by technological innovations, which principally target male fishing activities and marginalise the participation of women in fishing.

Increased participation

Although there has been increased participation of women in formal employment, this has, unfortunately, predominantly been in menial, underpaid jobs. An overview of the Asia-Pacific region shows that Asia has been more advanced in addressing the issue of women in fisheries. This has come about through government support and the accomplishment of programmes which target small-scale fishing enterprises.

Tradition is not static, and thus the ideologies which revolve around its usage are not static either. Due to women's dominant role in the subsistence fishing economy, and their contribution to the family diet, any shift in their fishing patterns will have several kinds of impact on local village societies and practices.

Despite women's increased participation in the fisheries sector in the Pacific and in Fiji, in particular, their activities remain officially overshadowed by those of male fishers.

Pacific invisibility

In documenting women's participation in development the status and roles of Pacific women have commonly been evaluated using Western models and perceptions. When I started on this project, I spent substantial time with women from my village, in Nadali, near Nausori town—women who spent endless hours diving for freshwater clams (**kai**) or line fishing for grass carp (**ika droka**) or flagtail (*Kuhlia rupestris*), **maleya** or tilapia (*Oreochromis mossambica*) and **duna** or eels (*Anguilla*).

I used these opportunities to engage women in informal discussions. During one of these, I was surprised that many of the women, including my mother, who was a regular fisher, seemed taken aback when I suggested that the fishing activities

they engaged in were an added responsibility to standard domestic chores.

The majority of the women did not see fishing as work, and in response, asked what they would do for leisure if there was no fishing. Going to the films, visiting relatives, or other such social activities were, in most cases, regarded as unbecoming in our society. Hence, fishing was the opportune time to spin yarns and catch up with the news, while also doing something useful.

Obviously, from this experience, it is clear that the case of women in the Pacific has to be addressed differently, keeping in mind the roles assigned to them within social concepts prevalent in the Pacific Islands.

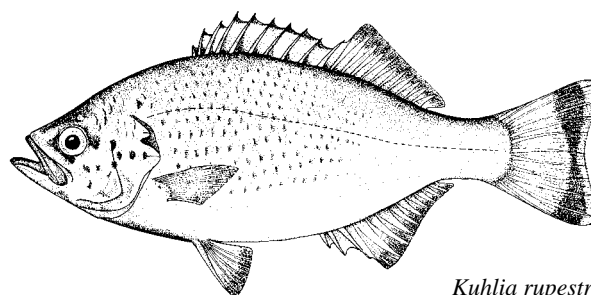
This is not to say that Pacific societies do not customarily recognise women's rights. In Polynesia, for example, females are not considered intrinsically inferior to males. In Samoa, even though women are largely dependent on their husbands for social status, those who are unmarried, divorced or widowed and continue to reside in the village are known as the 'ladies of the village'.

Such women hold high ceremonial status which is independent of male rank and which grants important decision-making powers within their families. In Fiji, women of chiefly birth also hold special status and can ascend to chiefly positions if they are the first-born ones in their families.

Thus, there is a need for a better understanding of what women actually do and how they are regarded socially within the context of Pacific societies today.

Traditional fishing activities are normally segregated, with men's fishing activities focusing on deep-sea areas and women's activities confined to shallower areas and support of men's fishing activities through preparing and repairing fishing equipment, cooking food and taking part in required rituals.

Recently, women have started to participate in more traditionally male-dominated activities such as offshore fishing in Tonga, the Mariana Islands and Fiji.



Kuhlia rupestris

Such increased women's workload, resulting from the expanded fishing activity, is a step away from the traditionally distinct gender roles in Polynesia and Melanesia.

Women's fishing activities are generally referred to as gleaning and collecting on reef flats. This definition does not accurately portray the immense knowledge and skills that women's fishing activities entail. Nor does it reflect the importance of women's fishing activities, especially to the total household production.

Early Pacific societies were self-sufficient in food, much of which was acquired through family fishing, foraging and collecting efforts. Women's subsistence fishing activities were a major component of these activities. Even in current times, women fishers are portrayed as basic providers of family protein through their fishing ventures.

The advent of commercialisation in rural communities has resulted in a greater emphasis on economically viable products. This has motivated the evident shift from the consumption of local food to less nutritious, imported food. These trends have also been intensified by the change in emphasis in women's fishing efforts, from subsistence to commercial.

Women are the main informal traders throughout the region, dominating municipal markets and other roadside and street outlets. If the 'self-employed' category is used as an indicator of informal sector activity, then almost a quarter of Pacific women are engaged in informal trade. In Fiji, women operate from homes, roadside stalls and streets, selling a diverse range of foodstuffs.

However, another explanation holds that women's immense involvement in the informal sector is a response to poverty. This significant informal participation reinforces women's undervalued roles, because the formal sector is usually rated higher than the informal.

Women also possess an extensive knowledge of traditional post-harvest activities, which is not recognised enough. This is because current fisheries development emphasises production, with the post-harvest sector being given low priority.

As a result, women's dominant participation in post-harvest and processing activities is regarded as secondary in fisheries development. It has been argued that post-harvest activities performed by the women of Vanuatu contribute very significantly to the nutritional and income levels of households. Modern fisheries development, therefore, needs to blend traditional processing knowledge with new strategies.



A Fijian woman sorts out button blanks made from trochus shells

The concept of access to resources has been addressed only minimally in the literature on the Pacific. In the majority of the Pacific Island countries and territories, resources are clan-owned, mostly through patrilineal descent.

When women marry, they become a part of their husbands' clan but neither own or have legal control over resources in their own area nor have legal control over resources in their new home area. At the same time, they lose resource rights in their places of origin. Thus, in the modern context, women are usually landless.

Exceptions occur where there are traditionally matrilineal descent systems, as on Bougainville in Papua New Guinea and on Nauru. These two societies have been affected by mining, which has eroded the control of resources by women.

For example, female landowners in Nauru do not have much influence over negotiations for compensation or for the management of phosphate. Thus, even where women have resource access, they lack economic, political and social authority to control it, especially as resources take on increasing commercial importance.

In spite of Pacific women's increased participation in the market economy, they are generally regarded as basically involved in subsistence fishing, with minimal defined participation in commercial fishing activities. Commercial fishing, in this context, does

not regard essential post-harvest activities as active commercial participation. Neither is women's domestic work viewed as necessary for the success of men's commercial fishing.

Another major obstacle in the documentation of women's economic participation in the fisheries sector is that their fishing activities are not seen as economically productive. The failure to recognise the mixed subsistence nature of the village fishery results in an undervaluation of their participation.

Apart from this, the involvement of women in fisheries is usually not well documented. For example, female participation in the fisheries sector in 1993 for Fiji, Samoa and Tonga was recorded as only 13–17 per cent of the total workforce. This low statistical measure of women's economic participation is due to the subsistence sector not being counted. The obvious indifference to women's fishing activities and the non-recognition of their work in the subsistence sector prompted the description of them as 'invisible fisherfolk'.

The current industry-oriented fisheries development leaves women's small-scale commercial and subsistence activities unmonitored and undeveloped. Whenever women have been incorporated into the industrial sector, this has been in gender-related types of employment, such as fish processing. Among major constraints to women's fisheries development are the lack of access to technology and the absence of fisheries extension assistance.



Participants at a workshop in Tonga learn how to make spicy dried clam

This trend is not surprising, considering that women's contribution to fisheries only began to be recognised during the past decade. Recent literature has begun to record the substantial involvement of women in processing and marketing, especially in Papua New Guinea and Vanuatu.

Women continue to be largely responsible for post-harvest activities in all the different sectors of the fishing industry. This has been increasingly so with

the establishment of tuna canneries in Fiji, the Solomon Islands and Western Samoa.

Various international and regional organisations specifically address women's issues throughout the region. Through regional co-operation and, with assistance from bodies such as the UNDP and the FAO, research into and awareness of women's concerns are being highlighted.



One of the graduates from a PNG workshop now markets her value-added products

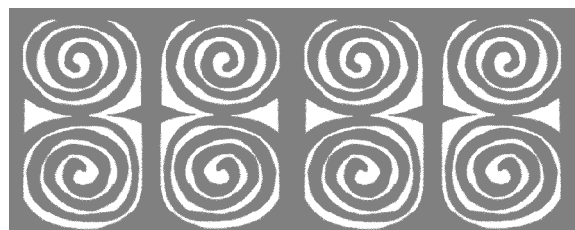
The Women and Fisheries Network

The Women and Fisheries Network is a network of individuals who are interested in advancing women's development in the fisheries sector in the Pacific Islands. The network is intended to link researchers and activists interested in fisheries development issues with women and women's groups who are engaged in fisheries activities in the region.

The Network recently organised a two-day national workshop for Fiji fisherwomen at which women discussed their fishing participation, problems and strategies on how to counter them. Recently the Network published *Fishing for Answers: Women and Fisheries in the Pacific Islands* (1995), which included contributions on women's fishing activities within the region from various authors.

The network also produces a quarterly newsletter called the *FISHNET*.

Membership in the Women and Fisheries Network is open to individuals, women's organisations, and other interested organisations throughout the region.



Books

Check out *The National Fisherman*, February 1997, vol. 77 no. 10, which features a cover story on women who fish. The article 'Women at Sea' (pp. 22-24) provides excerpts from the book *The Entangling Net* written by Leslie Layland Fields. The book provides a portrait of 22 women involved in Alaska's commercial fishing industry. The women share their views and experiences as professionals who have spent years fishing for halibut, herring,

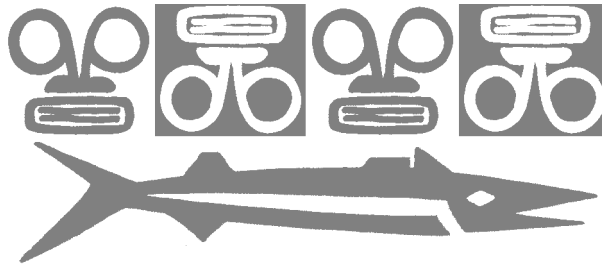
salmon, crab, cod and other fish and shellfish. They seine, troll, trap and toil in the cold, deep waters off Alaska.

Copies of the book can be obtained by phoning the University of Illinois Press at (800) 545-4703. Unfortunately no mail address is provided in the journal.

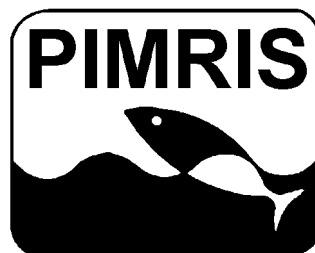
Send in articles, reports...

The Women-in-Fisheries Special Interest Group is interested in any activities, workshops or research within the SPC region. We will not know what you are doing or what is happening in your area unless you let us know. You can send in almost anything. Whether you are harvesting, processing, preserving, selling or assisting men fishers in your own community, you are a fisherwoman!

Various unofficial networks or groups are in existence at the village or community level within the SPC region. Your activities and approach may be vital to the furthering of fisherwomen's interests throughout the region. There is also an increasing number of women involved in industrial fishing. Your roles and experiences in the industrial sector can provide valuable information for women fishers in the region. We hope to hear from you! . . .



PIMRIS is a joint project of 5 international organisations concerned with fisheries and marine resource development in the Pacific Islands region. The project is executed by the South Pacific Commission (SPC), the South Pacific Forum Fisheries Agency (FFA), the University of the South Pacific (USP), the South Pacific Applied Geoscience Commission (SOPAC), and the South Pacific Regional Environment Programme (SPREP). Funding is provided by the Canadian International Development Agency (CIDA) and the Government of France. This bulletin is produced by SPC as



Pacific Islands Marine Resources
Information System

part of its commitment to PIMRIS. The aim of PIMRIS is to improve the availability of information on marine resources to users in the region, so as to support their rational development and management. PIMRIS activities include: the active collection, cataloguing and archiving of technical documents, especially ephemera ('grey literature'); evaluation, repackaging and dissemination of information; provision of literature searches, question-and-answer services and bibliographic support; and assistance with the development of in-country reference collections and databases on marine resources.