Changes to women’s roles in fisheries development in Fiji

Vina Ram-Bidesi
Ocean Resources Management Programme
University of the South Pacific
Suva, Fiji

INTRODUCTION
The participation of women in fisheries is directly dependent on the changes that take place within the sector. In subsistence economies fishing forms a way of life for men and women alike in the coastal and inland river areas. As the fishery develops to artisanal-commercial and to industrial, the involvement of women is modified to specific tasks within the catching, processing and marketing sectors.

Fishing societies are among the oldest forms of community life known today, emerging in the Mesolithic era, or about 1000 years before the earliest agricultural settlements (CIDA 1993). Even today, many of these communities are heavily dependent on the inland rivers and coastal areas adjacent to their settlements for sustenance using both traditional and simple introduced technology and skills. Considerable time is spent collecting shellfish and catching fish which form an important part of the local diet. This reflects the early lifestyle of hunters and gatherers where people were self-sufficient in food from the land and sea.

With the introduction of modern economies through monetisation, advancement in science and technology, increase in consumer goods and modern way of life, fisheries activities have intensified from fishing for the family to accumulating a surplus catch for markets. This expan-
sion has led to a more distinct division of labour within the household; for example, major activities carried out close to shore areas are done by women and those at a distance are largely carried out by men in boats. In areas where new changes are beginning to take effect, the fishery operates with both traditional and modern forces which sometimes contradict. The effect of these opposing forces also determines the status of women in fisheries in the particular location.

On the other side, in the last fifty years, there has been a rapid development in the world fishing industry. Improvement in technology has led to mechanisation, larger and better equipped vessels, more efficient gear, and freezing, preserving and processing facilities. This has led to increased industrial development and building up of distant water fleets where men dominate the catching, marketing and management sectors while women provide the bulk of the labour force in processing activities.

While the industrial fisheries activities continue to play an important role in providing employment and income in many countries, there is a general concern over the rate of exploitation of fisheries resources and the building up of excess capacity within the sector. Recent statistics by the Food and Agriculture Organisation (FAO) indicate that many commercially important stocks are already over-exploited because of increased effort. Decline in productivity is also due to declining quality of the marine and aquatic environment as a result of pollution and manipulation of the ecosystem to fulfil other human needs which disturb the ecological balance. The search for ways towards sustainable exploitation and management of fisheries resources has become an integral part of current international fisheries development agenda.

At the 1992 UN World Conference on Environment and Development (UNCED) held in Rio de Janeiro, an action plan (Agenda 21) to make development more sustainable and less ecologically destructive was discussed. This action plan is now regarded as the internationally accepted "soft law" guiding national practices. Chapter 17 of this Agenda 21 specifically outlines the guidelines and strategies for sustainable development of fisheries resources. Among these, the importance of community-based small-scale fisheries and the promotion of traditional resource management practices that are compatible with sustainable development are included. Emphasis is also placed on self-reliant strategies such as subsistence fisheries (United Nations 1993).

In Fiji, since women are the major producers of subsistence catch and also the major suppliers of invertebrates to the domestic markets, they are directly affected by any policy changes to the coastal and inshore fisheries. For example, over-exploitation has led to efforts to reduce fishing pressure in the coastal areas. As a result, the major goal now is to secure nutritional and food needs of local communities first, before exploiting for urban market demand. Among the several strategies used to achieve these are restricting access to coastal fishing grounds, limiting the number of licenses, reducing subsidies on fishery inputs used in coastal areas such as nets, increasing mesh size requirements of nets, and improving technology in order to exploit deeper waters. Another strategy is to provide no direct or indirect incentives for women to participate in income generating activities. Furthermore, the latter is seen as promoting traditional fisheries where women would exploit for subsistence food needs. Women are therefore left to progress through "natural forces." The inherent danger in this practice is the fact that in reality women will increasingly continue to exploit the fishery beyond subsistence food needs because of the increased demand for cash. They will therefore have a direct impact on the status of the fisheries resources, its sustainability and the economic and nutritional well-being of their families.

The interpretation and implementation of the strategies and guidelines in Chapter 17 of Agenda 21 will now have a strong influence in determining the role and status of women in fisheries. By stressing the promotion of traditional-based fisheries systems, planners, community leaders and decision makers are faced with a real challenge to find the balance between the preservation and protection of these traditional systems as opposed to the desire to
improve the standard of living in a modernised context. Should women in coastal areas be allowed to only continue their traditional subsistence role in a changing world which places increased social and economic pressures on their survival? Evidence already indicates that many women have begun to sell all or part of their produce to fulfil their household's basic needs. They are either the main supporters of their families or they supplement the household cash needs for their sustenance. This reflects the changing traditional role of women which is not recognised as part of the formal sector. The type of activities these women engage in also does not fall within the mainstream fisheries development process which places importance on policies that generate economic growth instead. This in turn is supposed to indicate the economic well-being achieved from the sector. As a result of such policies, women are increasingly faced with hardships of long working hours and increased physical labour in their production and distribution process which further burdens them. On the other hand their participation and contribution is crucial to the survival of their household and the village economy. Their activities also directly affect the physical state of the environment they exploit, the level of development and the general well-being of their people. How much and in what ways women will be involved or to what extent their actions are recognised as an integral part of fisheries development, will have a strong bearing on their overall social and economic status and well-being.

Thus while inclusion of women in the sustainable development of coastal fisheries is crucial, a more balanced approach without gender bias in the management and development of fisheries in general is important. This will in turn allow employment opportunities for women in more skilled positions within the industrial fisheries and tertiary institutions dealing with fisheries. Educational and training opportunities for women to progress in the modern sector is essential to eliminate discrimination against them within the fisheries sector.

This report is a study of the changing role of women in the process of fisheries development in Fiji. The development process is highlighted by the major forces that influenced the policies and structure of fisheries. First, the situation prior to colonisation reflects the self-sufficient, subsistence-based economies of hunters and gatherers. Major changes in this system occurred through the influence of early traders, colonists and the introduction of a market economy.

After colonisation, the increase in population through expatriate and indentured labourers, led to a growth in demand in the domestic market for fish and fisheries products. However, fisheries sector only became a high priority area for economic development after the 1970s when Fiji became independent. The two major influencing forces were the need to become a self-reliant economy and the obligation to manage and develop the 200-mile Exclusive Economic Zone (EEZ) under the new Law of the Sea. This led to the development of an industrial-based tuna fishery to generate foreign exchange and employment. The direction of development towards growth-orientated fisheries also meant diversion of major capital and Fisheries Division's manpower resources away from community-level fisheries that catered for self-sufficiency to the industrial and commercial sector. With the influence of western ideas and the market economy, the pressure to increase the standard of living in rural areas by raising income levels also increased. Various schemes were introduced. Women's participation in these instances has been limited to marketing of catch from some household operations, while men have been involved in a variety of activities. Women have basically remained at the subsistence and artisanal level with a limited and specific role in the industrial category.

**Subsistence Fisheries and European Influences**

Before the arrival of missionaries and traders, fishing and agriculture were done basically for subsistence consumption by the local people. The subsistence economy that operated enabled people to derive all their needs from the adjacent land and seas. Daily lives of women, men and children revolved around hunting and gathering activities. The first commercial exploitation of the marine resources in Fiji began around the 1830s with the arrival of the bêche-de-mer traders.
This, however, did not have a major impact on the subsistence fishing economy except in areas where sea cucumber resources were exchanged for iron goods, weapons and other trade items.

The colonial government had codified existing land boundaries by 1874 by adopting the mataqali (a traditional clan or lineage group) as the land owning unit in order to formalise land tenure for agricultural development. Marine tenure on the reefs and lagoon was treated differently in that customary rights were recognised based on native custom without codifying any boundaries. This led to the continuation of ownership of fishing rights based on custom and tradition and thus to the present existence of a large subsistence fishery. In 1923, the Native Fisheries Commission was established to administer the customary boundaries but there were no moves to clarify the legal problems of ownership. The colonist interest in fisheries was limited; no major market demand existed except for a few selected invertebrates such as trochus, bêche-de-mer, turtle shells and pearl shells.

In Hornell’s (1940) description of the most widely used indigenous fishing methods (hand nets, loose stone barriers, fish drives, poisoning or stupefying, bare hands, handlining and basket traps), women were involved in all, either exclusively or in concert with men. Although the report’s intention was not related to identifying gender issues, it is obvious that women’s participation in the fishery was crucial. This implies that they had a strong influence in fishing operations.

MARKET ECONOMY AND THE DEVELOPMENT OF ARTISANAL FISHERIES

While the subsistence fishery still dominates the economy in terms of production volume and the number of people directly involved, the influence of the market economy was gradually felt from the colonial period up to independence in 1970. A prime influence came with the arrival of the expatriate population and indentured and migrant workers from Asia who introduced new fishing technologies and created a local market demand. With this increase in population and introduction of a cash economy, the number of artisanal fishermen also increased. These artisanal-commercial fishermen, mostly of foreign origin, supplied fish and fisheries products at various domestic markets and exported turtle shells, trochus, shark fins and bêche-de-mer.

The use of steel hooks, nylon lines, twine and nylon nets, steel traps, powered engines, modified vessels, various types of nets such as cast nets, seine nets, blocking nets and verandah nets also increased. There was a rapid transfer of these technologies from the expatriate fishermen to local fishermen. In many instances, these improved and modified gear and vessel technology replaced the traditional canoes, fishing lines, hooks and nets made from local materials. These changes also meant a more specialised division of labour within the fisheries sector. The use of larger nets and fishing in deeper waters increased, but was basically carried out by males. This required capital investment and fishing trips became longer. Women could not participate for several cultural reasons that considered these activities a taboo, bringing bad luck, or dangerous for women to go out in boats for deep-sea fishing. Secondly, women were responsible for domestic tasks such as looking after children, cooking, washing and other household chores so they could not be away from home for extended periods of time. Women also did not have the necessary capital to invest. In the household operations where fish was sold, women sometimes assisted in marketing and processing of catch caught by male family members and helped in the repair and maintenance of nets and fishing gear.

As technology improved through use of ice, freezing facilities and infrastructural development, together with increased market demand, fishing gradually became the men’s domain. Women continued collection of shellfish and other inshore species for home consumption.
consumption, and facilitated the household production. Fishing activities were carried out within the limits imposed by their domestic responsibilities. On the other hand, men became more recognised actors in fisheries because of their definite roles within the sector. The target species also became more differentiated as most women concentrated fishing in the inshore areas and collecting invertebrates at low tides while men targeted larger finfish, like groupers and snappers.

Fisheries, as the major resource base for rural coastal areas, became a high priority area for rural development after independence. A Rural Fishermen's Training Scheme was established by the Fisheries Division to train rural fishermen aspects of commercial fishing operations. This took place concurrently with the building up of the necessary infrastructure to facilitate the production from commercial operations and through providing other incentives such as subsidised loans and gear and extension services. The National Marketing Authority (NMA) was also established as a central marketing system with collection centres in Lami, Labasa and Lautoka. As a result of this promotion the number of local artisanal-commercial fishermen increased. The aim of the Scheme was also to encourage fishermen to move to outer reef and deep-sea areas to reduce fishing pressure in the inshore areas. Since the fishing operations required specific skills, expertise, and extended time at sea in order to maintain a viable operation, males became the recipients of the training and assistance. This practice affected subsequent benefits and assistance with males directly becoming the beneficiaries of other projects such as aquaculture programmes. This policy has also led to men's fishing becoming relatively more dependent on the availability of inputs such as fuel, bait, ice and good weather. Women, however, have continued exploitation for subsistence because of lack of access to improved technology. Through their increasing specialisation in collection of invertebrates, they have become more reliable suppliers of food for the family as they are able to go out to sea whenever the need arises. Women have come to dominate the market in selling of these commodities as well, as there is an increased demand for cash for school fees, transport, clothing, cooking fuel, medical expenses, etc.

**Progress of Industrial Fisheries**

The establishment of the 200-mile EEZ under the Law of the Sea brought a new perspective to the Pacific island fisheries. This was the major force which led industrial fisheries to develop independently of the domestic artisanal fisheries. Also around the same time in the mid 1970s, the presence of a lucrative international market and resource surveys indicating exploitable quantities of tuna led to the establishment of the industrial tuna fishery. The transhipment base for distant water fleets at Levuka was upgraded into a canny under a foreign joint-venture operation (Pacific Fishing Company, PAFCO) and a national fishing operation (Ika Corporation) established to supply the canny in 1976.

In terms of division of labour by gender, women have been restricted to processing activities including cleaning and gutting fish packing and maintaining quality control. In the PAFCO canny, the total employment (staff, workers and management) for 1993 was over 1000 with the overwhelming majority being hourly-paid female production workers (Emerson-Bain 1994). Men are directly involved in harvesting, handling at port, marketing and the management of all tasks. Indirectly their involvement includes boatbuilding, transportation, gear manufacture, and maintenance.

Women derive income from being canny workers, but they form the most vulnerable group of workers. Being categorised as unskilled, they fall into the lowest paid group. They have weak bargaining power, and are not involved in any decision-making process in the industry. Reports on the degree of exploitation of women's labour at the canny and its socio-economic consequences

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(2) In many aquaculture programmes in Fiji, although women are usually the ones to carry out the daily pond maintenance and feeding activities, they do not often receive formal training.
are often cited. For example, Alexander\(^3\) outlines details on how the profits are derived at the expense of minimising wages for women workers while Emberson-Bain (1994) gives details on the labour process and preferential labour policy and its consequences on women workers and their families.

Plans to increase domestic entrepreneurship by encouraging local fishermen to move to the exploitation of pelagic tunas is under consideration. Women would be involved only if this tuna is processed locally. This may not be the best economically viable option since the export of fresh and chilled tuna for sashimi market is so much more profitable. In such a case the only likely participation of women would be in the packaging of tuna.

**CURRENT AND FUTURE TRENDS**

Three broad categories exist within the fisheries sector in Fiji: subsistence, artisanal-commercial and industrial. The latter, dominated by tuna, operates independently from the other sectors since it is based on export-orientated development ideology. More recently the establishment of Voko Industries for canning mackerel (an import-substitution operation), shell button manufacturing, and export of fresh and chilled tuna are also based on a similar labour policy where women provide the bulk of labour as low-paid, unskilled workers. Figure 1 shows the division of labour by gender as the fishery progresses from subsistence to industrial. The type of work performed by women is greatly reduced as fisheries develop along those lines, which reduces women’s influence and control over the decision-making process on factors that may affect them within the industry.

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(3) See page 91, this volume.
Fisheries development

In the artisanal-commercial category, women may be involved in a variety of activities as indicated by the illustration above. Their degree of participation is highly dependent on the access to means of production, their knowledge and skills and the need for food and income. Commercial fishing in Fiji is synonymous with the issue of licences or permits, including licences for middlemen who sell fish. While some women may be regularly engaged in fishing and selling, their activities are not considered as part of artisanal-commercial operations, except for the freshwater clam (kai) fishery. As a result of this exclusion, credit facilities, training, extension and marketing assistance to women in marine fisheries are also limited. Thus, while some women may be directly involved in facilitating and assisting in the various fisheries activities within their households, very limited assistance or training accrues to them even though they devote long hours of physical labour to these tasks.

Disrupting forces
There is a general feeling that any specific training and assistance to enhance women's economic activities will accelerate social and cultural change and disrupt the traditional community life. Interaction with senior fisheries officers during a recent workshop on coastal fisheries management and development held at the University of the South Pacific revealed that policies that encourage women's economic participation were generally discouraged in order to promote

(4) In 1993, more than 850 mt of this clam were sold in Fiji (Fisheries Division 1993). The clams were exclusively collected and sold by women. There are crustacean - reef gleaning licenses, but these are only recorded as a requirement to measure fishing effort. In actual practice, they are not issued as proper licenses and are not recorded adequately, as they are based on random surveys at the various markets.
women's traditional subsistence activities. This was said to be in line with UNCED's recommendations to enhance self-reliant traditional fisheries. The analogy used was that if subsistence women who stood long hours in water were given punts in the hope that it would reduce their chances of getting cold, sick and arthritic in old age, then they would instead spend longer hours at sea catching more fish and would soon progress to seeking an engine for the boat. Since they would be able to stay at sea longer, they would not have sufficient time to perform their other domestic responsibilities. Some fisheries officers further expressed concern that if women become major income earners, it would affect the dominantly existing patriarchal social structure. There is an inherent belief that women's roles will change with innovation, but men's roles are not expected to be so flexible. For instance, men are often resistant to the possibility of sharing responsibilities within the household. As a result, the development of women's income earning activities is seen as a disturbing force which disrupts the norms and values that guide the society. If the traditional systems of exchange and production are sufficient to meet household food demands and other basic needs, then women do not have the pressure to participate in income generating activities. However, this is not always so as modern lifestyles increasingly force women to provide sustenance for the household.

Is it still subsistence? Statistics on fisheries production in Fiji over the last five years indicate that half the volume of catch from the sector originates from subsistence fisheries. Within the subsistence category (classified as the informal sector), women are the dominant producers (Department of Women and Culture 1994). With use of simple technology – collection by bare hands, free diving with goggles, lines and hooks, hand nets, and traps – women contribute significantly to household food and protein needs. However, with monetisation of the rural economy and the consequent demand for cash, women are selling part of their catch to the market. While some may market their catch on an irregular basis, depending on seasonality and demand for cash, other women are increasingly supplying a variety of inshore resources to markets through their so-called "subsistence activities." Crabs, prawns, seaweeds, seashells, octopus, sea cucumbers, and a variety of other marine products sold at the municipal markets in Fiji are largely collected and sold by these women. Vunisea describes how women are able to organise themselves into informal groups and networks in order to cope with difficulties involved in the production and distribution process, as these activities can be problematic for them. She also points out the gradually changing attitude of women who are aiming to supply the market. Surplus now goes for consumption at home whereas previously, surplus went to the market. This increase in women's purchasing power also increases dependence on imported foods that are now bought in stores. This reflects the changing dietary patterns away from natural foods towards the nutritionally inferior processed and convenience foods. A recent comprehensive survey by Fiji Fisheries to assess the subsistence fishery, provides useful information on the status of resource exploitation. It, however, does not elaborate on gender-specific data in production, use of technology, or division of labour within households. Such data would have highlighted the different roles of men and women and given a clearer picture to planners and policy makers on the individual needs of these men and women.

Looking at trends in the three fisheries categories, it is evident that women are extensively involved through their varied roles. While the value of women's contribution to the industrial fisheries is recognised in terms of their "wage rates," the value of women's contribution to the artisanal-commercial and subsistence sector remain

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(6) See pp. 101, this volume.
relatively unassessed and therefore does not fall within the mainstream of fisheries development. This is further eclipsed by the fact that women’s traditional fisheries should satisfy household food needs.

**DEVELOPMENT IMPLICATIONS**

The development emphasis on industrialising and modernising the fishery may be an important means of providing foreign exchange and employment, but it tends to overshadow the importance of subsistence and semi-subsistence operations which in fact support a larger number of people in terms of food and income. As in monocropping in agriculture, high capital investment into one fisheries resource, such as tuna, can be affected by competition, price fluctuation or resource constraints due to declining productivity. Women who provide the bulk of the labour force and who depend on income from the tuna canneries would be most directly affected by such changes as they are the dominant group of casual and temporary workers. Better regional cooperation to maintain supply levels of raw materials or alternatively diversifying the industry must also be considered. This would not only help to sustain the business, but also those who have become dependent on the industry especially in areas where other economic opportunities are limited. Women should also be given opportunities for training and education in order to progress into more skilled positions such as managers, scientists, accountants, and technicians. This would help them become part of the decision making process on issues that may directly affect them.

Within the artisanal-commercial fisheries, while women provide food, supply a variety of fisheries products to the domestic market, and facilitate household production and processing, they are not the direct beneficiaries of any development assistance. The tasks they perform are regarded as low-priority (i.e., post-harvest handling and processing). As a result, women are often seen selling processed fish and other products without any proper packaging, exposed to heat, humidity and flies. The quantities sold are also not adjustable to consumer demands. For example, commodities are sold in heaps or bundles rather than by weight. The marketing conditions are inadequate, often women are seated on hard concrete floors in overcrowded conditions with limited shelter from rain and sun. These conditions not only create difficulty for women, but prices for commodities are not optimised due to lack of proper storage, handling and grading. Thus to derive the desired level of income, they aim to maximise production quantity which directly places more pressure on the resources and its sustainability. As informal producers, the women have no provision for assistance or training to better enhance their activities, such as by improving the processing and presentation of their products.

Fishing effort within coastal areas has expanded considerably because of improved technology and population growth, which increases both the demand for fish and fisheries products as well as the number of fishers. There is increased competition between subsistence and commercial production. This has influenced the choices in terms of what species are marketed and which are left for home consumption. Evidence already indicates that low-value and undersized organisms are usually consumed at home and high-value species are marketed. As the resources get scarce, fishing effort may be increased through use of more destructive methods such as use of poisons, pesticides and other chemicals. Women also resort to use of such techniques. Because of the informal nature of these fishing activities, the real picture of fisheries resource use in the economy is not properly assessed.

Policy changes in order to make fisheries development more sustainable and to provide for self-reliance may be misguided if the activities of women within the artisanal-commercial and subsistence sector are left alone as a strategy to enhance traditional production systems. The underlying assumption is that traditional systems have supported the livelihood of coastal communities in the past. These systems, which have evolved through time, are therefore thought to be capable of guiding the future.
CONCLUSION
By looking at the case of women involved in fisheries in Fiji, it is evident that they are active production agents who have an important role in the sustainability of the resources. Implementing the guidelines from UNCED, which stress the importance of enhancing the role of women and of providing food self-sufficiency to meet nutritional needs, must be viewed objectively. These guidelines call for strategies to enhance women’s fishing activities by incorporating them with mainstream fisheries development and not the contrary. To promote subsistence and artisanal activities of women does not mean that they must be deliberately left out of any assistance. The definition of development assistance has been perceived as formal development leading to modernisation and change. Thus any assistance that is development-orientated, may be seen as a threat to the status quo of traditional fisheries. On the other hand, the major emphasis of the UNCED guidelines for long-term sustainability was to include management as an integral part of development, even though development and management may be opposing forces within the short-term. Once this definition of development, and the inclusion of gender as an important component, is better understood, the need to incorporate women would also become clearer.

Since women are closely involved in coastal resource exploitation, they also ought to be trained through extension and other appropriate means to become resource managers and to exploit the resource more rationally whether it is for home consumption or for market. In some instances, women lack awareness of resource dynamics because of lack of education or training. This is evidenced by the increase in use destructive practices by some of them. As trained and active resource managers, such women would realise the need to avoid overharvesting. As primary educators of children, such women could exert a strong influence on the future generation of resource users. Increased targeting of women for training as coastal resource managers would be an effective strategy for raising public awareness on sustainable fisheries.

Assisting women by reducing the physical work burdens and providing alternative income earning opportunities in non-fishing activities should also form part of the integration of fisheries within other sectors in order to reduce fishing pressure in areas that are exhausted. Assisting in marketing, processing and transportation is also essential in areas that indicate potential for development. As aquaculture develops, women could also be encouraged to participate, as this will enable them to remain close to shore areas, so they remain relatively close to home. Enhancing subsistence fisheries to meet household food and protein needs would also require extension training and awareness on food, nutrition, and health education.

Conservatism against women is part of the strong traditional force guiding the social values and norms of many societies. Therefore gender issues may not be well understood and both men and women may strongly resent and resist the introduction of new ideas directed at improving their situation. However, long-term sustainability in a world that has seen many changes requires the cooperation of both men and women for the betterment of all.

REFERENCES


Security, women, and tuna: a look at Fiji

Ronni Alexander
Kobe University
Kobe, Japan

There are, perhaps surprisingly, a number of things which can be said about security, women, and tuna. The purpose of this brief essay is to suggest some ways in which the subject may be approached, rather than to present a case study of tuna in Fiji. The first part will be an abstract exploration of the ways in which capital intensive development strategies, such as fisheries development involving high-priced commodities like tuna, relate to national (international) security on the one hand and women on the other. This will be followed by a brief look at two examples: the Pacific Fishing Company (PAFCO) and Fiji Fish, Inc. based on interviews conducted in August 1994.

Since the end of the Cold War, it has become common practice in international relations theory to try to define security in terms of something more than military superiority. One such effort is the idea of "endogenous" security, which essentially takes individuals as the starting point for a bottom-up participatory view of security. It assumes that security entails freedom from anxiety for individuals and for society as a whole, and that an important aspect of that freedom is a guarantee of the necessary conditions for a healthy population. Those conditions require a healthy natural environment, access to clean water and nutritious food for the body and...