Development of tuna fisheries in the Pacific ACP countries (DEVFISH) Project

Gender issues in the Pacific Islands Tuna Industry

A report by

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LIST OF ACRONYMS

DEVFISH	Development of Tuna Fisheries in the Pacific ACP countries
EU	European Union
EDF	European Development Fund
FADs	Fish Aggregating Devices
FFA	Pacific Islands Forum Fisheries Agency
Forsec	Pacific Islands Forum Secretariat
HACCP	Hazard Analysis and Critical Control Point system
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
NAFICOT	National Fishing Corporation of Tuvalu
NGO	Non Government Organisation
P-ACP	Pacific-African, Caribbean Pacific Countries
PAFCO	Pacific Fishing Company
PFC	Pohnpei Fisheries Corporation
RIP	Regional Indicative Programme
RMI	Republic of the Marshall Islands
SPC	Secretariat of the Pacific Community
SPC CETC	Secretariat of the Pacific Community, Community Education Training Centre
STD	Sexually Transmitted Disease
STL	Solomon Taiyo Ltd, now Soltai Ltd
UNFPA	United Nations Population Fund
US	United States
USA	United States of America
USP	University of the South Pacific

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EXECUTIVE SUMMARY

In order to promote gender equality in the tuna industry, one needs to identify the roles that men and women play as stakeholders in the industry, but also as members of the general community. Awareness of the positive and negative impacts of the tuna industry will help in addressing those impacts that have a negative effect on women. By highlighting the constraints that restrict the participation of women in the industry, it is envisaged that support will be given to help in the development of opportunities.

Studies show that men and women are both involved in all aspects of the tuna industry with most women found in the processing (small scale and commercial) and marketing for the domestic market. Most men are found in the capture and commercial marketing areas.

The positive impacts of the industry are common to both men and women. However, the negative impacts are often directly felt by women. The increase in a woman's work load and domestic responsibilities, poor working conditions in processing factories, the transmission of sexually transmitted diseases including HIV/AIDS, alcohol and drug abuse are a few negative aspects that affect the health and well being of women. In order to address these negative impacts, women rely largely on NGO groups such as National Women's Councils, Youth Groups, Health Groups, and the Church. More support is required from both Government and the tuna industry.

Socio cultural beliefs, family obligations, lack of skills and experience, lack of direct access to credit and finance, transport restrictions, and poor market facilities restrict women from participating or participating equally in the industry. Any opportunities for women will need to take into consideration these constraints.

The production of value added products is a proposed business opportunity for women. They may become part of commercial activities, or establish small scale ventures. Tuna and by-catch from fishing activities or waste from processing factories could be used for smoking, salting, drying, tuna jerky and fishmeal. Several countries in the region including *Tuvalu, Kiribati, Papua New Guinea, Solomon Islands*, and *Vanuatu* may be interested in providing training, equipment and finance to assist women set up businesses to cater to the local market.

The areas for development assistance are highlighted with specific projects proposed for the DEVFISH Project.

1.0 INTRODUCTION

1.1 The DEVFISH Project

The *Regional Strategy Paper and the Indicative Programme* (RIP) agreed between the Pacific ACP (P-ACP) countries and the European Community for 2002-2007 identify fisheries development as one of three focal areas for EDF9 cooperation. The improvement and coordination of poverty-eradication-oriented national fisheries sector policies is targeted as an objective of fisheries development cooperation. The DEVFISH (Development of Tuna Fisheries in Pacific ACP countries) by the European Community is designed to meet this objective.

One of the key features of DEVFISH is that it is private sector oriented, that at the regional level will describe and measure the current pattern of P-ACP participation in tuna fishing and processing; and identify opportunities and strategies for enhancing that participation and the economic benefits that flow from it.

Under the DEVFISH project, one of the target groups identified is Pacific Islands women. As such, an activity to be undertaken is to promote gender equality in participating Pacific Islands private sector tuna development. To begin to address this activity, the project wishes to establish a baseline on what is known on the involvement of women in the tuna fishery in Pacific Islands and impacts on women as a result of tuna fisheries.

1.2 Terms of reference

A 12 day consultancy with the *Secretariat of the Pacific Community*, and the *Pacific Islands Forum Fisheries Agency* was commissioned with the following terms of reference:

Under the supervision of the *Coastal Fisheries Programme Manager* the consultancy was a desk study that would cover the following areas:

i) A review of literature that covers women's participation in Pacific Island tuna fisheries;

ii) A review of issues relating to women's participation in Pacific Island tuna fisheries including key constraints to participation;

iii) An assessment of impacts on women in general in relation to tuna fishing operations (domestic or foreign including transshipment and especially tuna processing) being developed in Pacific Islands countries;

iv) Identify potential work areas where women can gain employment in domestic tuna fisheries in Pacific Island countries; and

v) Identify critical issues that need to be addressed to reduce any identified negative impacts on women as a result of tuna fisheries and processing in Pacific Islands countries.

1.3 Methodology

As a literature review, this report has looked at national, regional and international articles, documents, field reports and books written on women in development, gender in development, women in fisheries, and the assessment, management and development of Pacific Islands tuna fisheries. In terms of gender research in tuna fisheries, the report calls on the documents produced by the *Pacific Islands Forum Secretariat* (Forsec), the *South Pacific Islands Forum Fisheries Agency* (FFA), and the *Secretariat of the Pacific Community* (SPC). A full bibliography is provided at the end of the report. It is important to note that the information in some reports cited may be outdated due to developments in the tuna industry.

1.4 Gender equality in the tuna industry

Gender equality implies a society in which women and men enjoy the same opportunities, outcomes, rights and obligations in all spheres of life. Equality between men and women exists when both sexes are able to share equally in the distribution of power and influence; have equal opportunities for financial independence through work or through setting up businesses; enjoy equal access to education and the opportunity to develop personal ambitions (*UNFPA website*).

If men and women are not equally involved in decision making at all levels, decisions may not be balanced and may benefit one group more or less than another (*Pacific Islands Forum Secretariat 1998*).

The goal of gender equality in the tuna industry requires identifying the roles of men and women; constraints to women's participation; direct and indirect impacts of tuna fisheries; ways to reduce negative impacts of the fisheries, and opportunities for participation. Sustainable tuna industry development can only be achieved and measured with the active participation of all members in the community.

Gender varies with culture, time, religion, age and values. National studies carried out on gender issues in tuna fisheries have provided specific information. Athough there are findings specific to a country, there are also many similarities amongst Pacific Islands countries. This literature review, while providing specific examples, has summarized areas of consensus.

2.0 THE PARTICPATION OF WOMEN IN PACIFIC ISLANDS TUNA FISHERIES

2.1 A summary of the roles of men and women in the tuna fisheries

A review of reports on the Pacific Islands tuna industry shows that men tend to be involved in all activities from harvesting through to support services. Women in most island countries are involved in all activities with only limited involvement in harvesting.

Table 1: A summary of the roles of men and women in the tuna industry of the Pacific Islands

Activity	Men	Women
Harvesting	*Artisanal and subsistence fishers *Crew on local/foreign vessels *Partners and owners of companies *Members of consultative committees *Industry liaison *Surveillance and compliance officers *Observers/port samplers *Engineers *Boat repairs and maintenance *Bait fishers *Boat owners *Owners of nationalised quotas *Customary resource owners (bait fish royalties) *Fishing gear maintenance and construction *Fish handling to shore *Stevedores *Shore based support staff	►Subsistence fishers ►Bait fishers[1] ►Partners and owners of companies ►Boat owners ►Members of consultative committees ►Industry liaison ►Surveillance and compliance officers ►Port samplers ►Stores control ►Shore based support staff mainly in administration and office work ►Customary resource owners (bait fish royalties)[2] ►Makers and menders of fishing gear ►Fish handling to shore[3]

1 Arama and Associates 2000, notes that there are women bait fishers in Fiji. This is the exception rather than the rule for Pacific Islands women involved in the tuna industry.

Processing	*Company owners and managers *Cannery and loining plant workers *Cool storage workers *Transport workers (forklift operators, weighmasters etc) * Administrative staff including accountants *Quality control and laboratory workers *Engineers and plant maintenance workers (carpenters, plumbers, labourers, etc) *Graders *Support staff (cleaners, security, maintenance)	►Company managers ►Cannery and loining plant workers ►Administrative staff including secretaries and accountants ►Quality control and laboratory workers ►Food service providers at cannery ►Hostel workers ► Support staff such as cleaners
Marketing/Distribution	*Local marketing and distribution *Transportation *Drivers *Engineers *International marketing and distribution *Economists/Accountants *Market research and promotion	►Local marketing and distribution ►International marketing and distribution ►Drivers ►Market research and promotion ►Sales clerks
Secondary activities	*Public sector workers linked to	►Public sector workers

2 Royalties are distributed to women in some parts of the Solomon Islands, for example Munda bait grounds (Mike Batty, FFA, personal communication).
3 Women in Madang, PNG are involved in fish handling to shore (Mike Batty, FFA, personal communication, June 2006).

	fisheries *Security workers *Sex trade workers *Casino and niteclub owner and workers *NGO staff dealing with negative side effects of the industry	linked to fisheries ►Sex trade workers ►Casino and niteclub workers ►NGO staff dealing with negative side effects of the industry
External employment		►Take on alternative work to support family in an unstable industry.

(Summary of literature on gender roles by Forsec, SPC, and FFA)

2.1.1 A closer look at women's participation

Although the literature provides information on the roles of men and women in the tuna industry, there is limited sex disaggregated data quantifying the numbers of men and women in each area. This data can be found in the harvesting and processing areas and is usually produced as part of a one off study. Canneries such as the *Pacific Fishing Company Ltd* (PAFCO) and *Solomon Taiyo Ltd (STL)* have collated data.

Baseline quantitative data is required to assist in the allocation of resources that will promote gender equality in the tuna industry. In order to be effective, the data must be updated on a regular basis so that a comparative analysis over time can be made. Below is a summary of the literature. Where available, sex disaggregated data is included in the text or cited for reference.

In addition, Annex 2 provides a table of men and women in eight Pacific Islands countries who are employed in the harvesting and processing of tuna. The unpublished data has been collected by *SPC Fisheries Development* staff while carrying out national field work. The information highlights the areas in which men and women are employed in national tuna industries, shows male/female ratios in artisanal and commercial harvesting as well as processing sectors. Although the table is undated the information provides comparative tuna industry employment across the region.

Harvesting

Mainly due to culture and social customs, most Pacific Islands women do not participate in deep sea fishing. Cultural beliefs that women on fishing boats are bad luck, traditional beliefs that fishing is a man's field, and the social obligations of household and family inhibit the participation of women. Apart from women who have been trained as Fisheries officers at the SPC/Nelson Polytechnic, few in the region have been trained to be crew. The Nelson course provides training in navigation and chart work, practical netting and seamanship, marine electronics, safety and survival at sea, outboard repair and maintenance, seafood safety and

quality management, vessel construction and safety management, business management and report writing. Of the 54 students trained at the regional level from 1996 to 2005, only 6 did the fisheries officers course. These women from Kiribati, Samoa, Tonga, FSM, Niue all worked in the *Departments of Fisheries* and returned there after the course ended (see Table 5).

There are women in parts of *Papua New Guinea, Solomon Islands*, and the *Federated States of Micronesia* who fish for subsistence purposes. Others in the region fish for bait, own boats, conduct port sampling of tuna, and are employed as support staff in the capture fishery, mainly in store control, administration and office work.

The gender issues study of the *Fiji* tuna industry provides employment data for men and women in the harvesting and processing sectors.[4] According to the study, sources of information are scarce, variable, and subject to rapid change, as the industry develops or reacts to market forces and availability of fish. Most of the 2001 data on vessels, crew and staff collected for the study were expected to change in the near future. Ten companies indicated that boat numbers, crew and processing staff would increase by 2002. Where companies are involved in both harvesting and processing, it is difficult to separate out staff involved in both areas.

The *Fiji* study also provides quantitative targeting the harvesting sector and the processing sectors as can be seen in Tables 2 and 4. Twenty-one companies with a total of 92 vessels were recorded as being involved in harvesting in the *Fiji* study of 2001. The data shows that only men are in the vessel positions of captains, engineers and crew. Approximately 1268 jobs at sea are provided with women employed as 30% of office staff. Workshop and other shore based maintenance work are carried out by men (88%) with women employed in making long line gear.

Table 2: Numbers and percentages of men and women directly employed in the harvesting sector in November 2001, by job type (Fijian and non-Fijian)

Job Type	No. of men	No. of women	Total	% men	% women
Company/boat owners/managers	20	1	21	95	5
Skippers	102	0	102	100	0
Engineers	126	0	126	100	0
Crew	1040	0	1040	100	0
Office (harvesting)	63	27	90	70	30
Workshops and other harvesting	130	10	140	93	7
Totals	**1481**	**38**	**1519**	**97**	**3**

(Pacific Islands Forum Secretariat.2004. *Gender Issues in the Fiji Tuna Industry* in Gender Issues in the Pacific Tuna Industry Volume 2).

Chapman's 2001 field report on *Fiji* includes a table showing the approximate composition of staff in tuna processing/packing facilities, office and workshops. The table provides information on numbers of men and women (Fijian and non Fijian) employed by twenty eight fishing companies.

4 The Fiji study was undertaken by Lyn Lambeth (SPC Community Fisheries Officer and Margaret Leniston (Pacific Islands Forum Secretariat Gender Issues Advisor).

Processing

The area in which women play a prominent role is in processing. Women in many countries including Tuvalu, Kiribati, the Republic of the Marshall Islands, and Papua New Guinea are responsible for subsistence processing for the home or for sale at the local market – salting, drying and tuna jerky being the main activities used to preserve seafood where there is no/limited electricity, refrigeration and/or transportation to markets. As soon as the men return home from fishing trips, the women take over the responsibility of cleaning, gutting and processing fish which include salting and drying and baking in earthen ovens.

Commercial canneries employ mainly women. There are two large canneries in *American Samoa*, a smaller cannery in the *Solomon Islands*, one in *Fiji*, and two in *Papua New Guinea*. *Solomon Taiyo Limited* (STL) is responsible for freezing, smoking and canning, as well as fishmeal production. In *Fij*i there are three main tuna processing and packing plants in Suva, another in Pacific Harbour, one at Lautoka, and PAFCO at Levuka. Three other tuna longline companies are interested in establishing processing and packing facilities in Suva. The *Voko cannery* and other processors are looking at processing and value adding bycatch species taken during tuna longlining. Loining of albacore for the EU market, filleting or cutting stakes and packing them, and smoking are areas of development for processing facilities (*Grynberg and Twum-Barima 1995*).

Solomon Taiyo Ltd *(STL*) employs a total workforce of 2, 298 of which approximately 600 are women. Of the total women employed in the processing industry by STL, almost all are based in Western Province and employed in the Noro cannery, most in unskilled positions doing fish processing (Tuara and Nelson 2000). Hughes 1995 in his performance appraisal of STL stated that the cannery uses grading systems which take into account such factors as education, skills, merit, levels of responsibility and seniority. The salary structures apply to staff positions, in which there are six levels ranging from middle management at the top down to junior staff at the bottom. The wage structure covers workers who are graded as non-skilled, semi-skilled and skilled. Table 3 depicts this system as it relates to female employees.

Table 3: Solomon Taiyo Ltd's employment of women

Area	**Total and percentage**		**Staff Grade and percentage**	
Honiara Office Staff	10 of 58	31%	Grade C 1 of 1	100%
Noro Base Staff	3 of 58	5%	Grade D 0 of 8	0%
Cannery Staff	38 of 94	51%	Grade E 0 of 16	0%
Cannery Workers	648 of 763	85%	Grade F 2 of 30	7%
Arabushi Production	7 of 99	7%	Grade G 7 of 46	15%
Grade H	9 of 15	60%	Grade I 13 of 17	76%
Total of Female Employees		34%		
Total Females in Staff Grade		24%		

(Hughes, Tony 1995. FFA 95/54: *Costly connections: a performance appraisal of Solomon Taiyo Ltd*)

Table 4 shows that in *Fiji* in 2001, of the estimated 983 staff employed in processing and packing jobs, about 70% were women. Most of these women work for PAFCO making up 80% of the staff (or 820 women).

Table 4: Numbers and percentages of men and women directly employed in the processing sector in November 2001, by job type (Fijian and non-Fijian)

Job Type	No. of men	No. of women	Total	% men	% women
Company/managers	7	1	8	88	12
Processing/packing	291	686	977	30	70
Office (harvesting)	34	42	76	45	55
Workshops and other	93	22	115	81	19
Totals	**425**	**751**	**1176**	**36**	**64**

(Pacific Islands Forum Secretariat, 2004. *Gender Issues in the Fiji Tuna Industry* in Gender Issues in the Pacific Tuna Industry Volume 2).

Other countries with processing plants include the *Federated States of Micronesia*, and *Kiribati*. The state owned *Pohnpei Fisheries Corporation* (PFC) is involved in processing and exporting frozen tuna steaks and loins mainly to the USA. PFC obtains non-export grade fish from longline vessels and local boats as its raw material. Tuna and swordfish jerky are produced for export to the *US* and *Korean* markets, with a small amount sold locally. Of the 40 staff employed, 10 are women (2 in middle management and 8 on the production line). Men work in the areas of filleting, quartering and skinning, while the women are employed in trimming, inspecting, bagging and sealing. The processing of fish is currently being conducted in *Kiribati* in two plants. Women supervisors of both plants were of the view that women were better at processing fish, and were also much better at attending to work and to their duties. The *National Fishing Corporation of Tuvalu* (NAFICOT) hires women on an adhoc basis to process the fish for smoking steaks, fillets etc. 80% of the fish is sold fresh and unprocessed with processing done on demand for restaurants, hotels and special orders. (*Lambeth 2000 and Vunisea 2006*)

Marketing and Distribution

Women tend to be involved in the domestic market selling the tuna caught by men. In *Tuvalu* some women, using handcarts and large ice chests, sell their husbands catch outside the main shop on Funafuti. On the outer islands the fish is sold by women from home or to NAFICOT fisheries centres. In *Fiji* and *Tonga* women sell the tuna at the market place. In Pohnpei there are a variety of seafood shops and markets selling fresh and processed goods. On days when the Pohnpei tuna processing plant is operating, off cuts from the production line are bagged and sold to the public for $US1.00 per 20lb bag. (*Lambeth 2000*). In Yap, fish is sold by the string, whole and on ice, with little or no processing before sale. Smoked or fried fish is sold for lunch packs. The sale of fish exists in Kosrae ranging from the ice chest store to larger facilities. Women perform much of small scale marketing of fish in Colonia while in the villages they are mainly the ones who decide on the customary distribution of catch (*Lambeth 2001*).

Where there is no central fish market as in *Palau,* and in *Fiji,* the women have to travel by road and boat to reach the main market place.

In *Kiribati* the selling of fish is an activity that is dominated by women. Distribution points include the roadside, fish market, mobile sales from moving cars, and retail outlets. Women also go out to the mother ships berthed out in Betio harbor and exchange coconuts and other food items for tuna discards from the ships that they then sell at a very low price (*Vunisea 2006*).

There are few women involved in export marketing and distribution. However in the *Federated States of Micronesia* and *Kiribati* there are women Managers in charge of processing plants. Employment as drivers, market research and promotion, sales and engineers are also undertaken by women. Unfortunately very little, if any, data is available on employment of men and women in the marketing sector.

Secondary activities

The tuna industry is linked to the provision of a variety of goods and services. Women are employed in government departments such as fisheries, health, women's affairs, social welfare, as well as in the business sector (airlines, shipping, export, retail shops, and restaurants). They are also involved in the illegal sex industry servicing seafarers and foreign fishermen. Women work in casino and niteclubs providing entertainment to visiting crew. They are employed in the many non-governmental organisations in countries providing support in trying to minimize the negative effects of the tuna industry. Such agencies include the church, National Councils of Women, health groups dealing with sexually transmitted diseases and HIV/AIDS, and small business support groups.

The relatively recent developments of long line and purse seine tuna transshipment through some ports has created more immediate, locally-based opportunities for the local private sector in supplying and servicing foreign operations (*Lambeth 2001*).

External employment

Women take on work outside the tuna industry as income from the industry may be unstable and unpredictable. Processing plants may close when raw material is low. In addition, remittances from seafarer husbands may take a long time to reach home.

2.2 A summary of issues relating to women in tuna fisheries

Studies carried out on women in the tuna industry identify issues of specific concern to each country. In some countries, such as *Kiribati,* the domestic tuna industry is not fully developed nor the post-harvest or value added component of the industry developed as yet, so there are no major current issues in direct employment concerns (*Vunisea 2006*).

Below are the key issues of concern to women that have been identified in the literature:

2.2.1 Employment: terms and conditions for workers and their families

Due to the unstable nature of the tuna industry, families cannot rely on a regular income. Irregular finance from seafarers or fishermen often means that the family must find ways to make ends meet. There are few financial support schemes for seafarers/ fishing vessel crew, or processing plant workers. Where women are left responsible for raising the family, they have to either seek alternative means of raising income, or take out high interest bank loans. A vicious cycle occurs where women are taking out successive loans in order to pay other loans. Some Seafarer organizations have schemes to help financially support the wives at home. Processing canneries also provide support as discussed below.

Various studies on the working conditions of women in the industry highlight gender discrimination. The lack of appropriate legislation makes women subject to different job controls and standards relating to employment benefits and rights. In relation to the *Fiji Factories, and Employment Act*, women are subject to different job controls and standards relating to employment benefits and other rights. In particular, maternity provisions in the *Employment Act* do not protect women from heavy manual labour or other harmful work during pregnancy. However the main limitation of the Act is that it does not provide women with full pay compensation while on maternity leave. Health and safety conditions in canneries may be poor with women forced to stand for long periods of time.

Women employed in some processing plants are paid lower wages than men employed to do the same work. According to Emberson-Bain, at PAFCO, all women are classified as unskilled labour so wages are low with a minimum rate of $1.53 for all women irrespective of job, skill, experience or productivity. On the other hand men's work is classified as semi skilled or skilled giving them higher value and wages. As unskilled workers, women are not given any training or opportunities for promotion. At the same time, women work two jobs – one in the factory and the other at home cooking, cleaning and caring for the family (*Emberson-Bain 1994 and 2001*). Note that PAFCO has upgraded its operations since Emberson-Bain's studies and the upgrade has lead to improvements in worker's conditions.

Plants may not have child care facilities for young children placing a greater burden on women employees, who may have to take time off to look after a sick child or other family member.

When both parents are absent from the home, it is likely that the women in the home will take on the household chores. As a consequence young girls may have problems trying to keep up with school work and be forced to give up their educational pursuits (*Emberson-Bain 2000*).

It is important to note that not all canneries are alike. *Solomon Taiyo Ltd* provides social and economic benefits in addition to wages. These are available to both male and female employees and may offset some conflict over spending priorities within families to the benefit of children (*Tuara and Nelson 2000*).

2.2.2 Representation and decision making

Few women are in decision making positions in fisheries departments where

decisions on the management and development of tuna resources takes place. The allocation of tuna boat licences, inspections of processing plants, and decisions on support services (training and information) tend to be made by men. However there are exceptions to this where women can be found in senior positions (see CEO of the Fisheries Ministry in *Fiji,* Permanent Secretary for Fisheries in *Solomon Islands*[5], senior staff in the *Cook Islands*, *Kiribati, Tonga*, and *Wallis and Futuna*). In *Papua New Guinea* women are found in the licensing and sanitary/health inspection decisions.[6] Although processing plant managers are usually men, there are examples of women managers in the region as noted earlier. As the tuna industry impacts on both men and women, it would make sense to have both employed in management positions to ensure decisions that take into consideration all stakeholders. In addition, female Managers of processing plants may have a rapport with women workers that a male Manager may not possess.

2.2.3 Health

All of the literature on gender issues in the tuna industry highlights women's health. Emberson-Bain 1994 and 2001 reports comment on women working in PAFCO, has women workers telling of their lower back problems, swollen legs, knee and joint pains, influenza and other airborne diseases, contracted from standing for long periods of time in factories that have poor air circulation. The discomfort of working in the heat is an additional burden.

The health issue relating to the tuna industry and the sex trade is dealt with later in the report.

3.0 KEY CONSTRAINTS TO PARTICIPATION

3.1 General summary

Many field studies have been carried out to determine how to develop the domestic tuna industry in Pacific Island countries. A cost/benefit analysis for each country has been carried out, opportunities highlighted, and interventions proposed.

The main constraints which hinder any man or women from developing the tuna industry (small scale and commercial) are as follows:[7]

A limited or lack of:

- a regular supply of tuna
- experience such as entrepreneurship, technical experience in harvesting, processing, marketing
- a competitive nature for business
- finance especially start up capital
- skilled and unskilled labour
- infrastructure such as adequate ports and harbours, airlines, transport and communications
- fuel, water, electricity

5 Personal communication from Mike Batty, FFA, June 2006.
6 Personal communication from Jonathan Manieva, SPC, June 2006.
7 References taken from reports by Chapman 1998 to 2004, Doulman 1987, Gillett 2003, Grynberg and Twum-Barima 1995, Grynberg, Forsythe and Twum- Barima 1995, Kingston 1995, Rodwell and Tapiro 1995, Tong 1995 and 1996, and Wright 1995.

●equipment
●bait
●markets
●airfreight
●storage facilities

Land acquisition is another common problem that restricts participation and development of the tuna industry. Throughout the Pacific the complex systems of traditional land tenure and a lack of current institutional arrangements to clarify tenure, land lease, and land transfer prevents the establishment of infrastructure and support facilities such as ports and harbours, processing plants, airports, distribution facilities, and administration/marketing outlets (*Pollard 1995, Chapman 2001 Tuvalu, 2002 Kiribati and 2004 Republic of the Marshall Islands field reports*).

In addition to the above, there are constraints that are specific in restricting the involvement of women in the tuna industry as discussed below.

3.2 Constraints specific to women's participation

There are a number of constraints that restrict the participation of women in the tuna industry.

3.2.1 Socio-cultural beliefs

Cultural beliefs continue to prevent the equal participation of women in the tuna industry. The important role of women in the fisheries sector – both in subsistence and commercial-artisanal activities – has yet to be given appropriate official recognition, support and resources. The reason for this is the belief that men fish and women provide support to fishermen. Few countries in the region have fisherwomen involved in deep sea fishing. Women tend to glean the reef for shell fish, crustaceans, sea cucumbers and octopus. Those who do go out on fishing boats, fish in the inshore area close to their household obligations rather than in the deep sea area (*SPC fisheries reports by Lambeth, Tuara, and Vunisea*).

Added to the belief that fisheries are a man's domain, women may not see employment in the tuna industry as a viable option. Women employed in processing plants tend to be from the rural areas where there are limited alternative means of employment. Although women are in large numbers in processing they tend to be in unskilled positions rather than in decision making positions.

SPC has been instrumental in raising the profile of women in fisheries through their in-country field visits, workshops, production of videos, and manuals. One aim of this work has been to expose women to employment opportunities within the marine sector. At the same time the in country work has helped develop links between women and those who can provide assistance such as donors, banks, government, and non government organizations.

In marketing, women's economic impact has not been quantified so women's contribution remains invisible. Women do not acquire the support they need to improve their employment conditions in marketing. Combating the dearth of quantitative and qualitative data on women's

involvement in tuna marketing could be a project worth looking into by regional organizations. This is discussed further in section 7 of this report.

3.2.2 Family obligations

Whether from the *Solomon Islands* or from *Tonga*, the traditional role of the Pacific Islands woman is the care of the family and home. Such domestic obligations are often full time and prevent women from engaging in paid employment outside of the home.

The development of the tuna industry has provided opportunities for women to participate in the work force. However in most cases this has been at a cost to women's responsibilities in the family and home. Absenteeism is a common problem at PAFCO, According to Arama and Associates 2000, absence from work is an expression by the employee of having to maintain home stability in terms of keeping their domestic chores and duties up to date and their family happy. To accommodate absenteeism, canneries in have tended to hire a larger workforce. In the Marshall Islands, a family-job-system was used where one female member of a family would stand in for another who was busy. Other canneries have chosen to construct on site hostels for workers and these have their own problems as discussed elsewhere.

3.2.3 Lack of skills and experience

Although national fisheries departments conduct training workshops, training is also provided by regional organizations such as SPC, USP and SPC CETC.

Training provided to those in the tuna industry tends to be for fishermen (different capture methods, boat skills etc.). This may be due to the social set up where men are the head of the household and decision makers. Communications to the household are to men not women. Although men obtain the training, the women take on the responsibilities of net making, and fish processing.

However post harvest training and training in business skills have been provided to women, as well as men. Table 6 provides an outline of the courses undertaken by 54 women in the region from 1996 to 2005.

Training of women in commercial processing plants is on-the-job and usually through observation of fellow workers.

3.2.4 Access to credit and finance

Few, if any women, have enough money to invest in a small business and rely on external sources of funding. Banks have strict rules and criteria that govern lending that make it difficult for women, particularly unmarried women, to gain access to loans. Banks demand collateral and women do not own property or land. According to Lambeth 2000, the *National Bank of Tuvalu*

offers small loans of AUD $10,000 to 20,000 at 8% interest. A short term overdraft loan is offered at 13%. Most loans are given to men; however as women are often the financial managers of the family, it is common for women to initiate the idea of borrowing the money and for them to manage the repayments. The *Solomon Islands Development Bank* does not have specific schemes for fisheries ventures as fisheries are not a priority area. General loans require 35% equity contribution plus security for the rest of the loan. Chapman 2000, suggests that the Government look at ways to help qualified and trained Solomon Islanders gain equity contribution need to qualify for loans.

Women may only have access to bank loans with the support of their husbands, fathers or brothers. However, interest rates are high. PAFCO cannery workers find repaying Westpac loans difficult because of low wages and high interest. It is not uncommon that a woman takes out other loans to help with repayments.

Without credit or finance women have inadequate working capital and are unable to buy ice, better quality fish, or materials such as chilly bins. Financial schemes for women can be developed using tuna longlining access fees. Alternatively the PDF scheme could be used to target women[8]. The *Fisheries Development Fund* is another avenue for finance and is discussed later in this report.

3.2.5 Transport

The transport of fish to the market can be problematic for both men and women with the high cost of fuel, irregular service, and long distances. It becomes a solely female problem where women have to travel along dangerous roads and waterways to distant markets. In such cases (as in *Papua New Guinea*), men folk will take the fish or accompany the women[9].

A major constraint on the outer islands of *Tuvalu* (and applicable to outer islands of most Pacific Island countries) is the storage and transport of fish, both for sale and for local use. Large catches of fish must be consumed or sold quickly or salted and dried for later use. Fisheries Centres with cold storage facilities often run out of storage space and cannot take all the fish offered for sale by fishermen. Outer islands demand cannot keep up with supply but the opposite occurs on the main island (Funafuti, Rarotonga, Majuro etc). The establishment of new centres, upgrading of existing centres, and the implementation of a reliable transportation of fish to main islands will help broaden the market for fresh fish products and increase opportunities for both fishermen and women (*Lambeth, 2000*).

The problems of storage and transport will not be solved quickly or easily. Women's access to development opportunities could be improved by providing them with training in seafood quality, handling, and preservation.

3.2.6 Infrastructure and Market

8 Personal communication from Jonathan Manieva SPC, June 2006.
9 Personal communication from Mike Batty FFA, June 2006.

Unhygienic market conditions, which include a lack of facilities for waste disposal, lack of drinking water and toilet facilities, are problems in some markets. For women selling in the market place, urinary and bladder diseases may occur where no toilet facilities are provided.

Governments can provide funds to establish central markets and improved transportation facilities in countries lacking such facilities. The building and upgrade in infrastructure can be part of a tuna access agreement with the developments in harbours and airport facilities. Improvements in market facilities include the provision of good drainage, toilet facilities, fresh water and electricity.

3.2.7 Low priority

In *Palau* the tuna industry development is not currently perceived to be a priority by Palauan women. Direct responses to try and redress women's non involvement are unlikely to be successful. Broader initiatives of governance, public participation, and awareness about the positive and negative implications of the industry, and their relevance to women are needed in order to create a rationale for women to become involved when their time is already heavily committed to family, community, and wage earning activities.

4.0 ASSESSMENT OF IMPACTS ON WOMEN

A number of reports have undertaken a cost/benefit analysis of the tuna industry. Costs have included detrimental environmental impacts, urbanization, social cultural impacts, congested ports and harbours, and competition with other fishers. Benefits have included fishing licence fees, the fees and service payments paid to government and the private sector for port use, fish handling and other local facilitation, local provisioning, local employment, and the taxation of foreign incomes, as well as foreign exchange from enhancing import substitution and tuna exports.10

Women will experience the impacts of the tuna industry directly or indirectly. The impacts will be positive or negative. Below is a summary of positive and negative impacts of the tuna industry on women.

4.1 Positive impacts

The benefits of the industry are numerous ranging from licensing and access fees, transshipment fees, employment opportunities for both men and women in on-shore based activities (processing), indirect benefits through entertainment and the service industry in countries, national income through customs and other related fees, fuel and other necessary costs paid by vessels and the positive multiplier effects on the local economy.

10 From reports by Arama and Associates 2000, Gillett and McCoy 1997, Gillett, McCoy, Rodwell and Tamate 2001, Pacific Islands Forum Secretariat 2000 and 2004, Pollard 95, Hughes 1995, Pacific Islands Forum Fishery reports 95/71, 96/21 and 97/28, Rodwell and Tapiro, Tuara and Nelson 2000, Vunisea 2004.

4.1.1 Employment

The off-shore tuna fishery provides three types of employment; jobs for fishermen on vessels and or workers in processing plants; employment linked to the tuna industry; and indirect spin-off employment in other sectors of the economy. Net repair, administration, fish vendors, teachers, boat builders, refrigeration mechanics, providers of goods and services to foreign fishing vessels (*Gillett and McCoy 1997*). About 10,000 Pacific Islanders are formally employed on tuna vessels and in tuna processing plants. The total direct and indirect tuna related employment is estimated to be between 21,000 and 31,000 people or between 5% and 8% of all wage employment in the region. Tuna related employment provides support to government policies related to decentralization, women's activities, and private sector development. The region canneries employ 5% of all formally employed women in the region (*Gillett, McCoy, Rodwell and Tamate 2001*).

At the national level, *Solomon Taiyo Ltd* is the largest single private sector employer in the *Solomon Islands*, providing 5% of all formal employment - nearly 1,500 jobs in total, of which well over 90% are filled by Solomon Islanders (*Grynberg, Forsythe and Twum-Barimba 1995*).

The high employment at the canneries in relatively remote areas becomes especially important. The canneries in Levuka, *Fiji* and Noro, *Solomon Islands* provide formal employment in non urban areas for about 2,000 people. Arama and Associates 2000 Fiji study states that the PAFCO cannery in Levuka has become the lifeline for the island, providing income and employment and spurring commercial activity. The study indicates that for every employee at PAFCO, another four people (family members) are affected by the job.

The provision of employment is of significance in *Kiribati* which has a high population. Vunisea 2006 believes that the industry can be of benefit to young people who may be otherwise unemployed and thus attracted to illegal income generating activities.

Although Pollard 1995, recognizes the employment opportunities provided by the tuna industry, he suggests caution in reviewing employment data**.** In the first instance much of the local employment has only been achieved at the great cost of a loss-making and continually subsidized government owned and operated industry. This employment may not be sustained in the long term. The same government funds could also arguably have been used in other sectors such as public health, education, or public works to both employ local people and at the same time to improve public services. Secondly it is also important to note that much employment in the tuna industry is seasonal in nature and sustained employment is subject to successful international competition. Lastly, the question of who is employed must also be asked. The American Samoan canneries primarily employ Western Samoans. In the case of private transshipment operations in *Fiji* a large portion of the employees are on Hawaiian and Korean vessels and are not *Fiji* nationals.

Many Pacific Islands governments wish to provide more employment opportunities for women. The canneries in Pago Pago, Levuka, Noro, and Madang employ over 6,500 Pacific Islands women. *Solomon Taiyo Ltd* was the first tuna processing plant to provide cash employment to women without tertiary education in the *Solomon Islands*. Women compose about 85% of the employees of the tuna cannery in Madang (*Gillett, McCoy, Rodwell and Tamate 2001*).

4.1.2 Skilled work force

Women are likely to obtain training in the areas of processing, marketing and management. A few women obtain training in gear repair and maintenance. The provision of skills is through fisheries and women's departments, at canneries, or through regional attachments and workshops. Table 5 is a summary of training provided to Pacific Islands women with the assistance of the *SPC Fisheries Training Section*. The majority of women have been trained in seafood enterprise operation and management.

Table 5: 1996-2005 courses for Pacific Islands women arranged by SPC Fisheries Training Section

Topic	Country	Number of students
Seafood enterprise operation and management for Pacific Islands women	Tokelau, PNG, Tuvalu, Kiribati, Tonga, French Polynesia, Fiji, Nauru, FSM, Solomon Islands, Palau, Northern Marianas, FSM, Wallis and Futuna, Vanuatu, Niue, Cook Islands	33
Pacific Islands Fisheries Officers Training Course	Kiribati, Samoa, Tonga, FSM, Niue	6
Managers of medium to large size fisheries enterprises	Tonga, Cook Islands, Palau, Kiribati, Fiji, Vanuatu, FSM	7
Handling, quality assessment and grading of sashimi tuna	FSM, Vanuatu, PNG	3
Start your fishing business	Vanuatu	2
Enterprise management	Palau	1
Small business management	Tonga, PNG	2
TOTAL number of trainees		**54**

(Table compiled using *SPC Fisheries Training Section* data base material provided by Project Assistant Christine Bury, 2006)

Men are trained in harvesting, processing, marketing, and management areas. Their training will impact indirectly on women and the country as a whole. For example, the benefits of skilled I Kiribati crewmen and other skilled personnel use their skills at home. At present men are trained in the maritime schools to join overseas fleets, thus there are a significant number of trained men in *Kiribati.* These men are trained in different areas of specialty and their skills can be used working for their own fleet (*Vunisea 2006*). There is no information on women trained in maritime schools.

For men in the *Solomon Taiyo Ltd* cannery, there are more diverse career choices ranging from unskilled work, to vessel crew and captain positions, to engineering and management positions. *Solomon Taiyo Ltd* provides training to men to achieve these levels of employment. On the other hand STL provides training for women in how to function efficiently on the processing lines, and

training for supervisors and quality control staff who also work on the lines but with additional responsibilities. (*Tuara and Nelson 2000*).

4.1.3 Local business

The fishery results in increased business for restaurants, bars and other such recreation industries. An increase in tuna related industrial activities could have a positive effect on recreational establishments. In addition, women in a number of Pacific Islands countries raise income by selling agricultural crops, meat and other food staples, and supplies to fishing crew in port.

The industry can provide opportunities for investment and partnerships for local people. The development of the local industry and the attempt to include local investment or partnerships in investment will ensure that locals can invest and enter into the market economy (*Vunisea 2006*). A stimulated local economy will encourage local people to remain rather than emigrate overseas in search of employment opportunities.

Transshipping vessels have substantial local expenditures and related benefits as local businesses expand to cater to the vessel and related trade. The 507 transshipments known to have been made by Korean and Taiwanese purse seiners in 1996 resulted in about US$3.8 million in local expenditures (*Gillett and McCoy 1997*).

In the *Solomon Islands*, royalties are paid to Chiefs who have ownership of the Mbili baitfish fishing grounds by *Solomon Taiyo Ltd* for access to fishing grounds. This income can provide benefits to people of the area.

Tuna sports fishing, recreational fishing and boat charters, are popular income earners in the region. As the business tends to be a family one, all members of the family are involved in the operations.

4.1.4 Foreign exchange

At the regional level, the value of the tuna of catch continues to increase from US$375 million in 1982 to US$1.9 billion in 1998. The annual catch in the Pacific Islands has a current value of 11% of the combined GDP of all the countries of the region or half of the value of all the exports from the region. US$60.3 million in access fees was received in the region for foreign fishing activity in 1999 – an increase from US$15million received in 1982. Access fees provide important revenue to governments (*Gillett, McCoy, Rodwell and Tamate 2001*).

At the national level, *Solomon Taiyo Ltd* generates substantial economic benefits for the Solomon Islands through net foreign exchange earnings and savings, estimated at US$30-35 million annually; employment of over 2000 Solomon Islanders for about US$12 million in yearly wages net of tax; purchases of goods and services in the S.I. economy worth US$40-45 million a year

and payments to national and provincial governments and NPF of US$6 million annually (*Hughes, 1995*)

Increased foreign earnings from revenue can lead to an increase in the standard of living of local people. Increased employment and money earning powers of the people can result in improved living conditions in which people can afford education and meet necessary family needs.

4.1.5 Infrastructure and support services

The industry can lead to the development of infrastructure and support social services. Other sectors of the community like transportation, tourism, youth development, and the agriculture sector get indirect benefits from the industry. In the Solomon Islands,

Solomon Taiyo Ltd supports local schools, clinics, football teams, and provides scholarships to students. STL's provides assistance in the areas where government services are poor.[11]

In *Vanuatu* the development of transhipment has lead to multi purpose infrastructure with related port fees paid to government, direct employment opportunities in the areas of administration, security and stevedoring, and indirect employment opportunities in the area of selling supplies, services and entertainment to vessels and crew (*Pacific Islands Forum Secretariat 2000*).

4.2 Negative impacts

4.2.1 More work for women

To enable men to leave home and family and become seafarers or crew on foreign fishing vessels, women have taken on the role of head of the house. They must change their traditional support roles to take on the domestic duties of home and family as well as obligations to the community. Remittances from men working in overseas vessels contribute substantially to the country's revenue and significantly contribute to household level finances and monetary needs, but at the same time it exposes a trend in modern families with men absent for long periods of time.

The region's canneries bring cash incomes to women who would otherwise not have had the opportunity to enter the money economy, and they therefore have a favorable, if fairly small, effect on the gender distribution of both employment and income However, this has commonly not resulted in a reversal of traditional roles. The husbands of women working in the canneries have tended not to take on women's child rearing functions or household duties and such employment can be socially disruptive, at least in Melanesia. In a society where there are serious prejudices against female employment in the formal sector, and where women's educational and skill levels are often low or

11 Personal communication from Mike Batty, June 2006.

non-existent, problems of staffing and productivity in that sector of the industry are likely to prove more difficult to overcome than in many other industries and other countries (*Arama and Associates 2000, Pollard 1995*).

Many of the women working in processing plants are unmarried and therefore do not have the same domestic responsibilities as married women have. However they face different problems particularly those living in cannery hostels. Single women are engage in sexual relations with male staff, fishing crew and others, alcohol and drug abuse – all activities that come with freedom away from the family. These problems are dealt with in section 4.2.6.

4.2.2 Poor working conditions

Much has been written about the difficult working conditions of women employed in the canneries of PAFCO and Solomon Taiyo Ltd (STL). PAFCO, like STL, has a captive labour force with workers feeling the full weight of economic dependence, vulnerability, and a weak bargaining position in relation to their employer (*Emberson-Bain 1994*). Usually classified as unskilled labour, the women receive less pay compared to men who are classified as semi skilled or skilled. In some cases the women do the same work as men but their job titles and wage scales differ.

On the production line women are involved in monotonous, smelly, messy work of precooking tuna through to packing for shipment. On the PAFCO production line fifty women work back to back to divide fish, cut, clean and remove the bones, skin and red meat. Flakes are separated from the loin and prepared for canning as solid meat, chunks or flakes. Between 50-75 metric tons of tuna pass through and each woman prepares between 373lb and 560lb of fish a day. The women work up to 11 hours a day in excessive heat and overcrowding with no talking and monitored toilet visits. While men are paid for exposure to the cold in cool stores, women are not paid allowances for enduring the heat. There is no monitoring by the Labour Department of the heat, noise, poor ventilation, or equipment in the factory where women work. Illness and accidents receive little, if any, financial or other support from PAFCO (*Emberson-Bain 1994*)[12].

4.2.3 Poor living conditions

In order to attract staff from outer lying areas, *Solomon Taiyo Ltd* provides dormitory accommodation for staff, many of them single women. By housing women in factory dormitories, STL has a captive work force that it can control more easily. Management is able to ensure that the women come to work every day on time, work for as long as necessary, and then return to their dormitories for the next day. There is no interference from family or the community so the women are fully focused on serving STL. Accommodations are cramped and the young single women find it difficult to cope away from their families.

4.2.4 Food security

Fresh and dried tuna plays an important part of food security in all the Pacific islands, mainly in the outer islands. However, the contribution of the commercial (not subsistence) tuna industry to

12 This study is 12 years old and needs to be updated.

domestic food production is very small. Canned mackerel remains the fish of choice of low income consumers as it is considerably cheaper than canned tuna. Moreover, with trade liberalization and the decrease in import duties canned tuna will face greater competition from Asian products, which are considerably below the price of locally produced substitutes (*Pollard 1995*).

Imported food may replace local food and lead to anemia, vitamin and mineral deficiencies, dental diseases, heart disease, stroke, diabetes and cancer.

4.2.5 Community changes

Residents where tuna projects are based may experience a change from a rural lifestyle to one dominated by a cash economy. Land and water resources may be threatened. Predictable lifestyles and cultural patterns may be disrupted by an influx of outsiders. Rural neighbours may find they are less well off than those who have cash employment with the tuna industry (*Doulman 1987*).

Hiring of local workers for the industry work can impact on the community. *Who will do the subsistence fishing and agriculture work previously done by absent men?* Extended families may suffer because there is not sufficient labour at home and traditional roles will change.

Socio-economic inequalities between the tuna fishery work force and the rest of the population can lead to jealousies and conflicts. If local hiring policies are promoted two or more members of a family may be employed with a tuna project. This could lead to jealousies and conflicts among communities. Income differences and inequalities will be evident.

4.2.6 Rural to urban drift

Where the locally-based tuna industry has been located in the main urban center such as in the case of Tarawa, *Kiribat*i, this development has contributed to attracting more people to an already over-crowded urban environment. Large scale out-migration to the project site may actually result in rural depopulation or demographic imbalances, with the young, old and women left at home in the villages. In the Solomon Islands and Fiji, enclave tuna development has been encouraged in undeveloped areas (*Pollard 1995*).

4.2.7 Sex and the transmission of disease

One significant by-product of the tuna industry is the sex industry catering to seafarers[13]. With few alternatives for employment and entertainment, young Pacific Islands women become involved in the sex trade – sometimes for money, and other times for goods, including tuna fish.

13 It is important to distinguish between seafarers employed on merchant ships, and crew on foreign fishing vessels. Seafarers are local men employed by the maritime sector to work on merchant vessels traveling around the globe for long periods of time. Crew tend to be foreign fishing crew who visit a country for transshipment, refueling, provisioning and other purposes. Local fishermen also crew on vessels. Although the three groups are different they can face the same issues and problems.

In the *Republic of the Marshall Islands* (RMI) there were very strong suggestions of organised sophisticated prostitution by Asians or foreigners with local girls being involved in small-scale drinking and prostitution with men. Abuse of women by men on vessels is not uncommon as some girls could be subjected to that while on vessels for longer periods and if exposed to drinking with several men. Police records in Kiribati and RMI show that young women aged from 14 to 26 were apprehended or arrested while returning from boats (*Vunisea 2006*).

A significant cost of the sex industry is the greater risk of HIV/AIDS which is a health, social and economic issue for Pacific Island countries. HIV and sexually transmitted diseases (STDs) are high risks linked with overseas based employment for seafarers and also for local men and women in regular association with seafarers on board foreign ships that come into port for transhipment and other activities. A study conducted by SPC revealed the low use of protective measures such as condoms by seafarers and this was both attributed to high alcohol use and the non-familiarity of its use. The same study also highlights the tendency to have multiple partners in ports of calls by seafarers (this was mostly true for older men when compared to the younger men on vessels). The rates of infection among seafarers and their wives are increasing, clearly making up the majority of cases for *Kiribati* and *Tuvalu*. In *Kiribati,* seafarers and their wives make up more than 50% of the country's 38 cases while in Tuvalu, recent national HIV tests have revealed a further 7 cases, 75% of these being seafarers. The particular nature of the industry exposes seafarers to extreme environments where in one instance they are out at sea, isolated, confined, and under strict rules, and the next, are in port bombarded with sex workers and alcohol, and pressured to indulge in both (*Vunisea 2004 and 2006*).

A growth in transhipment activities leads to an increase in shore-based services. Contact with local people is based on the exchange of goods and services, with the sex trade being one service (*Vunisea 2006*).

4.2.8 Alcohol and drug abuse

Seafarers with money to spend are attracted to alcohol, drugs, and sex as a means of entertainment after long sea voyages. Alcohol and drug abuse leads to domestic violence, family breakups, teenage pregnancies, and loss of employment.

Local men and women may be drawn to foreign fishing crew by easy access to alcohol and drugs. In *Kiribati*, young women become involved in prostitution after befriending crew initially through drinking parties. In the *Republic of the Marshall Islands* there are indications of smuggling of goods and the presence of gambling and other organised illegal activities related to the industry (*Vunisea 2004 and 2006*).

4.2.8 Environmental degradation

Claims of harbor and lagoon pollution and other environmental degradation are increasingly raised, mainly in response to the increase in locally-based activity emanating from fresh tuna transshipment. The problem of additional wreck removal has also developed in Micronesia.

Environmental degradation is most noticeable in small or confined harbors with poor water exchange such as Yap and Pohnpei. Potential oil pollution risks are compounded by the lack of trained expertise and equipment with which to deal with emergencies (*Pollard 1995*).

Environmental impact continues to be a cause for concern with respect to the region's tuna canneries. The construction of a tuna cannery can affect the environment – there may be competition for scare land, and land development may affect the surrounding area. Coastal canneries can impact marine life. Pollution of lagoon waters is reported in the vicinity of the Noro cannery in the Solomon Islands, with declines in reef-fish and lagoon-fish catches. The decline in stocks of reef fish may result in problems of supply of bait-fish and could affect tuna supplies if the food chain is disturbed. However, the magnitude of these effects is not known and it seems likely that they are fairly restricted in terms of their impact on the country's fisheries (*Pollard 1995*).

Although 11 years old, Hughes 1995 study of *Solomon Taiyo Ltd* (STL) provides valuable information on the environmental impact of canneries. STL's activities were seen to affect the natural environment in the following ways:

- impact on fish stocks (surface swimming tuna and bait fish)
- occupation and use of land
- general waste disposal
- obtaining of fresh water supplies
- treatment and disposal of effluent and waste water from the shore base
- disturbance of lagoon environment by catcher boats/baiting activities
- use of firewood for smoking fish

At the time of the study, the *Solomon Islands* had virtually no legislation on environmental protection or legally enforceable standards to be observed by industrial activities that may affect the environment.

5.0 REDUCING NEGATIVE IMPACTS OF THE TUNA INDUSTRY

This section takes a look at steps that can be taken to reduce the negative impacts of the tuna industry experienced by women.

i) More work for women

In order to reduce the amount of work undertaken by women, support will need to be provided by the family (immediate and extended), the community and the tuna industry. Sharing of household chores and child care by other members of the family and even community is one form of support. The community can set up day care centres for young children or implement after school and holiday programmes. The church is often active in youth programmes. Ideally processing factories should provide child care facilities. Lobby groups could be effective in reducing women's work as has been seen in Fiji and PAFCO workers. Management may consider reducing work if absenteeism is reduced as a consequence. The local medical clinics could also promote the practice of family planning for women so that they can control the size of their families. To be effective, this action will need the support of both women and men.

The double day of working women will always be hidden if nothing is done to make those who set policies, targets and quotas aware of the implications of those decisions. The challenge is for industry policy and decision makers to examine various gender discriminatory and biased practises in the current set up. Such an examination contains economic as well as social rationale in balancing up internal practices, instead of waiting for another 'illegal strike' to cause production levels to halt (*Arama and Associates 2000*).

ii) Poor working conditions

Women's rights groups can be effective in lobbying for improved working conditions including equal pay for equal work, and standardized wage levels for processing plant workers based on job title and descriptions. Lobby groups can pressure government and plant managers to make changes or be exposed in the media. In Fiji the *Fiji Women's Rights Centre* is a dynamic group of women that aims to eradicate workforce discrimination against women in all areas; eliminate discriminatory practises in the area of family law; raise awareness about the inequalities that women must bear; and support and provide women with opportunities to participate in the formulation of Government policies, among other things. The lobbying and research work undertaken to is immediately followed up by ongoing dialogue with the right offices, and the Centre's track record and achievements to date can be seen in many legislative and legal reform changes in the various employment acts. Their support to women in the industry will assist in raising the standard of women as well as the productivity of the industry as a whole. Women's lobby groups have persuaded government enact a *Health and Safety in the Work Place Act 1996*. The *Employment Act* and related acts are under review by the *Fiji Law Reform Commission*, and government is in the process of ratifying *ILO conventions* that will address the issues of equal remuneration, abolition of forced labour, discrimination convention, and the minimum age convention. The *Department of Women and Culture* has also made submissions to the *Law Reform Commission* concerning the *Employment Act* and the *Worker's Compensation Bill* (*Arama and Associates 2000*).

The *Solomon Islands Women's Information Network* has been instrumental in informing women of their labour rights. Through radio the group has educated women in the Noro cannery about their rights to ensure they are upheld. The *Pacific Council of Churches* funded a researcher who reported on the life of female cannery workers at the Noro Cannery. The 1992 critical report on cannery employment conditions by a Japanese social worker[14] helped to stimulate STL management into a more active approach, and a 1994 follow up report by the same observer recorded some improvements. Management has provided raincoats to staff, and agreed to the provision of an affordable and nutritious lunch service. The improvements have been financed by STL. The cannery Management Provides social and economic benefits in addition to wages to both male and female employees and may offset some conflict over spending priorities within families to the benefit of children (*Tuara and Nelson 2000*).

Although various initiatives have already begun addressing employment condition inequalities and discriminations between men and women, this initiative needs to be supported through a coordinated approach**.**

14 Mari Sasabe wrote both reports on Working Conditions in Noro Cannery for the Pacific Council of Churches.

iiii) Poor living conditions

Studies need to be carried out on living conditions of cannery staff in hostel accommodation in order to provide practical, effective, and longterm solutions. To date only one researcher (Mari Sasabe 1992) has researched working and living conditions at the *Solomon Taiyo Ltd*. Her report to Management lead to their discussing the building of a new hostel and the provision of hostel matrons to oversee the welfare of single women.

iv) Food Security

The *Ministry of Finance* and the *Ministry of Fisheries* need to look at schemes to support local fishermen and women so that they can supply the local market at fair and reasonable prices. The provision of tax concessions for fishermen, subsidies, and start up capital are examples of support. Unfortunately the use of subsidies has not been successful in the region to date. It may be better to encourage government's use of the *Fisheries Development Fund* to support fishermen and women.

The provision of seed finance (*see Outer Islands Development Grant Fund* in the Cook Islands) provides grants to men and women on the Outer Islands enabling them to set up small businesses.

v) Community changes

Prior to any tuna industry development, the community should be fully consulted. Community meetings to ensure all are aware of changes and how to adapt to them. It also allows local people to speak out against any developments they may not want, and recommend changes to projects. The provision of support to the new community is needed from government and NGOs.

vi) Rural to urban drift

Both the Government and NGO groups can provide support to both resident and new communities. Ministries of Fisheries, Social Welfare, and Health can provide information and advice. NGOs such as Women's Groups, Youth Groups, Church Groups and Environmental Groups can help people adjust to new environments and changes.

As stated elsewhere, canneries have built on-site hostel accommodation for their core staff of processing workers. Studies on this type of accommodation is limited so little is known about the implications of hostel living on staff. The 1992 Sasabe report on STL included recommendations to employ older women to take care of the single women in the hostel. A detailed study of existing hostels would provide information about the costs and benefits of such living arrangements that could assist other canneries make informed decisions about constructing similar accommodation.

vii) Sex and the transmission of disease

In order to be effective, immediate collective action through a multi-stakeholder approach should be used to deal with the transmission of sexual diseases. This can be done by the Churches,

NGOs, Women's Groups, Youth Groups, Island Councils, Community Focal points, and Elders as a core group, with Government support (*Arama and Associates 2000*).

The provision of sex education, free condoms, and other forms of contraception by Ministry of Health to women is suggested by a number of researchers. The Ministry of Health and Medical services provides sexual and reproductive health education through workshops to community trainers. Outreach through counselling and the provision of health materials and medicines is provided. The *Disease and Prevention Control Unit* has an STD and HIV/AIDS programme that provides training to sex workers, mothers, casino women, youth and others. Condoms are also distributed to target groups. A media information programme is provided via the radio.

The *School for Marine and Fisheries Studies* runs training programmes for deck officers on tuna fishing vessels. The annual intake of 20 students (all male) are funded by *Solomon Taiyo Ltd* in basic fishing techniques preparing them to be crew on Solomon Taiyo vessels. At the time of the study, there were no courses in sex education, STDs and HIV/AIDS (*Tuara and Nelson 2000*).

Youth peer groups are very effective in public awareness of sexually transmitted diseases and HIV/AIDS. Groups use the radio, television and bulletins to spread the message. Fiji AIDS Taskforce is a group of voluntary youth who actually work on the streets, promoting an awareness of HIV/AIDS among the commercial sex industry. Evidence states that though sex workers are aware of precautionary measures to support their activity, the discrimination and perception about them encourages their 'hard core' behaviour and resistance or avoidance of information and advocacy programs. However the Taskforce has had a fair amount of success in Suva, because of the persistence and professional attitude of the volunteers to sex workers. The task will be to grow small taskforces such as these to be accessible to a larger clientele in other sea ports around Fiji (*Arama and Associates 2000*).

Vunisea 2006, suggests government monitoring of boats and wharves to stop the illegal sex trade. In the *Republic of the Marshall Islands*, government has put in place regulations that specifically target transshipment activities. These regulations range from specifying a single dock for ships and crew coming in, sending out of notices to shipmasters and crew of the regulations that exist on dumping of water, discards, fuel and oil and rubbish. For communities at large, an incentive has been created where there is a monetary reward to people reporting on any infringement of ships that come into port. There are also specific laws relating to shipmasters and the communities. How far these regulations and existing legal instruments can be enforced are the major challenges in these cases. As in Kiribati, the police have figures and data on women coming on boats and those apprehended while on board, but the judicial system and regulations does not enable prosecution. This is because of the lack of evidence to support prostitution cases. Cases of women arrested for prostitution, loitering or being on ships get way with going though the judicial syst4em because of the lack of "evidence" to prove prostitution (*Vunisea 2004*).

Government development and enforcement of standardised legislation related to labour, immigration and customs is required to both reduce the possibility of STDs among all groups and to protect immigrant women workers from exploitation and danger (*Pacific Islands Forum Secretariat 2000*).

NGO groups such as HIV/AIDS groups, Youth groups, Women's groups and the church may be able to provide health services as well as shelter. In the Solomon Islands the *Anglican Church* provides information, counselling and support. The *Mission to the Seamen* offers counselling services targeting men on fishing vessels, implemented through the *Church of Melanesia*. Apart from emotional support the Mission gives training in sexual health issues and practices. *Sisters of the Church* provides a refuge to Honiara street kids. Some of the children go on fishing vessels to trade sex for food, goods or money. The church provides a home, food, and training in sexual health. Unfortunately funds to these groups are limited and most rely on donations. Lack of government and industry support to NGOs is due to parties being unaware of the problem, and a lack of sufficient information, evidence or data on the sex trade.

Canneries also have a part to play. *Solomon Taiyo Ltd* has allowed the provision of sexual and reproductive health services to cannery workers. STL has a clinic at the Noro cannery for workers. The spread of STDs as well as teenage pregnancies amongst staff has led to the provision of health treatment, and sexual education to staff.

At the regional level, SPC has a number of initiatives in place. *SPC's Regional Maritime Training Programme* recognises the need for training in HIV/AIDs and STDs and sexual health as essential components of maritime training. In 1998 SPC conducted research into the attitudes, knowledge, and behaviours of seafarers in relation to STDs and HIV/AIDS and the results guided the curriculum and its materials. Topics include information on AIDS and HIV (transmission and non transmission), the use of condoms, safe sex, and living with HIV (*Daines 1999*).

The SPC HIV/AIDS programme recommends that efforts to combat the negative implications of the tuna industry are required. Public awareness on the spread of sexually transmitted diseases, health support services for seafarers, their wives, and for women in the sex industry are all advised (*SPC 1998*).

Surveys of HIV/AIDS, other sexually transmitted infections and risky sexual behaviour have been conducted in six sentinel countries – *Fiji, Kiribati, Samoa, Solomon Islands*, *Tonga* and *Vanuatu* by SPC and WHO. Dr Chen (WHO) says that marketing strategies are needed to increase access to and acceptance of condoms in the community, as well as to identify new approaches to raise awareness of risky behaviour in at risk and vulnerable groups. There is a need to gain trust and to work with people to assist them to change their behaviour and reduce risk, including making access to counselling and testing more widely available. Dr Jimmie Rodgers noted that voluntary confidential counselling and testing needs to be made available to people through mainstream health clinics. Dr Chen stated that more involvement is required of sectors such as education, trade, industry, employment and social services as well as non governmental organisations and the private sector. During 2004 and 2005, 4305 people including seafarers, pregnant women, young people, police and the military took part in the survey. A second round of surveys will occur in 2007 (*SPC website 2006*).

Although not found in the literature, the legalisation of prostitution is one suggestion that has been made off the record. By legalising the sex trade, activities can be monitored, and health safeguards enforced. Removing the stigma of prostitution may lead to positive relationships between health workers and those in the trade. The spread of STDs and HIV/AIDS may diminish through support to prostitutes including free testing for STDs and HIV/AIDS, free condoms, and

other contraceptive advice. To date, no Pacific Islands countries have legalised prostitution. Few countries outside the Pacific have legalised the trade.

viii) Alcohol and drug abuse

The support groups used in combating prostitution and related diseases is the same group that is involved in alcohol and drug abuse support work. NGO groups such as the church, Youth group, Women's group, and health groups provide shelter, education, and free health services.

ix) Environmental degradation

The government with support from environmental lobby groups can be used to deal with environmental problems. The relevant Ministries can insist on environmental impact assessments for all developments. The government can make transshipment boats and processing plants put in place environmentally safe processes. Environmental NGOs can promote environmental awareness programmes in schools and through the media.

The industry should also be made responsible for its impact on the environment. Unless cannery operations have in place systems that minimize or eliminate environmental damage, the productivity of the cannery may decrease. In Hughes 1995 performance appraisal of *Solomon Taiyo Ltd* he stated that the benefits of STL were diminished by environmental pollution. He noted that the *Solomon Islands* had virtually no environmental protection or legally enforceable standards to be observed by industrial activities that may affect the environment. STL's conduct is a matter of corporate responsibility to the community at large, reinforced by moral pressures, and a few pieces of official machinery eg. local by-laws, or conditions on investment approvals. Active, positive relations between government officials and the company's management are the key to sound environmental practice: confidence and exchange of information and advice are essential to forestall damage and minimize costs.

6.0 POTENTIAL AREAS OF EMPLOYMENT FOR WOMEN

There is not much written in the literature about employment opportunities for women. The emphasis has been on discussing the roles of women in the tuna industry, identifying the positive and negative impacts of the industry, and suggesting ways to reduce negative impacts. Although Tuara and Nelson 2000 touch on opportunities they state that although employment opportunities in secondary sectors supporting the tuna industry are varied, their numerical significance has not been formally documented. Due to time constraints in-depth surveys on opportunities were not carried out as part of their study.

According to Arama and Associates 2000 and Tuara and Nelson 2000, women may consider employment in the following areas of the tuna industry:

- boat owners and managers of fishing companies
- processing plant owners/managers
- government employees dealing with tuna fishing
- food suppliers (small scale farming of agricultural produce and animals for sale to fishing vessels and the Noro cannery staff)

● ingredient suppliers
● service providers- formal (security, sanitation, health, insurance, banking, airlines, transport etc) and informal (casinos, niteclubs, and after hour liquor outlets, etc) catering to crews of fishing and transhipment vessels
● small enterprise sellers of fresh or frozen tuna
● sellers of rations and supplies to fishing crew
● canteen operators
● seamstresses (uniforms)
● domestic helpers
● laundry workers
● purchasers of by-catch for processing and on sale, and
● NGO and church workers
● makers and sellers of fishing gear
● workers in the sex trade

Changing consumer preferences in favour of easy to prepare processed fishery products brought about by changing lifestyles has increased the demand for value added fishery products. Value added products are well developed in Asia as income earners from local and export industries. The products include salted and dried fish, tuna jerky, chilled products of sashimi grade tuna, frozen products of tuna steaks, loins, fillets, breaded fillets and minced fish in convenience packs suitable for the catering sector and retail sales, and canned tuna in spicy sauces such as chilli, green curry, and coconut milk. Ready to cook and ready to eat products are popular in South East Asia and include fresh/frozen fish balls, fish cakes, breaded fish, and sushi. Dried and smoked fish are other examples (*FAO 1998*).

Although culinary tastes between Asia and the Pacific may differ, a number of countries have produced value added products. Exports from Asia and the Pacific include a variety of live, chilled, frozen, dried, canned, and other fish, and shrimp products. Initial investigations show favourable financial returns for value added production of fishery products and indicate encouraging prospects (*FAO 1998*).

As women are predominant in the processing of tuna they may be interested in analysing the feasibility of producing value added products as a viable income generating opportunity.

6.1 Value added products

The information below comes mainly from reports on suggested commercial tuna development options produced by Chapman 1998-2004. The practical advice in the reports is useful to entrepreneurs as it outlines the status of the industry in each country, along with shortcomings to development, and possible solutions.

6.1.1 Commercial industry in the Pacific Islands

A number of Pacific Islands countries produce value added products on a commercial basis for the local and export market. Smoking, salting and drying, tuna jerky using bycatch, lower grade

tunas and small tunas. The tuna can be from longliners or from domestic small scale fishing activities around FADs.

In the *Federated States of Micronesia* value added processing industries have operated for some time in Pohnpei using non-sashimi grade tuna and bycatch of the fishery. However the supply is erratic and a more stable fleet of foreign vessels is required to ensure a regular supply of tuna.

In *Kiribati,* the problems with a regular tuna supply and limited markets has constrained development of the 1990's tuna jerky venture belonging to the Teikabuti Fishing Company.

In the *Marshall Islands* in the mid 1980s a small fish processing factory operated for several years but the facility closed as it could not obtain enough wood for the curing/smoking process. As with all processing facilities the Marshall Islands processing plants require an upgrade HACCP[15] plans in processing facilities. In addition there is the need for HACCP training for staff in the facilities. Product development is an area to look at. The Marshall Islands government can approach USP to request that some students look at new value added products for tunas and bycatch species that could assist in local product development. Govt provide scholarships for Marshallese students at USP in food technology with their thesis to be on product development or another post harvest activity. Chapman advises that the *Marshall Islands Marine Resource Authority* (MIMRA) support new initiatives from the private sector to enter into small scale value adding processes. Any facility used for small scale value adding processes should meet all local and export health standards with a HACCP plan also developed for the processing being undertaken if the product is for export.

In *Tokelau*, value adding was tried in the early 1990s with a tuna jerky facility on Atafu. The venture failed for a number of reasons including the limited supply of tuna for processing. Before closing the facility established export markets as a result of its good product. Government may want to look into value adding again given the potential by product species from the planned tuna longline project and future fishing activity.

An ADB project team suggested the development of a *Tuvalu* tuna jerky facility at one of the outer islands to produce high value export product using solar energy to dry strips of tuna. The proposal refers to successful projects in *Kiribati* and the *Marshall Islands*. According to Chapman there is potential for this project. A similar project was trialled successfully in Nukufetau and Nanumea. Unfortunately the technical advisors departed before the local counterparts could fully understand the process. He suggests that government encourage the development of private sector value added products in the outer islands.

In *Vanuatu*, the need for large scale equipment, water, and a competitive market mean that tuna farming, tuna canning, tuna loining would not be successful. According to Chapman 2000, foreign investors who make the Palekula base operational may be able to incorporate canning or loining as an additional operation to transshipment. A small fishmeal plant using waste from Palekula could be a possibility. A prefeasibility study would need to be undertaken to determine

15 HACCP is the Hazard Analysis and Critical Control Point system that requires products to be monitored at identified critical control points. The system manages risk in a food processing plant and is required for products exported to the USA (*SPC Coastal Fisheries 1998*).

whether arabushi[16] would be economically viable. Small-scale value adding processes such as smoking, salting, drying, and jerky may be preferred options for *Vanuatu* in the short term. Chapman suggests a study on the process, the amount of fish needed to make the venture viable, the amount of fuel needed, costings, market prices, environmental concerns as a first step before any funding is considered for an arabushi plant. Unfortunately to date no foreign investors have been found and Palekula is rusting away and would need total replacement (*Chapman, pers. comm. June 2006)*

6.1.2 Employment opportunities in value-added products

In his field reports, Chapman provides advice to Pacific Island countries who may want to investigate or further develop value added products.

For the *Cook Islands* there is scope in the Southern group islands for salting and drying, smoking and tuna jerky production but cost of freight is high. Processing tuna by smoking, salting and drying, or producing tuna jerky using bycatch, lower grade tunas and small tunas are viable options. The tuna can be from longliners or from domestic small scale fishing activities around FADs. For an entrepreneur to establish a small value-adding plant there should be concessions on building materials and machinery provided as government incentives. Chapman suggests in-country training by USP or technical consultants in value added products.

Solomon Taiyo Ltd has a smoke house that produces arabushi from skipjack tuna for export to Japan. Smoking, salting, drying, and jerky are options using by-catch or non export species such as albacore tuna, small yellowfin, bigeye tuna and marlins. A person interested in value added products can purchase the fish from fishermen and women. In addition a person can look into providing value added fish to the local and expatriate community customers as only frozen and tin fish are available. The provision of fresh chilled fish, processed fresh fish steaks or fillets, salted, dried or smoked fish can are examples. For an entrepreneur to establish a small value-adding plant there should be concessions on building materials and machinery provided as government incentives. Training in processing and marketing of the product is required. Chapman suggests that government through the Fisheries Department seek assistance from regional organisations (SPC, USP, CETC) to run workshops on value adding processes, and marketing.

In the *Solomon Islands*, Noro cannery has provided many women around Noro and Munda with paid employment. However, there are no projects or plans to specifically initiate, support, encourage or promote the role of women in fisheries. Support could be given to part time commercial fisherwomen and women fish vendors. Current plans and projects to develop rural fisheries have the potential to involve women through access to extension services and provision of training and equipment (*Lateef 1990*).

Processors in *Tonga* can consider quarter-loining albacore and other good quality tuna that may be too small for the sashimi markets. Quarter-loining requires that the fish being butchered into four quarters or loins, skinned and trimmed to remove any bone or dark red meat, and vacuum packed. This would require upgrades of onshore facilities or of long line fleets. A vacuum

16 Arabushi is a heavily smoked tuna loin with basically no moisture left in the flesh (Chapman 2000 Vanuatu report).

packing machine, packing and shipping materials would need to be purchased for quarter-loining. Other small scale value added processes include smoking, salting and drying, and producing jerky. By-catch species from long lining, and lower grade tunas can be used and obtained from long liners or small scale fishing boats around FADs. There is also the possibility of small scale value adding to products in the outer islands fishing depots. This will need to be carefully developed as the facilities need to meet all health requirements of the importing nation such as HACCP for the US market. Marketing of the product will be the key to outer islands ventures as there is no point developing a product that is not marketable or is too expensive. A market feasibility study will need to be undertaken as a first step.

The advice given by Chapman is applicable to all entrepreneurs who wish to produce value added tuna products. The need for a regular supply of fish, a market, water and electricity (or solar power), equipment, and training are the basic requirements for a business venture. In addition, feasibility studies are needed to check whether a venture is economically, culturally, and environmentally viable.

7.0 AREAS FOR DEVELOPMENT ASSISTANCE

7.1 General areas of assistance

A number of studies on the commercial tuna industry in the Pacific have been carried out and provided sound advice that may be of value to women. Other studies in Asia and Africa have provided advice and these are included below. Although the advice may be given to specific countries there are suggestions that are of practical use to anyone interested in developing a business that produces value added tuna products.

7.1.1 Training

Smoking, salting, drying, packaging and marketing are skills requested by women around the region. Short training attachments to the Post harvest programme, U.S.P could be arranged for women. USP has a processing facility where students can be given basic training in post harvest activities (cleaning, filleting, staking etc) for tunas and bycatch species. Alternatively, USP trainers could visit via the USP extension centres to provide summer school training on tuna, post harvest activities and processing. Note that *SPC's Community Education Training Centre* provides training in post harvest skills for women community workers as part of their annual training programme.

Product development is an area that the processing sector should look into. USP should include new value added products for tuna and bycatch species to assist local product development. USP should consider putting together a short course on post harvest activities and health issues for school leavers who want to gain employment in the fish processing sector (*Chapman 2000 to 2004 reports*).

Fisheries Departments should organise training in value added processes that can be used for bycatch and non export species with the help of regional organisations. Study tours to Asia to see what they are doing in processing and marketing could be arranged via the Fisheries or Foreign

Affairs departments. Short term attachment to Asia for training in value added products would be useful[17].

Industry

Processing plants such as PAFCO have specific needs for training of staff in quality control, seaming inspection, and other processes in tuna canning production. They are currently addressing their needs through specialised training overseas. Such specialised training overseas should continue and be supported by the Government. Plants should also send their staff to national workshops relevant to their training needs.

The processing sector should approach USP and request that national students be encouraged to look at new value added products for tunas and bycatch species, to assist in local product development. The sector could provide several scholarships for students at USP in the field of food technology, with their thesis to be on a product development or another post harvest activity (*Ibid*).

For US markets a HACCP plan will need to be developed for each facility and staff will need to be trained. For the EU similar requirements apply. The USP Marine Studies Programme has trained staff in the HACCP area, and they can be approached to set up specific training as required. An alternative to this is to seek assistance from SPC in the running of HACCP training or training in other fields[18].

Non Government organizations

Training in small-scale business and management can be provided by the *Small Business Enterprise Centre.* Women's groups (*National Council of Women, and Women in Business*), youth groups, and religious groups continue to provide training in income generating ventures, and business skills.

Whether people go fishing, process or value add to a purchase product, sell goods or so forth, proper business management skills are required to ensure a venture is economically feasible. The basic principles of business management require the ability to estimate costs and income, planning ahead, managing staff and operations, and record keeping. Training in business skills can be done with the assistance of regional organisations. The topics should include how to access loans. An effective course would have input from local lending institutions.

For women to be active and successful in micro-enterprise areas requires support of Government to ensure increased understanding by women of small business principles and to support small marketing ventures through provision or support for a market venue (*Pacific Islands Forum Secretariat 2000*).

17 See Tuvalu's experience in tuna jerky where local people require training in the tuna jerky process (Chapman's 2001 Tuvalu report).
18 Advice in the section on training includes recommendations by Chapman in his national field reports 1998-2004.

7.1.2 Credit and finance

Few commercial banks provide loans specifically for fisheries projects. Women may only have access to bank loans with the support of their husbands, fathers or brothers. Interest rates are high.

Credit programmes in support of women's micro-enterprise development projects in Asia have been successful and there is scope to strengthen their role in value-added production and marketing of fish (*FAO 1998*).

The concept of a revolving fund uses the savings of members in women's groups for purposes of lending. Whether provided by a bank, government, non government or donor agency the credit needs for women's projects have the following characteristics:

- require small amounts at regular intervals rather than large amounts at one time
- treat savings and credit as separate activities rather than linking them together
- recognise that credit needs are not just for production but also for consumption
- provide finance for projects that directly benefit women or that facilitate the participation of women in development projects
- support projects in social infrastructure that provide direct benefits to women and support for projects in sectors that create income generating and employment opportunities for women
- consider at every major stage of the project cycle of the role of and needs of women in projects and the effects that a project may have on women.

Revolving credit schemes have been requested by women in a number of Pacific Islands countries. Unfortunately, to date, national and regional credit schemes have not been successful largely due to poor money management. Donors and governments in the region are hesitant to implement revolving credit schemes. These schemes have been effective in Asia and Africa[19] and attempts to liaise with women's groups in those countries could be encouraged. The *SPC Pacific Women's Bureau* may be able to provide assistance in liaising with groups in these countries.

Despite the poor track record of revolving credit schemes, Gillet's 2003 study showed that the facilitation of credit for fisheries enterprises was the intervention that was cited most often as being important for promoting tuna industry development. Credit has been a major factor in some of the tuna industry success stories in the region.

19 There are simple savings clubs in Africa which may work here. For example 10 women each chip in $10 every payday and one women takes home $100 to pay the school fees. It may also be useful to use the church fundraisers for self help projects (Personal communication from Mike Batty FFA, June 2006).

Reports refer to the *Fisheries Development Fund* to be established under the new Tuna Management Plan with one half of the revenue made from the fishing industry going to the Fund. Chapman suggests that this fund could be used to assist equity contributions of qualified Pacific Islanders.[20] The funds could be given on a low interest loan basis to be paid off on an agreed schedule. This approach would turn part of the EDF into a "revolving type fund" which would be paid back over time so that others could use the funds in future. Women interested in setting up business ventures should be given access to the *Fisheries Development Fund.*

7.1.3 Quantitative data

Fisheries departments should be encouraged to collect sex disaggregated data for the tuna industry. This data will need to be look at all areas of the industry and be consistently carried out over time in order to be meaningful. Comprehensive data can be effective as a decision making tool in managing and developing the industry.

7.1.4 Supporting NGOs

Communities, governments and donor agencies need to provide volunteers, equipment, financial, and other support to NGOs enabling them to address the negative aspects of the tuna industry

The larger canneries all employ their own community development officers. These officers may be able to help by providing counselling, health services, child care facilities to staff to ease their burdens.

7.2 Assistance under the DEVFISH Project

The literature review shows that some information is outdated or requires further study. The available information focuses on the participation of women in the tuna industry, and highlights the impacts of the industry. There are information gaps with regard to women's participation in marketing. Sex disaggregated data tends to be for a limited period of time and has not been updated. Aside from reports on the Solomon Islands and Fiji, there is very little information on employment opportunities specifically for women. Because the tuna industry is developing, up to date and ongoing information is needed.

7.2.1 Needs assessment

A needs assessment for women is proposed that will require site visits to selected Pacific ACP (P-ACP) countries.

Case studies could look at:

- what is feasible for each individual country
- what women want and see as realistic development options

20 Chapman's 2000 report on the Solomon Islands recommends that the Fisheries Development Fund be used to assist equity contributions of qualified Solomon Islanders. He also recommends that government look at ways to help qualified and trained Solomon Islanders gain equity contribution to qualify for loans.

- investigate employment opportunities at/for commercial facilities as well as for small scale businesses
- investigate novel tuna products (e.g. the use of tuna bones and skin in handicraft)
- research in-country support for women entrepreneurs
- meet with successful businesswomen to document their stories, and to use as mentors in workshops for other women[21].

7.2.2 Economic analysis

An economic analysis of women in tuna marketing could be carried out to quantify their contribution. In the absence of such data, women's contribution remains invisible and as such, women do not acquire the support they need to improve their employment conditions in marketing.

In addition, market research on value added products could be undertaken to provide countries with baseline information for those interested in setting up a value added business.

7.2.3 Regional meeting of industry representatives

The objective of the meeting would be to update information on developments in each country and explore ways in which countries can provide support to women in the industry. With funding support, women from different Pacific Island countries could learn from each other through training attachments.

The meeting could be part of the Heads of Fisheries Meeting or a stand alone meeting.

7.2.4 Information

Based on the site visits and regional roundtable a manual and/or dvd could be produced on successful women in the industry. A directory of useful contacts in the industry could be included in the manual. Articles on women in the tuna industry could be included in the *Women in Fisheries* bulletin.

The information could be used by women interested in entering the tuna industry, as well as those who want to change/expand their current involvement. The material could be used to promote greater awareness of opportunities for women in the industry as training tools for schools, fisheries departments, women's groups, and the general public.

21 Betty Wong in Fiji and Beverly Levi in Samoa are both running commercial tuna longline companies. Their development stories, advice and experience would be useful to others (personal communication from Mike Batty, June 2006).

8.0 CONCLUSION

Numerous studies have been undertaken, and reports written about the participation of Pacific Islands women in the tuna industry highlighting impacts, costs and benefits, constraints and opportunities. Unfortunately little is done to implement the many recommendations in reports. Time passes and a new report is published but little action takes place. By summarising a wide range of literature that has been written about women in the tuna industry, it is hoped that the next step will be taken that goes beyond the writing of another report. If we are serious about promoting gender equality in the tuna industry we need to provide the type of support that has been recommended in the many reports written to date.

The benefits that accrue from developing a country's tuna industry are felt by the whole community and can support women in their attempts to break through some of the constraints they face, particularly in an industry that is dependent on export markets and global processes. This means providing support in not just income generating activities, but also for advocacy, mobilisation, and participation in decision making processes.

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2 Annex 2: Table 1: Employment data in the tuna industry of 8 Pacific Islands countries

(Unpublished *SPC Fisheries Development Section* field reports).

Employment in fishing industry	**Commercial/industrial (purse seine, longline, pole-and-line) companies and vessels staff or crew**		**Subsistance/artisanal tuna fisheries (trolling, FAD fishing) fishers (catching and marketing) plus companies**		**Processing facilities (loining, canneries, packhouses, tetaki, arabushi), number of staff per facility**		**Comments on any sector**
	Men	Women	Men	Women	Men	Women	
COOK ISLANDS Almost no Cook Islanders employed at sea. Most vessels have Samoan or Fijian crew.	15				10	5	Data available for S. Cooks /Rarotonga based only
FIJI Estimate 40 vessels with all Fjian crew; 25 with 50% Fiji deck crew	550		10-20		550	1000	4 processing facilities with 150 each. 1 cannery with 950
2.1 NIUE No Niueans are employed on fishing vessels. Of operational vessels, one had all Samoan crew + Tuvalu skipper, one mixed nationalities ex Pago with NZ skipper.	Say 15 Samoans		150 part-time		9	3	Very limited operations in artisanal sector – 2-3 boats fishing per day.
PAPUA NEW GUINEA Purse-seine – 4-6 per vessel Longline – 6-12 per vessel	200 250		10-12 trainees on pumpboats		500 200 30	3,000 1,000 10	RD cannery SSTC Others
2.2 SAMOA							

Alias typically have a 4 man crew. Larger vessels often have expatriate skipper & engineer and around 6 Samoan crew	300				35	10	Apia Export Fish Packers employ majority of vessel crew and shore staff: 10 boats, 32 staff onshore.
2.3 TONGA Most operators report problems retaining crew. Increasing interest in employing foreign longline crew.	75				30	5	Crew turnover is high as longlining is perceived as harder work than other fishing and seagoing activities and incomes have fallen. Most vessels employ 2-3 foreign officers.
TUVALU 24 business licences issued by Funafuti Town Council. Chamber of Commerce indicates 30-40 fishing interest represented.			48				Minimum of 2 crews per dinghy=48 persons involved in small scale commercial in Funafuti. Average of one female per fishing business doing marketing and credit collection (20-30)
VANUATU			40 on skiffs 20 on charterboats				Fisheries indicated employment of some crews on purse seine vessels. About 20 could be estimated employed onshore associated with carter boat operations.