



Good practice policies
to eliminate gender inequalities
in fish value chains





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Foreword

Women represent nearly *half* of the estimated 180 million or more people worldwide working in fisheries and aquaculture.¹ These women are found in almost all fisheries-related occupations, although their *specific* roles vary among and within regions, countries, districts and even villages. In small-scale fisheries, they are frequently found fishing (especially in inland waters), gleaning or fish farming, but more often working on the shores or in their villages smoking, drying, salting or fermenting fish. Many sell fresh or processed fish in local markets while others are successful entrepreneurs, purchasing fish from local women (or men) traders, which they then trade in more distant urban markets. Some own boats and gear and hire men to fish, while others provide male fishers with credit. With the growth of global industrial fish and fishery product value chains, increasing numbers of women work as wage labourers in fish processing plants for national or export markets. Almost universally, women make key decisions on family nutrition and fish consumption. However, despite their crucial contributions to the fishery industry and to household livelihoods and nutrition, these approximately 90 million women are often invisible to policy-makers who have traditionally assumed that fisheries are largely a male domain. By failing to address gender-specific constraints to improving production and productivity, the evidence reviewed in this paper suggests that gender-blind policies have resulted in massive losses to the sector in terms of production and income, as well as to household food security and nutrition, particularly for the poor.

The purpose of this paper is to highlight some key gender inequalities in fisheries and aquaculture value chains that lead to marked underperformance by women, and to propose some good practice policies that can lead to sustainable increases in production, processing and marketing of high-quality fish; increases in women's incomes, and those of their families; and a reduction in malnutrition among the poor. The paper, which will be complemented by a concise policy brief, aims to build a solid business case to convince policy-makers and other stakeholders of the benefits of exploiting the hidden economic and social potential of fisheries and aquaculture. The focus is on developing countries where the majority of fish workers live, although some of the issues are similar in industrialized countries. The main audience is government policy-makers and officials, researchers, and their various development partners involved in the fisheries sector, with a particular focus on producers', workers', employers' and

other stakeholder organizations (including community-based organizations) operating in the formal or informal fisheries and aquaculture sector. Concerted, coordinated efforts are clearly essential among all these stakeholders to address the issues and realize women's lost potential in fisheries.

This paper is the first in a series that aims to build on, and expand to other agricultural subsectors, the innovative analytical approach taken by FAO's *The State of Food and Agriculture 2010-11. Women in agriculture: closing the gender gap for development*. This report was ground-breaking in providing quantitative evidence of the gender gap in access to productive resources, services, education and markets, and the very substantial gains that could be achieved by closing these gender gaps. In terms of crop production alone, the report concluded that if women farmers were to use the same level of resources as men on the land they farm, agricultural output in developing countries would increase by between 2.5 and 4 percent, reducing the number of undernourished people in the world by some 12-17 percent. Other subsectors, such as fisheries, livestock, horticulture and tree crops, share some of the same constraints and opportunities as the field crop sector focused on in the FAO report but exhibit some differences, for example, with regard to environmental, technological and market issues. Furthermore, as a result of the expansion of the concept of "food security" to embrace "food and nutrition security", many policy-makers are increasingly recognizing that the traditional focus of food security programmes on cereal has often had serious costs in terms of nutritional security. Clearly, fishery and livestock products are critical sources of animal protein and, together with horticultural and tree food crops plus minor field crops such as pulses and tubers, provide a range of other vital nutrients. As the gains from closing the gender gap in these other subsectors are also likely to be very substantial, FAO's Gender, Equity and Rural Employment Division (ESW) is taking the lead in preparing this series, in close collaboration with the concerned technical departments dealing with fisheries and aquaculture, crops, livestock, and forestry. Closing the gender gaps, achieving gender equality and empowering women are not only matters of justice – they are also smart strategies for furthering agricultural development and food and nutrition security.

The timing of this paper is particularly fortuitous. While gender and women's issues were notably absent from FAO's 1995 *Code of Conduct for Responsible Fisheries* and from *Aquaculture Development Beyond 2000: The Bangkok Declaration and Strategy* (adopted by the Conference on Aquaculture Development in the Third Millennium),² such gaps are finally being remedied. Gender equality principles were emphasized in the 2010 *Phuket Consensus: a re-affirmation of commitment to the Bangkok Declaration*,³ FAO's landmark 2012 *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*, and FAO's 2012 zero draft of the voluntary *International Guidelines for Securing Sustainable Small-Scale Fisheries*.

Although internationally renowned experts remain concerned that gender topics are “not on the agenda” in fisheries and aquaculture,⁴ these recent instruments demonstrate a new opening and a political willingness to address gender equity issues. It is therefore hoped that this paper will contribute to further awareness raising on gender issues in intergovernmental (both global and regional) and professional fisheries and aquaculture organizations and, while recognizing that these issues are often context-specific, will provide insights into what works, as well as providing practical mechanisms for adaptation and scaling up and out. In particular, the paper is designed to contribute to the ongoing process of implementing the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security and the voluntary International Guidelines for Securing Sustainable Small-Scale Fisheries, with the aim of helping ensure that gender equality becomes a reality in fisheries and aquaculture.

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Jennie Dey de Pryck

Abbreviations and acronyms

CBO	community-based organization
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CONAPACH	<i>Confederación Nacional de Pescadores Artesanales de Chile</i>
COOPAFRICA	Cooperative Facility for Africa
CPR	common property resource
CSO	civil society organization
CSR	corporate social responsibility
ECOT	Employers' Confederation of Thailand
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FTA	free trade agreement
HACCP	Hazard Analysis and Critical Control Point (system)
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
ICSF	International Collective in Support of Fishworkers
ICT	information and communications technology
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
ILRI	International Livestock Research Institute
IMO	International Maritime Organization
IOM	International Organization for Migration
IPEC	International Programme on the Elimination of Child Labour
ITQ	individual transferable quota
IUF	International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers Associations
IWMI	International Water Management Institute
LIFDC	low-income food-deficit country
MDG	Millennium Development Goal
MFI	microfinance institution
NGO	Non-governmental Organization
NRM	natural resources management
OECD	Organisation for Economic Co-operation and Development
OHS	occupational health and safety
SACCO	savings and credit cooperative
SCR	Saving-cum Relief Programme
SFLP	Sustainable Fisheries Livelihoods Programme (FAO)
SHG	self-help group
SPO	socioprofessional organization
SSF	small-scale fisheries
UN	United Nations

Executive Summary

Gender inequalities and women's lost potential in fish value chains

Setting the scene: who works in fishery and aquaculture value chains?

Policy-makers worldwide have traditionally assumed that fisheries are a male domain. The policy agenda has for decades given priority to the production sphere, where men generally predominate, and has largely neglected processing and marketing activities, where women often play a key role. Recent sex-disaggregated data (from the World Bank, FAO and WorldFish Center) represent an initial, positive step in providing the quantitative evidence needed to convince policy-makers of the importance of women in the sector. The data indicate that women represent 47 percent of the 120 million people engaged in capture fisheries. Worldwide, they are even more important in inland capture fisheries including post-harvest activities, where there are more women (33 million) than men (28 million). Employed mainly in processing and marketing, women considerably outnumber men in large-scale marine fisheries (66 percent) and small-scale inland fisheries (54 percent), and also represent significant shares of labour in small-scale marine and large-scale inland fisheries (at 36 and 28 percent, respectively).

Despite the significant presence of women in the sector, most developing country fisheries data collection systems fail to capture the actual contributions of small-scale fisheries and aquaculture to employment, production and consumption. Millions of rural men and women engage in subsistence fishing on a seasonal or occasional basis, but are not recorded as “fishers” in official statistics. Conversely, in many poor fishing communities, men and women often engage in other (non-fishing) income-generating activities as a survival strategy, particularly during the closed fishing season. These fisheries sector statistics largely fail to capture the youth and children who are employed in the sector, and the limited data available are rarely sex-disaggregated. Furthermore, as fish processing work is often done within the household, census-takers and researchers fail to capture girls' labour contribution in fisheries.

These data gaps reinforce the policy neglect of gender issues in fisheries and aquaculture. This leads to biased policies – such as focusing on capture/production (where men are concentrated) rather than post-harvest processing and marketing (dominated by women) – resulting in the underperformance of the fisheries sector.

Transformation processes in fisheries and aquaculture: Some gender-differentiated impacts

Major transformation processes are taking place in fisheries and aquaculture, most notably declining fish stocks due to overfishing, pollution, habitat destruction, invasive species and climate change. Many small-scale systems are being undermined by competition for land, ponds, coastal areas and inland waterways. These various changes in the fisheries sector are contributing to changing labour patterns in fisheries and aquaculture in different regions and countries. The gender and social impacts of these various changes are complex, and while they may be positive or negative, they do not necessarily favour one gender over the other.

The overcapacity of the global fishing fleet has contributed to increased competition for limited and declining fish resources. While men, as the main fishers, are the first to be affected, the declining catches have repercussions throughout the value chain, also affecting women (and men) employed in downstream processing and marketing. However, as global corporations increasingly move investments and jobs around the world to maximize profits and avoid taxes and regulations, developing country workers in export fish processing companies (especially the women who predominate in low-skilled, low-status jobs) are often disadvantaged by low pay and casual informal contracts, which enable companies to avoid paying social benefits.

Modern small-scale fisheries using improved technologies (such as motor engines, modern navigation and communication equipment, and processing and cold storage facilities) and meeting international food safety standards can produce high-quality, high-value products for export markets. However, these new technologies have targeted male fishers, while much less attention has been given to increasing women's access to productivity-enhancing innovations in capture fisheries (where women predominate), in order to improve the overall productivity and quality in small-scale processing and marketing.

Gains from eliminating gender inequalities in fisheries and aquaculture

There is considerable empirical evidence of women's serious disadvantages in access to fisheries and aquaculture resources; their lack of control of the products of their labour and/or the incomes from sales; and their low representation in professional or community-based fisheries organizations. Policy-makers and other stakeholders are beginning to recognize that eliminating these gender inequalities will bring substantial benefits, including the following:

- increased productivity, production and incomes;
- reduced post-harvest losses and improved quality;
- improved household food security and nutrition;
- improved natural resources management through women's empowerment in the community.

Why is Gender Important?

Gender is important because men and women often perform different tasks within fish value chains, and have different assets, skills, experience, knowledge and decision-making roles. However, the invisibility of women's roles in official fisheries and aquaculture statistics, coupled with the negative impacts of gender-blind policies, leave women facing discrimination and marginalization within the sector. Despite some positive changes such as women's group aquaculture enterprises or women's growing role in industrial fisheries, women generally remain disadvantaged throughout the fish value chain, with their productive potential unrealized.

Understanding gender roles and power relations in fisheries

1. Small-scale fisheries and aquaculture

In small-scale capture fisheries, men and boys typically specialize in doing the fishing, while women and girls predominate in traditional processing for human consumption and marketing. In aquaculture, fish may be raised in ponds situated within a household or community farming system that also includes crop/livestock activities. In these broader farming systems, women may suffer a variety of interlinked disparities in access to land, ponds, livestock and productive inputs in general.

Fish value chains reproduce complex power relations among different socio-economic categories of men and women. Thus, although women on the whole tend to be disadvantaged, some categories of female fishers or traders may exercise dominant or exploitative relationships over other women, or men, from weaker socio-economic groups.

Wealthier men and women hire men as fishing crew, and women for processing or trading. These poorer workers, male or female, have little bargaining power and often work in exploitative conditions, with low wages and job insecurity. The situation is often similar in aquaculture: processing is finished in factories, and intermediaries and exporters reap much higher profits than farmers and labourers. Female workers are particularly disadvantaged, earning about 64 percent of male wages for the same work.

Both men and women often fish or farm fish in groups and/or market their produce through cooperatives. This helps them obtain access to scarce fisheries and aquaculture resources and equipment, and usually increases their efficiency and profits while reducing risks. However, numerous case studies have found that men are more likely to join production-oriented groups (such as cooperatives), while women are more involved in civic or religious groups, which emphasize social interaction and solidarity (in the case of dangerous working environments, for example). Frequent male advantage in terms of access to resources, education and training can reinforce the production-oriented nature of men's groups. This often results in weak representation of female fish (or other value chain) workers in membership and leadership roles in mixed cooperatives, and discourages women's efforts to set up and run women-only cooperatives.

2. Industrial fisheries

In the industrial fisheries sector as a whole, women provide some 62 percent of total labour, ranging from 66 percent in marine to 28 percent in inland fisheries. Labour in the deep-sea industrial fishing fleets is largely male, although women are frequently employed in the processing lines on board large factory fishing vessels, and predominate in the land-based processing factories.

The industry is marked by occupational segregation, with women largely confined to low-skilled, low-paid jobs, while men tend to predominate in skilled and managerial work. Such wage employment is characterized by a high prevalence of seasonal, short-term and casual jobs for both men and women. The work is usually performed under informal contractual arrangements, without any occupational hazard protection or social benefits. Women are generally paid less than men, even for the same work. The managerial or skilled technical positions, which offer employment contracts with job security and benefits, are predominately held by men.

Gender inequalities in fisheries and aquaculture

1. Underlying structural barriers to gender equality in fish value chains

Worldwide ownership and access rights to land, ponds and other fisheries-related assets are heavily skewed against women. The poor – both men and women – rely more on common property resources (CPRs) including inland water bodies for fishing and gathering food, and women are often excluded in the management of such resources. Women face other gender inequalities in areas such as education and training, access to independent credit, and bargaining power in trade associations and the workplace. They also must contend with policy biases that favour male interests, such as focusing on (male-dominated) production at the expense of (female-dominated) fish processing and marketing, or neglecting women in fishing and processing through lack of training in improved fish technologies and production methods.

2. Small-scale fisheries and aquaculture – gender issues and impacts

- Poor infrastructure and equipment for small-scale fisheries: This can lead to large post-harvest quality losses, resulting in lower incomes throughout the value chain. This affects both men and women, but women are often more affected owing to gendered factors, such as lack of transport to distant markets and family responsibilities that limit the scope of their economic activities.
- Gender-differentiated impacts of new technologies: New fisheries technologies can have negative or positive impacts for men, women or both. For example, improved post-harvest processing facilities can greatly increase economic returns from fish products. However, this may encourage other men (or wealthier women) to compete for access to these new technologies.

- Gender-differentiated impacts of national export-oriented growth policies and increasing globalization/commoditization: The increased profitability of certain fishing sectors may attract male fishers, who can exploit their gender-related power to displace the women who are already working in those sectors. The growth of large wholesale trade undermines the role of small fish traders, particularly women traders, who are the first to be displaced or confined to low-quality fish. The growth of processing factories creates more wage labour for women, but eliminates even more jobs in the informal sector.
- Gender inequalities in market access: Women generally have less access than men to transport, market information, information on quality standards and regulations, and marketplaces. Women are also exposed to greater harassment in markets, and have more difficulty in finding secure storage facilities. Women traders' competition for scarce fish in small-scale fisheries systems often leads to sex-for-fish exchanges with male fishers.
- Health and safety: Fisheries-related safety and health hazards and the level of risk they pose vary by gender, age and socio-economic status. Bad weather, for example, will be more dangerous for fishers at sea – usually men and/or young men and boys. In female-dominated shore-based jobs, such as artisanal fish processing, women and girls face risk of injury from smoke inhalation or burns. Girls and women fish workers and traders are more likely to face sexual harassment and rape than boys and men.

3. Wage work in industrial fisheries

Evidence indicates a common failure across the developing regions to respect labour laws and provide decent working conditions in fish industries. This applies to both men and women, whether working in the fishing fleets or in factories. However, women are often further disadvantaged, as wage work in fisheries industries is rife with gender inequalities. Women largely work in low-status jobs with informal, casual contracts that disqualify them from receiving social benefits. Men predominate as supervisors/managers or skilled technicians. Women are often precluded from union membership because of their casual status, and when they are members, they rarely hold leadership positions. They also work day and night shifts, making it difficult to attend to family responsibilities.

Despite the growing evidence of these poor working conditions in the fish industry for all developing regions, governments and companies rarely take action. Fisheries ministries or departments tend to focus on production and environmental issues and leave employment issues to labour ministries or departments, which tend to give little attention to the fisheries sector and gender issues.

Good practices in closing the gender gap and realizing women's hidden potential in fisheries and aquaculture

This paper highlights some good practices in realizing women's hidden potential in fisheries, and also outlines examples of successful gender-equitable implementation modalities, including modalities for enforcing safety laws and regulations and improving women's representation in trade associations. The focus is on public action to reduce gender disparities in the fisheries sector and to exploit women's hidden potential.

Strategies and good practices across the fisheries sector

1. Promote pragmatic action to capture women's lost potential:

- Ensure gender equity in new fisheries policies and legislation;
- Incorporate gender issues into international and regional instruments on fisheries (e.g. conventions, codes of conduct, voluntary guidelines and trade agreements);
- Improve women's access to land, ponds, production resources, inputs and markets;
- Help men and women use the resources and opportunities they already have more effectively – through improved technologies, credit, extension, or help in leasing ponds/equipment;
- Go for “small fixes” whenever possible, which are often more effective than comprehensive but overambitious programmes that may be difficult to implement. Small but real improvements can build the confidence, trust, social networks, capital and other resources needed to embark on further developments;
- Support marginalized groups of men and women by strengthening unions, cooperatives, local community-based organizations (CBOs) and NGOs;
- Strengthen administrative action by ensuring that female fisheries extension agents are recruited; that both male and female extension staff are given gender-awareness training; and that women fishers, processors and traders are involved in stakeholder discussions on fisheries issues.

2. Recognize and promote the interrelationships among efficiency, gender equity and women's empowerment

Sometimes the links among efficiency, gender equity and women's empowerment emerge from a search for efficiency, with gender equity arising as a by-product. In other cases, policies, laws and projects that set out to improve gender equity also lead to women's greater and more efficient participation in fisheries, thus improving their own incomes and the efficiency of other nodes of the fisheries value chain. Projects that provide women with skills training and encourage their participation in socioprofessional organizations also help build these interrelations among efficiency, gender equity and empowerment, for example by increasing the social cohesion and motivation of CBOs.

3. Improve safety, hygiene and health

Various FAO, ILO and IMO instruments and programmes are helping to improve regulations and standards on fishing vessels, disaster preparedness training, and dialogue between fishers and governments. In the area of fisheries hygiene, FAO has also implemented projects such as introducing improved drying methods to reduce post-harvest losses. In addition, provisions have been made to ensure that women have access, as a group, to credit from savings and credit cooperatives (SACCOs) to help finance the improved methods.

In countries suffering a high incidence of HIV/AIDS, the rate of infection in fishing communities usually exceeds the national average. To address this, FAO and numerous donors and NGOs have supported national development policies and programmes to help raise awareness of HIV/AIDS risks among fishing communities, and also to encourage local communities to take responsibility for their own responses.

4. Strengthen collective fishery organizations and women's leadership roles

As women have generally played minor roles in collective fishery organizations, there is a vital need to build women's leadership roles in all these organizations and to sensitize men to respect and support women leaders – and to be willing to address gender inequities in organizations and in the fisheries sector. This almost invariably calls for remedial measures to tackle the prevailing discrimination against women throughout these organizations. Some successful measures include quotas for women in membership and decision-making positions in fishery organizations; gender-sensitive training in management and leadership skills and negotiation techniques; and awareness-raising among men and women of gender-equity issues and associated labour rights.

Good practices in small-scale capture fisheries and aquaculture

1. Promote gender-balanced roles in small-scale fisheries resource management

Co-management of fisheries resources by the government, resource users and other stakeholders is an increasingly popular response to growing concern about fisheries resource degradation. To be successful, programmes should be seen as local development organizations, working in partnership with local government service providers and other stakeholders to address both poverty reduction and responsible fisheries. Genuine participation and ownership by male and female resource users and other stakeholders is essential, in order to avoid elite capture and exclusion of underprivileged groups.

Examples of good practice include FAO's Sustainable Fisheries Livelihoods Programme (SFLP) in West and Central Africa, which has introduced development activities focusing on human capacity development, on improving access to health information and services, and on developing technical skills such as improving fish processing techniques.

The synergy between livelihoods and resource management has also been reinforced by other SFLP activities. For example, the legalization of socioprofessional organizations (SPOs), the training in adult literacy and negotiation skills, and the resulting increase in self-confidence has helped men and (especially) women to negotiate with microfinance institutions (MFIs), improve their fisheries production/processing, and diversify into other income-generating activities.

2. Strengthen women's roles in organizations representing small-scale fishers, fish processors and traders

In many cases, outside assistance from development agencies or NGOs has proved a key catalytic force in tackling gender inequalities in fisheries organizations. For example, FAO's SFLP found that by analysing gender issues (including social norms and practices) in SPOs and microfinance, as well as providing training (in literacy and numeracy, business skills and enterprise development), women's participation increased in the management of fisheries SPOs, village management committees, and credit unions or fishery cooperatives in Chad, the Gambia, the Niger and Nigeria. In other cases, women's own abilities and determination have enabled them to join male-dominated fish organizations and reach top elected positions in mixed organizations. Where Brazil's fishers' unions have opened up and admitted women, integration has followed and the exchange of ideas and access to new social spaces has led to a reconsideration of traditional gender roles. Increasingly, women fish workers are even establishing their own associations, cooperatives and unions. As they gain confidence and experience in successfully running their own collective organizations, they are more ready to diversify into economic activities that are traditionally the domain of men.

3. Introduce gender-equitable social security for small-scale fish workers

Most developing countries have rudimentary health and social welfare systems, which are particularly deficient in remote fishing communities. Women (especially) and the aged, who are the main caregivers, tend to be more disadvantaged than middle-aged men, especially if there is a need to travel far to hospitals or welfare offices. While social welfare benefits are often available to fish workers (in fleets or factories) with formal contracts, the majority of men and women engaged in small-scale fisheries are unprotected. Thus it is vital that fisheries policy-makers work with other sectors (health, social welfare, labour and industries) to extend such welfare coverage to the entire fisheries workforce – both male and female.

Some countries are attempting to provide better social welfare systems to informal sector workers, including fish workers. Among the most promising systems offering better social welfare systems is that of Pará State in Brazil, where most fishers qualify for non-contributory welfare benefits (pension, sickness, maternity, disability, and work-related accident benefits), as well as social unemployment insurance while the fishing season is closed.

Future directions

Assessing progress in exploiting women's lost potential in fisheries

Progress in exploiting women's lost potential in fisheries needs to be assessed at two levels. First, there is need for better, gender-disaggregated data in the form of actionable indicators that can inform future policy and programmes. Second, there is need for more in-depth research on complex issues that have varying interrelated gender, age, class, caste, ethnic, religious and sociocultural dimensions. Some suggestions of indicators and research topics are given in the following.

1. Gender-sensitive indicators

- contributions of the fisheries sector to national wealth, and increases in value-added in different nodes of fish value chains;
- access to and tenure of fishery-related resources;
- skills in fishing/processing, including access to extension/training in the use of new technologies or methods;
- recruitment of men and women as extension staff, and extent of training in gender-sensitive fisheries technologies and issues;
- access to and use of savings and credit by men and women, disaggregated by type of savings and credit system, size of loans and savings, and repayment rates;
- access to market information, use of modern communication technologies, and skills training in negotiation;
- health and nutrition status of men, women and children;
- attitudes of husbands and other men to women's participation in fisheries activities, including training; and women's attitudes regarding participation, male support, and their own self-esteem and self-confidence in taking decisions, and in organizing to undertake development initiatives and/or fighting to protect their interests;
- the effects of improved availability of domestic technologies (running water, fuel, electricity) and child-care facilities on women's work in artisanal or industrial fisheries;
- the involvement of women of different age groups and marital status in membership, management and leadership roles in community-based fish resource management; and the performance of these management groups compared with male-dominated groups in terms of production, incomes and policy influence;
- women's and men's roles in membership, management and leadership in fish industry unions and mass movements, and their respective success in achieving labour (and other) rights;
- the gender composition of the labour force in different fisheries subsectors by type of work, status in the professional hierarchy, and average wage level; and the extent of gender disparities in wage rates for work of comparable value.

2. Research priorities

- Research “decent” employment and incomes – including seasonality and security of work, contractual status, and adherence to labour laws (with associated social benefits) and to occupational health and safety laws and regulations.
- Analyse the gender-specific impacts of globalization on local fishing communities, assessing the following: the trade-offs between new opportunities for some groups of men and/or women and the threats to the livelihoods of others; the ways in which globalization often drives fisheries to overexploitation and excess capacity, and leads to loss of access to inland/coastal common property resources for fishing communities; and the gender-related implications of these changes for household livelihoods and food security.
- Examine how industrial fisheries and global trade encourage governments to privatize fish resources and common coastal and inland resources, and/or lease them for industrial or intensive aquaculture enterprises; and assess the gender-specific impacts and implications for national and local fish production/sales of the effects of these industrialization and globalization processes.
- Investigate how globalization affects the development and spread of production and processing technologies, energy-intensive transportation, and modern communication technologies and methods; and identify how these affect the gender-differentiated organization of work, consumption and environmental protection, benefiting some groups while marginalizing others.
- Study how fish workers organize themselves, giving special attention to how women operate within these organizations, how they improve their situations (by influencing decision-making within the organizations), and the stories they tell of their experiences, hopes and frustrations.
- Document labour and occupational health and safety conditions in artisanal and industrial fisheries at sea, in factories, and in markets; identify problems and good practices in addressing these issues; and assess the roles of employers and unions in meeting international labour standards and occupational health and safety conditions.
- Undertake regional, national or subnational risk assessments, identifying hazardous activities in specific fish value chains that pose risks to children and young people, with a view to introducing measures to prevent child and youth work in these activities, or to putting in place OHS measures to eliminate or reduce the risks they face.
- Research the nexus of poverty, social inequalities and child labour, with a focus on national or subnational studies. Particular attention should be given to identifying the gender division of labour between girls and boys in fisheries-related tasks; the reasons for this division of labour; the differential impacts on girls and boys; and the particular incentives that may be needed to get girls out of child labour and into school.

- Research the situations of men and women migrant workers compared with those of national fish workers, including gender-specific differences in vulnerabilities among these groups; and assess why migrants are being driven to leave their homes.
- Explore alternative models for globalization, including mass fish worker movements and the emergence of socioprofessional organizations and women fish workers' associations; assess the roles and benefits/losses by gender, ethnicity, and wealth category of different groups in these organizations; and analyse the outcomes of government policies that promote only trade, compared with those of government initiatives that promote social dialogue and constructive relationships as well as equity, health, labour rights and sustainability.
- Conduct research on the linkages between fisheries and other sectors (with particular reference to gender-specific opportunities and constraints), and on the potential benefits of improved policy coherence across sectors.
- Promote more comparative and collaborative research across and within regions and countries; strengthen international and national research networks to facilitate learning and knowledge exchange; and identify similarities and differences in what works and under what circumstances.
- Conduct research on gender-specific impacts of climate change on fisheries livelihoods, and the adaptation and coping strategies most appropriate for women and vulnerable groups.

Gender inequalities and women's lost potential in fish value chains



1.1

Setting the scene: Who works in fishery and aquaculture value chains?

1.1.1 Employment in fisheries: the official statistics

More than 180 million people worldwide worked full-time or part-time in capture fisheries and aquaculture in 2008, including production and secondary activities such as post-harvest processing and marketing; boat construction and maintenance; making and repairing nets, fishing gear and processing equipment; and ice production and supply. Nearly half were women, mainly concentrated in post-harvest work and marketing, but 12 percent of the 44.9 million fishers and fish farmers (typically considered a male domain) were women.⁵

The majority of fishers and fish farmers were in developing countries, mainly in Asia (85.5 percent), followed by Africa (9.3 percent), Latin America and the Caribbean (2.9 percent), Europe (1.4 percent), North America (0.7 percent) and Oceania (0.1 percent). China represented nearly one-third of the world total. The low (and declining) employment rates for OECD (Organisation for Economic Co-operation and Development) countries mask the substantially higher per capita productivity in their industrialized fishing industries compared with the small-scale fisheries that predominate in developing regions.ⁱ Employment in fisheries is growing faster than the world's population, and faster than employment in traditional agriculture, with an average rate of increase of 3.6 percent a year since 1980. Aquaculture is the fastest-growing animal food-producing sector, accounting for 46 percent of the global fish supply in 2008 and a quarter of the workers in direct production. Nevertheless, of the estimated 180 million people working globally in fisheries and aquaculture, the majority – some 120 million people – work full- or part-time in marine or inland *commercial capture* fisheries, including in post-harvest work. Almost all of these 120 million people – 97 percent – live in developing countries, and over 90 percent work in small-scale fisheries. Inland fisheries are especially important in developing countries, where over half of those employed in small-scale fisheries work in inland waters. and about 90 percent of production is used for domestic human consumption. For every person engaged in fishing, two to three people are employed in post-harvest processing and marketing, areas where women tend to predominate. These global figures mask significant variations among countries and between marine and inland fisheries.⁶

ⁱ See Glossary in Annex 1 for definitions.

1.1.2 Women's hidden roles in fisheries in developing countries

Policy-makers worldwide have traditionally assumed that fisheries are a male domain. This is partly because the policy agenda has for decades given priority to the production sphere, where men generally predominate, and has largely neglected the processing and marketing activities, where women often play a key role. Furthermore, the lack of sex-disaggregated data in the fisheries sector has left this misconception long unchallenged.⁷ Recent new global data (cited in TABLE 1) represent an initial, positive step in providing the quantitative evidence needed to convince policy-makers of the importance of women in the sector. Influenced also by growing awareness of gender issues in international and national arenas, policy-makers involved in fisheries and aquaculture at the national, regional and international levels are becoming more gender-sensitive, and are beginning to address gender issues in the fisheries sector. The special chapter on gender in fisheries in FAO's recent *The State of World Fisheries and Aquaculture 2012* testifies to this growing recognition.⁸

TABLE 1
Production and employment in developing country capture fisheries

	Small-scale fisheries			Large-scale fisheries			Total
	Marine	Inland	Total	Marine	Inland	Total	
Production and utilization							
Annual catch (million tonnes)	28	13	41	34	0.5	34.5	75.5
Value of catch (US\$ billion)	28	8	37	35	0.5	35.5	72.5
Employment (million)							
Number of fishers	13	18	31	2	1	3	34
Number of jobs in post-harvest	37	38	75	7	0.5	7.5	82.5
Total	50	56	106	9	1.5	10.5	116.5
Women in total workforce (%)	36	54	46	66	28	62	47

source: Adapted from World Bank, FAO & WorldFish Center. 2010. *The hidden harvests: the global contribution of capture fisheries*. Washington, DC, World Bank. Table 2. See endnote 10 for explanation of the methodology used.

Such recognition and increasing commitment to addressing gender issues are certainly timely, as the latest data indicate that women represent 47 percent of the 120 million people engaged in capture fisheries. Worldwide, women are even more important in inland capture fisheries including post-harvest activities, where there are more women (33 million) than men (28 million).⁹ As TABLE 1 shows, women represent nearly half of the developing country capture fisheries workforce, and if China is excluded, the average share of women fishers and fish workers approaches 60 percent.¹⁰ Employed mainly in processing and marketing, women considerably outnumber men in large-scale marine fisheries (66 percent) and small-scale inland fisheries (54 percent), and also represent significant shares of labour in small-scale marine and large-scale inland fisheries

(at 36 and 28 percent, respectively). Nonetheless, female employment rates vary considerably among countries, as illustrated by **TABLE 2**.

TABLE 2
Share of women in total capture fisheries

Country/case study	Total workforce (thousands)	Women as % of workforce
Nigeria	6 500	73
India	10 316	72
Cambodia	1 624	57
Ghana	372	40
Senegal	129	32
Brazil	493	30
China	12 078	19
Bangladesh	3 253	5
Mozambique	265	4

NOTE: Includes full- and part-time work in fishing and post-harvest activities.

SOURCE: World Bank, FAO & WorldFish Center. 2010. *The hidden harvests: the global contribution of capture fisheries*. Washington, DC, World Bank. Table 13.

Macrolevel sex-disaggregated data on employment in aquaculture are almost non-existent in developing countries. Case studies, particularly from Asia (where aquaculture has a long tradition), suggest that women's contribution is often much greater than men's. For example, women represent 33 percent of the rural aquaculture labour force engaged in fish production (excluding post-harvest activities) in China, 42 percent in Indonesia and 80 percent in Viet Nam.¹¹

1.1.3 The hidden economic importance of fisheries for poor men and women

Most developing country fisheries data collection systems fail to capture the actual contributions of small-scale fisheries and aquaculture to employment, production and consumption. For example, case studies indicate that millions of rural men and women engage in *subsistence* fishing on a seasonal or occasional basis, especially in inland fisheries in Asia and Africa, but are not recorded as "fishers" in official statistics.¹² Conversely, in many poor fishing communities, especially those on inland waterways, men and women often engage in complementary crop, livestock, forestry or non-agricultural income-generating activities as a survival strategy, particularly in the closed fishing season, or to compensate for seasonal fluctuations in the availability of fish. *Sectoral* statistical systems (such as those for fisheries) commonly fail to capture these broader contributions to livelihoods. At the same time, livelihood surveys are rich in a range of detailed data, but are often limited to a sample of case studies that are not sufficiently representative for generalizing to national or regional levels when informing policy design. However,

BOX 1

What is child labour?

A child is defined as any person under 18 years of age. The definition of child labour is based on a child's age, hours and conditions of work, tasks performed, and hazards. The ILO Minimum Age for Employment Convention No. 138 (1973) sets the general minimum age for children to work at 15. For work considered hazardous, the age is 18.

The ILO Worst Forms of Child Labour Convention No. 182 (1999) defines the worst forms as including slavery, trafficking, debt bondage, serfdom, forced or compulsory labour (including for use in armed conflict), prostitution, illicit activities, and work that is likely to harm children's health, safety or morals.

The ILO Work in Fishing Convention No. 188 (2007) sets the minimum age for work on fishing vessels at 16. The authorities may relax this to 15 for persons not subject to compulsory schooling but engaged in vocational training in fishing, or for children aged 15 during their school holidays. The minimum age is 18 for work on fishing vessels that could jeopardize health, safety or morals, or for night work, but the authorities can make an exception if the night work is for training purposes.

Children's or adolescents' participation in work that does not affect their health and personal development or interfere with their education is generally regarded as positive. This can include activities such as helping their parents around the home or farm, on boats and on the shore; assisting in a family business; or earning pocket money outside school hours and during school holidays. Such activities can contribute to children's development and to their families' welfare, provide them with skills and experience, and help prepare them to be productive members of society during their adult lives. ■

they can provide vital qualitative (and quantitative) information that helps interpret macrolevel data, particularly if they use participatory methodologies to capture the perceptions and concerns of different categories of local people.¹³

These fisheries sector statistics also largely fail to capture the youth and children who are employed in the sector, and the limited data available are rarely sex-disaggregated. As child labour (BOX 1) is particularly worrisome, such practices are being increasingly investigated through better data collection, audits and case studies. Although there are large variations within and among countries, case study evidence indicates that child labour is very considerable, particularly in the informal small-scale subsectors of capture fisheries, aquaculture and post-harvest fish processing, distribution and marketing. Boys (and young men) are more heavily involved in fishing while girls (and young women) are mainly engaged in post-harvest activities, with boys learning skills from their fathers and girls from their mothers.¹⁴ For example, estimates for 2001-2012 for Bangladesh, El Salvador, Ghana and the Philippines indicate that children, of whom a majority (up to 91 percent) were boys, constituted about 9-12 percent of the total fisheries labour force in these countries.¹⁵ Some 29 percent of the total workforce in the fisheries sector in Senegal consisted of children under the age of 15. Among crews the share was some 27 percent, and among those engaged in trade-related activities, 41 percent.¹⁶ However there are exceptions, as in India, where the 2001 census data indicate that girls worked longer hours than boys in fishery and aquaculture.¹⁷ Official and case study data could also underestimate girls' labour in fisheries, as artisanal fish processing work is often done within the

household; therefore girls' contribution to this work is likely to be invisible to census enumerators and researchers. Girls also often contribute *indirectly* to fisheries by substituting for their mother's domestic and caring work so their mothers can engage in fish trading and other economic activities.¹⁸

Official statistics on child labour generally include the fisheries sector within agriculture as a whole (60 percent of all child labour worldwide),ⁱⁱ and thus fail to give meaningful estimates of the numbers and proportions of child labour in the fisheries workforce. Of considerable concern for policy-making is the inadequacy of these limited data for assessing the distribution of child labour in fisheries between two kinds: "acceptable work", where children are learning professional and life skills in a safe environment (and most likely also attending school); and "child labour" and "worst forms of child labour" (BOX 1), both of which threaten the health and safety of the child, prevent school attendance, and often involve contractual arrangements (including low or no pay) and work conditions that are highly exploitive, and often dangerous.¹⁹ Policy measures are needed – *urgently* – to address the worst forms of child labour in fisheries.

These inadequate data systems not only greatly undervalue the *real* economic and social importance of the sector to the nation (and to the livelihoods and nutrition of poor men and women and their families), but also underestimate the scale and tragedy of child labour, the pressure on fish resources and the inefficiencies in the sector – especially the huge post-harvest losses.

The major reasons for these data gaps are institutional, methodological and conceptual:

- Most developing countries have little institutional capacity to collect reliable data from small, dispersed and socially complex fishing activities, particularly in inland fisheries and aquaculture or remote coastal communities. As subsistence fishing is highly seasonal, one-off surveys may fail to capture its importance unless carefully designed to do so. Because sectoral and household surveys commonly focus on household members' primary activities, such surveys often capture women's domestic work while underestimating women's real roles in fisheries. They also often fail to capture fisheries-related work by girls and boys, either because they note only the children's school enrolment, or because parents do not know or exaggerate their children's ages (so they appear to meet the minimum legal working age). Quantifying the economic value of recreational fishing (predominantly a male activity), which can be of greater economic importance than commercial fisheries in some high- and middle-income countries (and is a tourism attraction in some poor countries), is also methodologically challenging.²⁰
- Developing countries often lack methods, resources and trained, experienced professionals to conduct interdisciplinary data collection and analysis that would illuminate the structural, socio-economic, gender and power relationships in the sector, as well as their implications for sector growth, employment, poverty alleviation and food security. The lack of experienced staff with a sound grasp of these interdisciplinary issues often results in a failure to exploit existing data adequately.
- Many surveys are conceptually weak in that they "collect butterflies" without being designed to *answer the key policy questions*, such as the costs to the nation and families of not addressing gender in fisheries.

ii Worldwide, 215 million children are child labourers, with 115 million in hazardous work. In sub-Saharan Africa, about one in four children aged 5 to 17 is a child labourer, compared with one in eight in the Asia-Pacific Region, and one in ten in Latin America and the Caribbean. ILO. 2010. *Accelerating action against child labour*. Global report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work. International Labour Conference, 99th Session 2010. Geneva, Switzerland.

1.1.4 The interlinkages among gender data gaps, gender-blind policies and the underperformance of the fisheries sector

Such substantial under-reporting of gender roles is the result of gender-blind policies that ignore the need for such sex-disaggregated data, and this in turn reinforces policy neglect of gender issues in fisheries and aquaculture. These policy biases have led to serious policy failures resulting in the *underperformance* of the fisheries sector (compounded by a failure to address problems of resource overuse or degradation) by:

- focusing on large- or small-scale commercial fisheries at the expense of subsistence fisheries, and thus neglecting and further marginalizing very poor men and women who are dependent on (occasional or seasonal) subsistence fisheries;²¹
- focusing on capture/production (where men are concentrated) rather than post-harvest processing and marketing (dominated by women) when a value chain approach would help improve efficiency, by identifying blockages at different nodes (which are caused, *inter alia*, by gender-related factors or which have asymmetrical gender impacts);
- ignoring the interrelations between coastal and inland fisheries and broader gender-specific individual and household livelihood strategies, including migration and both agricultural and non-agricultural income earning (BOX 2);
- failing to take into account integrated gender-sensitive policy and technical approaches to fisheries, forestry and agriculture, especially in inland and aquaculture systems (BOX 3).

BOX 2

Interrelations among fishing, gender and livelihoods

In coastal areas of the United Republic of Tanzania, many poor households combine fishing with agriculture, livestock, salt making, seaweed farming, lime making, casual wage labour, and small businesses as part of survival strategies in which the complementary labour and decision-making roles of men and women are pivotal to household survival.

Communities in the Mekong Delta largely identify themselves as rice farmers, but up to 83 percent of the population engages in fishing at some time of the year. Households switch between non-fishing, subsistence fishing and commercial fishing, depending on the seasonality of livelihood opportunities and the gender and/or household division of labour. ■

BOX 3

Forestry and agriculture can harm fish

In the southern Cameroon rain forest, pesticides used especially in cacao and oil-palm farming (dominated by men) are very toxic to aquatic life (fished by men and women). Of 61 farmers surveyed, 56 percent prepared their pesticides on a stream bank and 72 percent washed their spraying equipment in the stream. Oil-palm is increasing in the area, and nurseries (which require a lot of pesticides) are often located near streams to facilitate irrigation. ■

Policies designed to assist only one aspect of rural livelihoods, one gender, one agricultural subsector, or one node of the fisheries value chain will inevitably have repercussions on others in terms of production, employment, incomes and the sustainability of the natural resource base. It is thus vital that fishery policies take a comprehensive, integrated approach along the value chain; that they are designed in discussion with key male and female stakeholders in other related

agricultural or industrial sectors; and that they take account of the role of fisheries and aquaculture in the livelihood systems of the poor, with particular attention to the (complementary or conflicting) needs of men, women, youth and children in different socio-economic groups.

1.1.5 The interlinkages among poverty, child labour and sustainable fisheries

Although poverty is a major cause of child labour, the causes are more complex and context-specific. They include the lack of adequate quality, affordable, accessible and relevant schooling in most remote fishing communities, as well as cultural attitudes to child work, the upbringings of girls and boys (respectively) and the perceived value of girls' education compared with that of boys. By keeping children out of school, child labour prevents them from developing knowledge, skills and a healthy constitution that are prerequisites for obtaining better-paying (legal) work when they are older, thus perpetuating poverty from one generation to the next. As educated women are more likely to send their sons and daughters to school,²² by depriving girls of their rights to education, girl child labour will have a multiplier effect in reproducing uneducated, poor young men and women in the next generation.

Paradoxically, rising household wealth and incomes among the poor are not necessarily translated into a reduction in child labour, at least over the short term. Various studies have shown that as rural households become more prosperous they are able to invest in more land and assets, and child labour in such family enterprises initially increases before it starts to decline. In these cases, the relationship between child labour and household per capita wealth takes the shape of an inverted U.²³

Poverty is often the cause of forced and bonded labour, linked to internal and cross-border trafficking or debt arrangements. Trafficking is thought to be more common in Africa,²⁴ while debt bondage appears more prevalent in South Asia and Latin America,²⁵ but also occurs in Africa.²⁶ According to International Labour Organization (ILO) estimates, in 2000 some 1.2 million children under 18 were trafficked, but because of the clandestine nature of trafficking, the figures are only indicative. Girls are affected disproportionately and are especially trafficked for commercial sex and domestic labour, while boys are believed to be trafficked primarily for work in agriculture, plantations, mining and armed conflict.²⁷

Recent studies of child trafficking show there is a "grey area" between trafficking for labour exploitation and the practice, particularly widespread in West Africa, of sending girls and boys to live with relatives – either as a poverty coping strategy, for schooling, or to gain experiences in a different environment. Such children often work for their hosts, but as with their own parents, the borderline between acceptable child work and exploitive and/or hazardous work may be blurred. Clearly this is a delicate area that requires more research and sensitive handling by authorities.²⁸

Child labour can also exacerbate the depletion of fish resources and, in the absence of alternative livelihood opportunities, deepen poverty over the longer term. For example, in some cases where overfishing has resulted in declining fish resources and profitability, children have replaced adult fishers to reduce costs, as the children are paid less. However, their labour allows fishing to continue in areas where it would have otherwise stopped because of poor profits, contributing to further overfishing and unsustainable resource management.²⁹

1.2 Transformation processes in fisheries and aquaculture: Some gender-differentiated impacts

Major transformation processes are taking place in fisheries and aquaculture, spurred by globalization – notably declining fish stocks in marine and inland capture fisheries, especially due to overfishing but also to pollution, habitat destruction, invasive species and climate change.³⁰ This is complemented by rapid growth in aquaculture and in industrial value chains in response to the following economic factors: i) market forces; ii) changing food demand patterns; iii) growing demand for fishmeal for animal food and shrimp farms; iv) improved production and processing technologies; and v) new market information technologies. Many small-scale systems are being undermined by competition for land, ponds, coastal and mangrove areas and inland waterways, stemming from tourism, real-estate construction, industrial expansion and port development. Oil drilling, aquaculture and water-based recreational activities have impacts on navigation, while pollution from these sources, and the increased use of agrochemicals in agriculture and aquaculture, is damaging fisheries resources. Such encroachments on fisheries resources are often facilitated and protected by commercial (often elitist) policies that foster the privatization of these various marine and inland fish resources, through joint ventures, foreign direct investment, and management systems based on limited licensing and individual transferable quotas (ITQs).³¹ These changes often have differential gender impacts, depending on a variety of socio-economic and cultural factors that vary by region and country.

These various changes in the fisheries sector, together with the growing incidence of in- or outmigration and competition with other sectors for jobs, are contributing to changing labour patterns in fisheries and aquaculture (that also vary by gender) in different regions and countries. The gender and social impacts of these various changes are complex, and while they may be positive or negative, they do not necessarily favour one gender over the other. Although they often reflect and/or reinforce socio-economic, cultural, age-related and gender asymmetries in access to fisheries resources, employment and income, they vary according to local specificities that affect, *inter alia*, the gender and class division of labour.

The declining fish stocks worldwide, largely due to the massive overcapacity of the global fishing fleet (often the result of perverse subsidies) as well as other factors such as pollution and species invasion, are of very considerable concern to policy-makers. A recent influential World Bank/FAO study, *The sunken billions: the economic justification for fisheries reform* (2009), estimated that 75 percent of fish stocks were underperforming, at an annual loss of net economic benefits for global fisheries of about US\$50 billion.³² This overcapacity of the global fishing fleet has contributed to increased competition for limited and declining fish resources, resulting in stagnant productivity and economic inefficiency. To

maintain profitability, boat owners have reduced labour costs while lobbying for subsidies and investing in labour-saving technologies. Thus the real incomes of male fishers are typically stagnant or declining, and their employment is becoming increasingly precarious.³³ While men, as the main fishers, are the first to be affected, the declining catches have repercussions throughout the value chain, also affecting women (and men) employed in downstream processing and marketing.

The increasing globalization of the fisheries value chain, controlled by transnationals and large retailers, is linking more and more developing country producers and workers to global markets. Increased competition for fish in global markets also has repercussions for many actors and consumers in developing country fisheries. Processing is becoming increasingly intensive and vertically integrated within many developing country fisheries, and the outsourcing of processing is already very significant at the regional and world levels, creating considerable value added and employment in these countries. For example, whole fish from Europe and North America are sent to Asia (especially China, but also India and Viet Nam) for filleting and packaging, and are then re-imported. Strict sanitary and hygiene standards, as well as international animal health and environmental standards and social responsibility requirements, limit outsourcing because many developing countries are not able to meet these requirements.³⁴ Women are often the main beneficiaries of these new employment opportunities. However, as global corporations increasingly move investments and jobs around the world to maximize profits and avoid taxes and regulations, developing country workers in export fish processing companies (especially the women who predominate in low-skilled, low-status jobs) are often disadvantaged by low pay and casual informal contracts, enabling transnationals and national companies to avoid paying social benefits.³⁵ Increasing concern is also being expressed about the potential impacts of recent or upcoming free trade agreements (FTAs) on developing country fisheries sectors. For example, it is anticipated in some quarters that the European Union (EU)-India FTA (negotiations for which were expected to be concluded by the end of 2012) will reinforce the export-led model in the fisheries sector. This will further compound the negative impacts on the livelihoods of men fishers and women processors and vendors in traditional fishing communities, and also lead to deteriorating nutrition for poor families and increased overfishing and environmental degradation.³⁶ Neutral studies are needed to collect and analyse reliable gender-disaggregated data to assess the impacts on a diverse range of stakeholders. Further research is also needed to estimate the trade-offs between the huge transportation costs incurred by these global systems, including their environmental footprints, and their savings on labour costs from the exploitation of cheap developing country (female) labour, as well as the costs and benefits in terms of employment and income for the developing countries' workforces.

Small-scale capture fisheries are typically assumed to be labour-intensive, with low productivity and low-value products mainly destined for local consumption. Although this is generally true in many developing countries where the small-

scale sector has been neglected, modern small-scale fisheries using improved technologies (motor engines, modern navigation and communication equipment, processing and cold storage facilities) and meeting international food safety standards can be economically efficient, and can produce high-quality, high-value products for export markets.³⁷ In general, these technological innovations have targeted male fishers, while much less attention has been given to policies and investments to increase women's access to productivity-enhancing technologies in capture fisheries (including gleaning), in order to improve the overall productivity and quality in small-scale processing and marketing, where women predominate.

The ongoing rapid expansion of aquaculture production³⁸ and the parallel development of national/global aquaculture value chains, stimulated by growing national and international demand, are bringing new opportunities as well as problems and inequalities for developing country producers. Traditionally a household enterprise in Asia (the region dominating the aquaculture sector), new large-scale enterprises are springing up to exploit rising demand. At the level of the industry as a whole, there are significant differences in benefits among countries, in part reflecting different governance systems that affect, *inter alia*, natural resource sustainability, incentives, accountability, and compliance with official (or voluntary) codes of practice or quality certification.³⁹ Aquaculture expansion is also increasing the pressure on resources – on land and water, on the availability and cost of high-quality seeds and feed, and on the supply of adequate low-cost energy for pumping and aeration. Existing or new producers are often unable to keep up with technology improvements (or new market opportunities) and quality standards and controls.⁴⁰ Their skill limitations contribute to some of the pollution and environmental degradation suffered by the subsector, such as the excessive use of inputs and poor husbandry practices, although major sources of pollution also come from growing urbanization and industrialization, as well as the heavy use of agrochemicals in other agricultural subsectors. While even relatively modest households (particularly men as the main landowners) may enjoy access to land and water for subsistence or commercial aquaculture, it is recognized that most future aquaculture expansion will be in the form of marine cage culture and mariculture, in coastal areas and further offshore in the seas and oceans. The latter could pose a challenge for international law⁴¹ and disproportionately benefit richer (male) entrepreneurs.

1.3

Gains from eliminating gender inequalities in fisheries and aquaculture

There is considerable empirical evidence of women's serious disadvantages in access to fisheries and aquaculture resources (such as land and ponds, processing and storage equipment and facilities, market information, and organizational and entrepreneurial skills); their frequent lack of control of the products of their labour and/or the incomes from sales; and their low representation in professional or community-based fisheries organizations.⁴² Some of this evidence is reviewed in Chapters 2 and 3. Increasingly aware of the very high costs that countries are paying for such gender inequalities, policy-makers and other stakeholders are beginning to recognize that closing the gender gap will bring substantial benefits, such as:

- **Increased productivity, production and incomes:** Many empirical studies have identified women's disadvantages in access to fisheries and aquaculture resources (land and ponds, boats and gear, processing and storage equipment and facilities, credit, inputs, extension, transport, market information, and organizational and entrepreneurial skills), while evidence from specific development projects shows that eliminating these gender gaps leads to significant increases in women's productivity and production in fishing and aquaculture, especially in processing and marketing, where women predominate in almost all small-scale systems.

While data for estimating the extent of women's lost production in fisheries and aquaculture are not available, estimates of their lost production in crops (BOX 4) suggest that it is likely to be very substantial. As men and women often perform complementary roles in fish value chains, there is urgent need for internationally comparable, macrolevel value chain studies that estimate the following: the size and impact of gender disparities in fisheries-related resources at each node of the value chain, the resulting productivity gaps, and thus the value (at the national level) of the production and value added that could be gained by closing the gender resource gap. Such a value chain approach would help identify weak links in the chains resulting from gender resource inequalities, in order to inform the design of specific, well-targeted policies and measures to address these gaps.

BOX 4

Women's "lost" crop production

Solid empirical evidence shows that if women farmers use the same level of resources as men (land, inputs, credit, education and extension), they achieve the same yield levels as men. Eliminating gender differences in resource use would increase agricultural production in developing countries by between 2.5 and 4 percent, reducing the number of malnourished people in the world by 12-17 percent – representing some 100-150 million people. ■

- **Reduced post-harvest losses and improved quality:** Evidence indicates that inefficient and unhygienic harvesting, transportation and processing methods lead to very substantial post-harvest losses, and contaminated

or adulterated fish products for human consumption or animal feed. Case studies show that these problems are particularly prevalent in small-scale systems, and that there is considerable scope for improvement on boats, at landing sites and during transportation and processing, often through “simple fixes”⁴³ that would benefit hundreds or thousands of small producers/processors. As women outnumber men in post-harvest fish work, both globally and in most countries, gender-aware policies and practices that close the gender gap in access to improved fisheries technologies, extension and training, credit and market information will clearly bring large payoffs in terms of reducing losses and improving quality and safety.

- **Improved household food security and nutrition:** In developing regions and low-income food-deficit countries (LIFDCs), excluding China, annual per capita fish consumption averaged 11.3 and 9 kg respectively in 2007, compared with 28.7 kg in industrialized countries. Although there are large differences within and among regions and countries, the share of fish in animal protein was on average more important in developing regions, at 18.3 percent for developing countries and 20.1 percent for LIFDCs, compared with only 13 percent in industrialized countries.⁴⁴ Of particular concern is the declining trend in sub-Saharan Africa, wherein per capita fish consumption fell by 14 percent between 1990 and 2002, reaching a worldwide record low of only 6.7 kg per capita in 2006, despite very substantial increases in revenue from fish exports. It is expected to fall further, to 6.6 kg per capita in 2020.⁴⁵ As demonstrated by many studies, when women have increased control over production and income, their status and bargaining power are enhanced within the family, and they allocate considerably more income than men do to food, health, education and clothing for their children.⁴⁶ Thus, exploiting women’s untapped potential in fish production, processing and marketing will almost certainly translate into higher incomes and consumption of fish protein and better family nutrition, provided that women control the product and/or income. If reinforced by complementary policies and programmes that raise women’s awareness of the nutritional importance of fish protein, and provide them with training in healthy processing, storage and cooking practices, the payoffs will be even greater in terms of improved family nutrition and lower incidences of illness and death from contaminated fish.⁴⁷
- **Improved natural resources management through women’s empowerment in the community:** Community-level fisheries resource management is much more effective if all stakeholder groups are able to participate in decision-making. However, all too often, women’s groups are excluded, while women – particularly young women – are rarely represented in leadership roles in mixed community groups, resulting in a neglect of the resource management issues for which women are primarily or exclusively responsible. Case study evidence also suggests that women’s full involvement in natural resources management (NRM) improves solidarity and conflict resolution over NRM issues.⁴⁸

Why is gender important?



Gender (BOX 5) is important because men and women, and boys and girls, often perform different tasks and have different assets, skills, experience and knowledge, as well as different decision-making roles within fish value chains. However, the invisibility of women's roles in official fisheries and aquaculture statistics, their frequent neglect by extension, training and credit programmes, and the negative impacts of gender- and youth-blind national policies, international fisheries conventions, codes of conduct and other instruments – including FAO's 1995 *Code of Conduct for Responsible Fisheries* – mean not only that women face discrimination and marginalization within the sector, but also that their countries are losing crucial opportunities to increase women's production, and thus their contributions to national economies and their families' welfare.⁴⁹ The 2010 Phuket Consensus (BOX 6), which contains a strong recommendation on supporting gender-sensitive policies and programmes in aquaculture, heralds the start of a new era of gender-aware policies. These were subsequently reconfirmed in FAO's 2012 *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in*

BOX 5

What is gender?

Gender is a concept that deals with the roles and relationships between men and women that are determined by social, cultural, religious, ethnic, economic and political factors, and not by biology. Gender roles and relationships are a key determinant of the distribution of resources and responsibilities between men and women, and thus both reflect and determine power relations between them. However, as they are socially determined, this distribution and the related power relations can and do change in response to new economic opportunities and market forces, and can also be changed deliberately through social action and public policy. While all societies exhibit marked gender differences, which vary from culture to culture, women worldwide are generally disadvantaged vis-à-vis men in their access to resources and services, and in their ability to exercise "agency" over their own lives. Men and women are not homogenous groups, and those within the same socio-economic, class, caste and ethnic groups will share the same privileges or disadvantages. ■

BOX 6

The Phuket Consensus

Recommendation 5 of the *Phuket Consensus: a re-affirmation of commitment to the Bangkok Declaration*, adopted by the Global Conference on Aquaculture 2010 (Phuket, Thailand, 22-25 September 2010):
"Support gender sensitive policies and implement programmes that facilitate economic, social and political empowerment of women through their active participation in aquaculture development, in line with the globally accepted principles of gender equality and women's empowerment." ■

the *Context of National Food Security* (BOX 7), and the 2012 zero draft of the voluntary *International Guidelines for Securing Sustainable Small-Scale Fisheries* (BOX 8). Together these three instruments offer a new opening to foster genuine gender equity in fisheries and aquaculture, providing they are implemented.

BOX 7

Extracts on gender from the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*

3B Principles of implementation

4 Gender equality: Ensure the equal right of women and men to the enjoyment of all human rights, while acknowledging differences between women and men and taking specific measures aimed at accelerating de facto equality when necessary. States should ensure that women and girls have equal tenure rights and access to land, fisheries and forests independent of their civil and marital status.

4 Rights and responsibilities related to tenure

4.6 States should remove and prohibit all forms of discrimination related to tenure rights, including those resulting from change of marital status, lack of legal capacity, and lack of access to economic resources. In particular, States should ensure equal tenure rights for women and men, including the right to inherit and bequeath these rights. Such State actions should be consistent with their existing obligations under relevant national law and legislation and international law, and with due regard to voluntary commitments under applicable regional and international instruments.

4.7 States should consider providing non-discriminatory and gender-sensitive assistance where people are unable through their own actions to acquire tenure rights to sustain themselves, to gain access to the services of implementing agencies and judicial authorities, or to participate in processes that could affect their tenure rights.

5 Policy, legal and organizational frameworks related to tenure

5.4 States should consider the particular obstacles faced by women and girls with regard to tenure and associated tenure rights, and take measures to ensure that legal and policy frameworks provide adequate protection for women and that laws that recognize women's tenure rights are implemented and enforced. States should ensure that women can legally enter into contracts concerning tenure rights on the basis of equality with men and should strive to provide legal services and other assistance to enable women to defend their tenure interests. ■

Gender roles and issues in fisheries are very complex, vary from region to region and country to country, and change in a variety of ways in response to new opportunities or constraints. Despite some positive changes such as women's group aquaculture enterprises or women's growing role in industrial fisheries, where they represent more than half the workforce, women generally remain disadvantaged throughout the fish value chain, with their potential unrealized.

Some of these issues and their implications for realizing women's lost potential in fisheries are explored in sections 2.1 and 2.2.

BOX 8**Extracts on gender from the zero draft of the voluntary *International Guidelines for Securing Sustainable Small-Scale Fisheries****4 General Principles*

4 Equity and equality, ensuring justice and fair treatment – both legally and in practice – of all people, including equal rights of women and men to the enjoyment of all human rights, while acknowledging differences between women and men and taking specific measures aimed at accelerating de facto equality when necessary. Gender concerns and perspectives and empowerment of women as well as vulnerable and disadvantaged groups should be integrated in policies, programmes and activities.

9 Gender Equality and Equity

9.1 These SSF Guidelines support gender equality and equity in accordance with human rights and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). It should be recognized that women and men play important and complementary roles in the governance and development of the small-scale fisheries sector, and that they should enjoy equal respect and rights, in all aspects of life and in decision-making. While the concept of gender, by definition, deals with both men and women – and boys and girls – and the socially, culturally and economically established roles and relationships between them, women are often more disadvantaged than men. Gender equality efforts hence often mean supporting and empowering women whilst working with both men and women. ■

2

2.1 Understanding gender roles and power relations in fisheries

2.1.1 Small-scale fisheries and aquaculture

Men, often assisted by boys and male adolescents, typically specialize in doing the fishing in small-scale capture fisheries, while women and girls predominate in traditional processing for human consumption (smoking, drying, salting, pickling and fermenting) and marketing. In many traditional poor fishing communities, fish products are also exchanged⁵⁰ or given as gifts to other families (sometimes these may be reciprocated), or to the elderly or disabled.⁵¹

However, there are considerable variations in this gender division of labour by region, culture and stage in the life cycle. In some situations, for example, in Ghana and the Lake Victoria fisheries bordering Uganda, women fish processors and traders invest their profits in boats and gear and hire male crews, thus securing a supply of fish. In other situations (such as in Cambodia, the Democratic Republic of the Congo, Thailand and indigenous communities in Latin America) women are involved in boat fishing, while in yet others (in Benin, Bangladesh and India) they collect shellfish.⁵² Fishing communities on Lake Sélingué in Mali illustrate the frequent complexity of labour arrangements. Men do 90 percent of the fishing although they are often helped by boys and girls in fishing households. Women handle all the drying and smoking and sell some of the produce, while men predominate in the large-scale collection and sale of processed fish to traders in larger markets. In contrast, women represent 85 percent of the wholesale traders of Lake Sélingué fish in Bamako fresh fish markets.⁵³ Men's and women's stages in the life cycle can be crucial: older men are more likely to be boat owners and manage younger (male) family and hired crews, while older women who are no longer tied to their homes to care for young children, and who may face fewer cultural constraints regarding going to public places, are often freer to travel to more distant markets. Boys and girls often provide substantial labour, in Ghana for example (BOX 9).

Compared with fisheries, gender issues in aquaculture often require a different framework of analysis, particularly if fish are raised in ponds situated within a household or community farming system that also includes crop/livestock activities.⁵⁴ The implications of the gender division of labour and access to/control over aquaculture resources for women thus need to be analysed within this broader farming system, in which women may suffer a variety of interlinked disparities in access to land, ponds, livestock and productive inputs in general. In contrast, marine cage culture and mariculture in coastal areas tend to be distinct aquaculture systems, often owned/exploited by fishing communities for subsistence and increasingly for commercial ends, with their own gender-specific ownership and labour practices.

In small-scale aquaculture, fish farming in ponds, rice fields and cages is often undertaken as a family enterprise. In some cases, both men and women handle all the operations, whereas in others men specialize in pond preparation, cage construction, seed production or collection, and marketing, while women concentrate on the nursing phases, and either men or women harvest. As a general

BOX 9

Boys and girls working in Ghanaian fisheries

Recent case studies estimate that several thousand girls and boys of all ages, even as young as five years old, work in fish-related activities in fishing communities on Lake Volta, in the Volta region's coastal areas and on Keta Lagoon. Fishing is largely undertaken by men and boys while women and girls predominate in processing. In Pru and Kwahu North districts bordering Lake Volta boys perform tasks such as paddling, bailing water out of boats, casting and pulling nets, and diving to free nets caught on tree stumps. In ocean fishing in the Volta region's Ketu South and Keta districts, a large number of children – mainly boys – participate in several of the steps involved in beach seining. Children of all ages, including some girls, work in the crews, pulling the nets and boats to the beach. Both boys and girls also carry the nets to and from the boats, remove the fish from the nets and head load it to processing or selling sites. In lagoon fishing, boys take part from the age of five in all the common fishing methods using hooks, traps made of bamboo or glass bottles with bait inside, and nets that are cast in shallow water or from small boats powered by paddles or sails.

Nearly half the boys interviewed in the four districts attended school, helping with fishing or other work before or after school, at weekends and during their holidays. Of the 21 girls interviewed in Ketu South, two-thirds went to school. During term time, schoolchildren worked for between one and six hours, while their cohorts who did not go to school spent between 5 and 12 hours in fishing-related work and often did other duties too, especially girls who also did domestic work.

Boys and girls who work for their parents and relatives are not usually paid; their work is seen as contributing to the family's livelihood and, if they go to school, to the cost of their education. If the fish catches are good, the children are sometimes given some cash and/or fish to eat or sell. The situation is different in ocean fishing in Ketu South where boat or net owners hire large crews for beach seining. Adult men are usually hired for the season, while boys mainly work for daily wages, and an occasional gift of fish if the catch is good. While fish processing is primarily small-scale, family-based female work in the Lake Volta communities, some processors/traders in Ketu South work on a larger scale and employ women and girls. Their remuneration is similar to that in fishing: employed for one season (ten months), the women are paid an agreed amount at the end. They generally receive some food, fabric and sometimes small sums of cash during the season, while any loans are deducted from their final payment. The children – mostly girls – receive a daily wage depending on how long and how intensively they have worked. ■

pattern, boys tend to help their fathers or other men, and girls their mothers or other women. However, an increasing number of women are developing and managing their own (or women's group) aquaculture enterprises in Asia and other regions. These generally operate on a small scale, and often benefit from the technical and financial support of Non-governmental Organizations (NGOs), but some are large enterprises that use the latest technology and efficient management methods.⁵⁵

Because of gender power relations, improving women's access to more efficient processing equipment, for example, to increase their productivity and incomes will not automatically enhance their social status or economic power in the household or community if their incomes are controlled by their husbands or other household members. Without some valued benefits for themselves, women may have little incentive to adopt new technologies or credit, especially

if these mean more work.⁵⁶ For example, women fish processors in Guinea were reluctant to diversify into the salt and vegetable oil extraction proposed by FAO's Sustainable Fisheries Livelihoods Programme (SFLP) because the revenues accrued to male decision-makers.⁵⁷ However, if these new developments bring women more income that they control, along with higher status and self-confidence, they will be more ready to accept the challenges and risks.

Men and women do not form homogenous groups, and fish value chains reproduce complex power relations among different socio-economic categories of men and women. Thus, although women on the whole tend to be disadvantaged, some categories of female fishers or traders may exercise dominant or exploitive relationships over other women, or men, from weaker socio-economic groups.⁵⁸ Migrant workers, especially the children among them, are particularly vulnerable as they are cut off from their community's support to contest their often poor living and working conditions and pay. There is sound evidence of girls and boys being trafficked directly by their poverty-stricken parents (or through intermediaries) to distant destinations to work in gruelling conditions in fisheries, often for no wages beyond the "pay" given, often in advance, to their parents. Hired as cheap labour to substitute for adult workers, such child labour depresses adult wages and reduces the availability of work for adults, reinforcing family poverty.⁵⁹

Because of the relatively high investment costs of boats and fishing and processing equipment, wealthier men and women play dominant roles in the parts of the chain in which they specialize, hiring men as crew, and women for processing or trading, depending on the culture. These poorer workers, male or female, have little bargaining power and often work in exploitive conditions with low wages and job insecurity. In Ghana, for example, there is a hierarchy among female fish traders, with richer women hiring poorer women for a small payment in cash or kind to help carry, wash, smoke and pack fish.⁶⁰ In other cases, traders advance (costly) credit to poor men or women producers in exchange for a monopoly on buying their produce, perpetuating a cycle of debt and dependency as, for example, in the shrimp value chain in Bangladesh,⁶¹ or among artisanal fishers who are dependent on credit from traders or boat owners in Brazil.⁶²

The situation is often similar in aquaculture: for instance, a considerable part of the shrimp value chain, which is dominated by China, Ecuador, Indonesia and Thailand, is controlled by large producers for the export market. In Bangladesh, where shrimp production is handled by small producers, processing is finished in factories, and intermediaries and exporters reap much higher profits than farmers and fry catchers. Women fry catchers and labourers are particularly disadvantaged, earning about 64 percent of male wages for the same work.⁶³

Partly to protect themselves from exploitive relationships, but also to obtain access to scarce fisheries and aquaculture resources and equipment (and in very dangerous marine fishing, to bring solidarity), both men and women often fish or farm fish in groups and/or market their produce through cooperatives. This usually increases their efficiency and profits while reducing risks. Cooperatives can also bring benefits such as shared landing sites and better infrastructure, equipment, transport and cold storage facilities, and can serve as mechanisms for sharing information on fisheries-related laws and regulations, as well as health, hygiene and safety standards.

Men's groups tend to be production- and efficiency-oriented, while women's groups often emphasize social interaction and solidarity, for example, in women's fishing groups in southern Cameroon where slippery rocks, snakes and sharp objects underwater can be dangerous.⁶⁴ In the Brazilian State of Pernambuco women often go (as they have done since the 1970s) to the fishing grounds in groups of four or more, mainly to gather molluscs and crustaceans, but also for shrimp and fish. The emphasis is on cooperation, solidarity and happiness, including humour. In some communities group members rotate the tasks of fishing, taking care of the canoe and cooking to ease their working day.⁶⁵

Numerous case studies on the role of social capital in different agricultural sectors have also found that men are more likely to join production-oriented groups such as cooperatives, while women are more involved in civic or religious groups.⁶⁶ Frequent male advantage in terms of access to resources, literacy, education, training and extension can also reinforce the production-oriented nature of men's groups. These male advantages are commonly compounded by cultural factors, and sometimes by laws (as in several Latin American countries) that recognize only the fishing-related activities in value chains and/or the household head's role in these. For example, only a widow without an adult son can inherit her husband's membership of a fishing cooperative in some Latin American countries.⁶⁷ Together these factors often result in weak representation of women engaged in fishing (or other value chain activities) in membership and leadership roles in mixed cooperatives, and discourage women's efforts to set up and run women-only cooperatives.⁶⁸ Nonetheless, as shown in Chapter 3, progress is being made in strengthening women's roles in, and benefits from, mixed and women-only cooperatives and other organizations.

2.1.2 Industrial fisheries

Wage employment is increasing rapidly in large-scale domestic and – especially – export fish and seafood industries, with labour in the deep-sea industrial fishing fleets being largely male, although women are frequently employed in the processing lines on board large factory fishing vessels, and they predominate in the land-based processing factories. In the industrial fisheries sector as a whole, contrary to common perceptions that fisheries is a male domain, women provide some 62 percent of total labour (TABLE 1), ranging from 66 percent in marine to 28 percent in inland fisheries. Opportunities have varied by region and country: for example, in Sri Lanka, over 90 percent of tuna plant workers were women.⁶⁹ While female employment in the Latin American fisheries sector was only 38 percent for whitefish in Argentina (Patagonia), it was higher for seafood, ranging from 52 percent in Uruguay, to 57 percent in Brazil (Rio Grande do Sul) and 72 percent in Argentina (Mar del Plata).⁷⁰

Gender inequalities in employment in the fisheries processing industry are pervasive across all regions and cultures. The industry is marked by occupational segregation, with women largely confined to low-technology, low-paid jobs (weighing, grading, packing and trimming) while men tend to predominate in filleting, skinning and deboning.⁷¹ This division is often justified by gender stereotypes of "feminine" traits such as conscientiousness and dexterity, or of women having different skills from those of men, who largely monopolize

managerial and skilled technical posts or undertake the physically heavier work.⁷² Segregation in low-technology occupations limits women's opportunities to develop new skills and advance professionally, while reinforcing the perception of these female jobs as low-pay and low-status occupations.

Such wage employment is characterized by a high prevalence of seasonal, temporary (short-term) and casual (daily) jobs for both men and women, especially women who often work part time. Usually performed under informal contractual arrangements, such work does not offer any protection against occupational hazards and risks, or social benefits including maternity leave, and it involves very little bargaining power so workers are usually forced to accept low wages. Women are generally paid less than men, even for the same work.⁷³ In contrast, the small cadre of permanent staff handling the managerial, supervisory, administrative or skilled technical work, who generally have employment contracts with job security, pensions, health and injury insurance and other benefits, are predominately held by men.⁷⁴

Because women need flexibility to balance their productive and reproductive roles, they are often pushed into informal, part-time work.⁷⁵ Fish processing factories rarely provide child-care facilities, so older children often take care of their siblings while their mothers are working. Unable to go to school, these children are thus perpetuating a cycle of poverty.⁷⁶ However, despite the problems, many women prefer this type of work, as the wages bring them some economic autonomy and improved status and influence within their households, and they can still handle their domestic responsibilities.⁷⁷ In some cultures, both employers and families prefer young, unmarried girls to do this work; this may involve migration. For example (BOX 10), poor, low caste, young unmarried girls from the poorer Indian states of Kerala, Tamil Nadu and Karnataka represent the majority of the female workforce in Goan fish processing factories.⁷⁸

BOX 10**Young female migrant workers**

The female migrants working in Goa's fish/prawn processing plants are mainly from Kerala. Hired by labour contractors to work for about ten months a year, many work a 10 to 12-hour shift, especially in the high season (October–November). Most of these migrants are young, unmarried girls; many work to earn their dowries. They live in company housing in the villages near the factories, and are supervised by the contractor's wife. Other than for religious services, they rarely travel to Goan towns or markets, so they are often lonely and isolated, except for contact with fellow workers. However, compared with job prospects in Kerala, Goan processing plants offer these poor women greater opportunities. ■

2

2.2 Gender inequalities in fisheries and aquaculture

As gender inequalities have multiple causes and manifestations (and also vary by age), their elimination requires a combination of complementary policy interventions that also take into account customary law and cultural practices. Some causes, addressed in the following section, are social and thus more difficult to influence by public policy. However, they do change in response to new opportunities brought about, for example, by better education and skills; market forces; temporary or permanent loss of male (and to a lesser extent female) family members due to migration or death from fishing accidents; illness; civil unrest; natural disasters or development projects; and/or are triggered or legitimized by policy and legal changes and evolving cultural values spread through modern media. Other causes of inequality may be easier to address: for example, through i) reversal of administrative negligence of gender in fisheries and aquaculture extension; ii) development of gender-sensitive extension methods to help women obtain access to and learn how to use improved fish technologies, and acquire skills in safety and quality practices in fish processing; and iii) enforcement – for both genders – of labour legislation and laws to eliminate child labour, particularly its worst forms. These issues are discussed in the following three sections.

2.2.1 *Social norms and policy biases: underlying structural barriers to gender equality in fish value chains*

- **Social norms, values and practices that determine gender roles and power relations** vary among and within regions and countries, and both determine and justify discrimination against women by legitimizing, *inter alia*, asymmetries in men's and women's access to livelihood capital assets (BOX 11). This nexus of social norms, values, practices and livelihood assets influences gender and age-related labour roles in fisheries and aquaculture at the level of:

BOX 11

Livelihood capital assets in fisheries

Natural: land, ponds, common property resources (CPRs) through ownership or use rights, leasing.

Physical: boats, gear, landing sites, processing equipment, ice-making and cold storage facilities, trucks, bicycles.

Financial: formal and informal savings and credit mechanisms, insurance.

Human: health, education, skills, capabilities (knowing what is possible and being able to take advantage of opportunities), traditional knowledge.

Social: community and kinship ties, professional networks and cooperatives (representing forms of solidarity that provide the means to undertake collective action), social status (class and caste), sociopolitical voice and influence. ■

- *the household*, by determining the division of labour among different reproductive and productive tasks (including in fisheries and aquaculture) based on gender and age, how these tasks are valued, decision-making roles in each sphere, and control of assets, products and income;
- *the community*, by determining the social status given to fishing as an occupation for men and/or women, and by influencing the cultural acceptability of women (of different age groups or marital status) working outside the home, such as trading in the market, engaging in paid work in private or family enterprises, appearing in public places and participating in mixed professional or training groups. Fishing is sometimes regarded as low-status work, for example, in the Indian states of Kerala⁷⁹ and Goa,⁸⁰ where it is a caste-based occupation that ranks among the lowest strata of the caste hierarchy. In Yemen, while fishing is not regarded as a particularly low-status occupation for men, only women of the lowest socio-economic category engage in fisheries work, and women of higher-status households would not undertake such work unless driven by poverty.⁸¹ Different ethnic or religious affiliations, even in the same district, can influence the roles of women (and attitudes towards these roles) in fisheries (BOX 12); cultural values can also affect women's confidence to speak or take leadership roles in mixed groups, and to negotiate/defend their interests in the market, household or community;

BOX 12

Ideologies about women's roles in fishing

In Trivandrum, Kerala, among Christian fishers, men fish and women process the catch and take it to market. In Muslim communities, women generally do not engage in fish marketing but work in related activities such as net making.

In Goa, cultural and religious ideologies partially explain the significantly greater success of Catholic compared with Hindu fisherwomen. Other major reasons are the Catholics' prior establishment in the main markets, and the Hindu fishing communities' location at the periphery of the Portuguese colonial territory, where they suffered from poor infrastructure and discrimination by the Portuguese, the high-caste Catholics and the Goan political and religious establishment.

Two indigenous communities in Mexico's Sierra de Santa Marta illustrate the interplay among ethnicity, gender ideology and local ecological and economic specificities in determining women's roles in fishing. While both communities are facing declining fish resources, their responses are different. Nahua men traditionally caught large fish while women harvested shrimp in all-female groups. Greater landlessness and long-term male migration, together with Nahua gender ideology, have increased women's responsibilities, independent economic ventures and mobility, while reducing men's subsistence fishing. In contrast, Popoluca ideology views men as the main breadwinners and woodlands as dangerous for women, while more equitable land access and opportunities for agriculture only permit short-term male migration. Popoluca women's main work is construed as domestic, but they may "help" in food provisioning by fishing with their husbands and children and in all-female groups, provided they stay near the village. ■

- *the labour market*, by permitting (for example, in employment in the fisheries sector) gender-differentiated occupational segregation and gender inequities in employment status, promotion opportunities and wage rates, to women's disadvantage;
- *the individual*, by constraining women's available time as their almost total responsibility for domestic and caring work ("reproductive" work) reduces the time they can give to productive work (including in fisheries), while their caring roles often force them to seek flexible work (whether for the family, their own enterprises or wage work) near their homes, especially if there are no child-care facilities. Such work is more likely to be part-time and casual; while new fishery technologies can be labour-saving (e.g. improved ovens for fish smoking), some can unduly increase women's workload. For example, women participating in the Patuakhali Barguna Aquaculture Extension Project in Bangladesh (1997-2004) were happy to have access to fish in ponds that were near their homes, but their labour burdens increased so that they were sometimes unable to attend training sessions.⁸²

Asymmetries in access to different livelihood assets vary not only by gender, but also by socio-economic class, age, caste, ethnicity and so on. The relationships among all these factors are complex and not necessarily congruent or static. A man or woman may have to choose between certain assets, while ignoring others, depending on social values or personal preferences and goals. For example, the growing wealth of entrepreneurial Goan Catholic fisherwomen enhanced their class status, but did not raise their caste rank or increase the respect paid to them as a group. Very conscious of and often humiliated by their low caste position, the most successful among them sent their sons and daughters to school to gain "human capital", with the aim of promoting their upward social mobility out of fishing, despite the financial benefits of inheriting their mothers' fisheries-based livelihood assets.⁸³

Fishing households often typify more egalitarian gender relations than other occupations in the same country, in part because of the long periods of absence of men during fishing expeditions.⁸⁴ Greater gender parity is also found in fishing communities where men and women play *complementary* roles, compared with those where men and women work together in fish-based enterprises. This is often due to an interplay of ethnic, religious and sociocultural factors, as found in Mexico (BOX 12). Thus, differentiation between men's and women's livelihood portfolios and their decision-making power within the household or community can constrain, but does not necessarily constrain, women's ability to participate as equals in fisheries.⁸⁵

- **Gender inequalities in access to fisheries resources:** Worldwide ownership and access rights to land, ponds and other fisheries-related assets are heavily skewed against women. The poor – both men and women – rely more on common property resources (CPRs) including inland water bodies for fishing and gathering food, and when the management of such resources is introduced, including through community-based

arrangements, women are often excluded.⁸⁶ For example, when some state governments in India started leasing land to investors in intensive shrimp farming at the beginning of the 1990s, this took away local communities' rights to common fish resources, affecting local fishermen and particularly women who had traditionally fished or gathered clams and other shellfish in these areas. These farms also polluted the drinking-water wells. On the southwest Indian coast, shrimp farms became infested with epizootic ulcerative syndrome, a disease that infected the entire water body and the fish within it. Major struggles erupted over intensive shrimp culture around India, with women at the forefront, and in 1997 the Supreme Court called a halt to its development on certain parts of the coast; however, this judgement was not implemented.⁸⁷ Gender inequalities in accessing other types of resources are as follows:

- *Lack of independent credit:* Fish wholesalers often provide credit to collectors and local traders at the beginning of the season, which is then passed on to fishers to finance equipment in return for a secure supply of fish. However, this reduces the bargaining power of the fishers and traders, so some men and women prefer to borrow from relatives if possible. Others – often the very poor with little social capital – are forced to resort to exploitative moneylenders who squeeze them in a cycle of debt. Although fishers' cooperatives and traders' associations often provide credit on fairer terms, in some countries, Mali for example, credit tends to be given to men who dominate the leadership of these organizations, so women sometimes prefer to set up their own revolving fund.⁸⁸ Various studies in the Gambian fishing community of Tanji showed that because of women's higher illiteracy rates, and because savings and credit cooperatives (SACCOs) had no special provisions for illiterate clients, women were more vulnerable than men to be victims of fraudulent practices. Although there were twice as many women as men in community-based organizations (CBOs) and women had higher demand for financial services, women received only 6.3 percent of the total credit given, despite having 20 percent more savings in the SACCO than the male members.⁸⁹ In the Kagera region of the United Republic of Tanzania, only eight women compared with 402 men benefited from the Fisheries Revolving Fund, partly because they had no collateral and were unfamiliar with the application procedures, but also because men sometimes interfered with their wives' attempts to get loans, or tried to control any loans that women were able to obtain.⁹⁰ However, in some cases (Burkina Faso, for example), microfinance institutions (MFIs) working with fishing communities are reluctant to lend to men because of repayment difficulties, and prefer to work with women and women's groups.⁹¹
- *Gender inequalities in education and training:* In many developing countries girls and women are disadvantaged in terms of educational enrolment and attainment, which further disadvantages them in adopting new fisheries or communication technologies, or entering higher-skilled wage labour/managerial jobs in fish processing industries. For example, in the crab value chain between Benin and neighbouring

countries, women's high illiteracy rates make groups of women traders dependent on men for bookkeeping and management. Young women with higher educational levels leave the fish sector.⁹² FAO's Sustainable Fisheries Livelihoods Programme (SFLP) found that in the Congo, the extension services often targeted subjects that interested men, while in the United Republic of Tanzania training organized by the Freshwater Fisheries Institute, which required functional literacy, had lower attendance by women and girls, owing to financial constraints and parents' belief that education is for men.⁹³

- *Gender differences in knowledge:* In view of the gender division of labour in fisheries, men and women often have different but complementary knowledge. For example, men might know which grounds have the best fishing, while women know which types of fish fetch the highest prices in the market. Collaborative gender relations are vital, so that women and men share their expertise to decide where to catch the highest-value fish.⁹⁴
 - *Social capital and networking affecting, inter alia, women's lack of bargaining power in fishers' cooperatives, associations and unions:* Social norms and lower female educational levels often restrict women's involvement in decision-making in fishery institutions at the local or national level, and for women to play leadership roles, they need support. For example, a recent study found that social norms restricted women's involvement in decision-making in traders' associations in Lake Sélingué in Mali, thus condoning non-transparent male management. Although membership was equally male-female, there was only one woman in the ten-member managing committee. The men were not necessarily efficient; for example, they managed the two trucks that transported fish to Bamako but these often broke down, and both men and women traders lost their consignments. Women could have brought other skills to these institutions, if only they had been given support and encouragement.⁹⁵ The most successful Goan fisherwomen owed their success to their participation in small female cooperative groups, which shared the expenses, profits and risks of their marketing business.⁹⁶ Fisherwomen's social capital and networking can also vary within a state or geographical area for ethnic or social reasons. For example, Catholic fisherwomen in Goa had extensive networks with natal and marital kin as well as fellow villagers involved in fishing activities, which enhanced their monopoly – to the exclusion of Hindu fisherwomen – over markets, jetty auctions and sales to hotels and restaurants in tourist resorts.⁹⁷
- **Policy biases resulting from the cultural and sociopolitical dominance of male interests, male control of policy processes or (male) elite capture, which lead to the following:**
 - *Policy-makers' neglect of fish processing/marketing where women predominate, and a policy focus on male-dominated production:* Gender issues are rarely mentioned in international fisheries conventions, codes of conduct and other instruments, or in national fisheries policy processes, although there is some progress in individual projects.⁹⁸

- *Neglect of women fishers and fish farmers, and fish processors, by public officials:* Examples include in providing veterinary services for aquaculture or extension and training in the use of improved fish technologies, inputs and production methods.
 - *A production or business approach to fisheries development that fails to integrate the goals and issues related to improving food and nutrition security, particularly for poor households:* Such an approach focuses on production and marketing where men have important roles, but ignores the latter part of the fish-to-consumption chain, which is almost exclusively women's work throughout the world. The production and business approach also tends to stop at the household door, leading to a lack of attention to developing and disseminating improved technologies and knowledge to women (and men), to encourage them to choose those fish species that provide the highest levels of micronutrients that are critical for nutritional security, and to improve the hygienic preparation, cooking, serving and storage of fish. An important motivating factor in women's engagement in fisheries work is to provide their families, especially their children, with a nutritious and balanced diet. Policies and programmes that fail to recognize this also fail to provide key incentives to mobilize women in adopting improved fisheries technologies and practices.
- **Policy biases against adopting comprehensive international labour legislation and decent working conditions, particularly in the fisheries sector:** Evidence from all developing regions indicates a common failure to respect labour laws and provide decent working conditions (BOX 13) in the fisheries sector, including in many high-value export fish industries. This applies to the deep-sea fishing fleets that exclusively employ men, and coastal marine fishing, which is predominantly male, as well as the fish processing factories that commonly employ a significantly higher proportion of female than male labour. Decent working conditions are very often lacking in the artisanal sector, and labour laws (including laws against child labour) are harder to enforce given the remoteness of many fishing communities, the smaller scale of their operations, and the invisibility of some of the processing work that is undertaken within the household. Some evidence of gender-related decent work deficits, and both successes and difficulties in applying labour legislation in the industrial fisheries sector, is given in section 2.2.3.

BOX 13

Decent work

The ILO's Decent Work Agenda, which has been recognized by the United Nations (UN) as crucial to the achievement of the Millennium Development Goals (MDGs) promotes:

- rights at work;
- decent and productive employment and income for women and men;
- social protection for all;
- social dialogue.

Gender equality and non-discrimination are cross-cutting priorities. ■

2

2.2.2 Small-scale fisheries and aquaculture: gender issues and impacts

Many of the problems facing small-scale fisheries and aquaculture are similar for men and women. However, the gender impacts may vary, depending on the gender division of labour within different fish value chains, the wealth and other socio-economic characteristics of different stakeholders, and social norms and practices. Thus, the gender issues and impacts will be context-specific, and will require appropriately formulated and targeted solutions. Some common problems and examples of their gender implications are illustrated below.

- **Loss of fishing rights due to pollution and encroachment on common fishery resources:** Pollution and encroachment can affect both men and women. For example, intensive shrimp culture in Thailand caused considerable pollution that destroyed men's coastal fishing activities.⁹⁹ Similarly, artisanal fish workers' livelihoods in Brazil and India have been destroyed by pollution from shrimp aquaculture and other industries, as well as encroachment by tourists whose high-speed boats and water skis sometimes tangle and destroy the nets. Women have particularly been affected in Brazil, because the shrimp aquaculture is in the mangrove area where women traditionally fished while men went out to the open sea.¹⁰⁰
 - *Poor infrastructure and equipment for small-scale fisheries:* This includes unhygienic landing sites and lack of cold chain facilities (ice plants, cold rooms, refrigerated trucks), along with other requirements such as electrical power, potable water, roads, transport and motorized boats for fishing and collecting fish. Such poor infrastructure and equipment lead to large post-harvest losses, especially quality losses, which can amount to 40 percent of fish landings,¹⁰¹ resulting in lower incomes throughout the chain. This affects both men and women, but women are often more affected owing to gendered power relations. For example, in the United Republic of Tanzania's Kagera region, women lack transport, even bicycles, and have to sell fish on the beach for low prices because they cannot go to more distant markets.¹⁰² In fishing communities on Lake Sélingué in Mali, which provide fresh fish for the Bamako market, women's family responsibilities and lack of access to ice limit them to collecting fish nearby; they cannot reach more distant communities that require a two to three-day trip.¹⁰³ Male wholesalers' better access to ice is due, at least in part, to women's under-representation in the management committees of ice plants and transport services. Women retailers or collectors are thus obliged to process their fish quickly, but nonetheless often suffer higher post-harvest losses and reduced value added than their male counterparts.¹⁰⁴
- **Lack of integration along value chains:** For example, poor fishing practices (by men), compounded by lack of skills training and reasonably priced ice close to landing sites, can lead to landing high proportions of low-quality fish. Once landed, even good-quality fish can quickly deteriorate, not only because (affordable) ice is lacking, but also because markets are not organized, with many intermediaries – men and women – bargaining for the catch. As negotiations can be lengthy, the fish quality

often deteriorates while deals are being concluded, owing also to the time of day and the temperature. Poor-quality fish can then cause problems of quality for women in the processing nodes of value chains. For social reasons, in some countries, it is difficult for individual women to ask men to take measures to improve the quality of their catch, and group action is not always possible because women are often not represented in (capture) fishing committees. However, the complexity of the reasons go beyond simple gender-differentiated interests, and need to be tackled at the community level, involving both men and women.

- **Gender-differentiated impacts of new technologies:** Whether introduced by governments, development organizations or the private sector, new fisheries technologies can have negative or positive impacts for men, women or both. For example, new technologies can erode women's access to/control of income and fish, and thus their ability to provide nutritious food and other basic needs for their families. Mechanization of fishing can also displace women from marketing (BOX 14). In some cases, action by women's groups can help them get round the problems. For instance, on Lake Chad, an FAO SFLP project trained groups of women in improved post-harvest processing technologies made available through "community technological platforms", which increased the economic returns from fish products by 30 to 50 percent. However, this stimulated attempts by wealthy (female) processors to control access to the processing facilities, and by men, who were not engaged in fishing until the processing technologies were made available, to compete with women for access to these facilities. As the men had their own fish or could easily negotiate with other fishers on the lake, they were often in a stronger position than the women. However, the fact that the women were organized in groups, even though in some cases these were mixed groups, gave women more solidarity in addressing the problems.¹⁰⁵

BOX 14

Mechanization in capture fisheries in Maharashtra and Orissa, India

"Motorization and mechanization of fishing vessels led to a concentration of fish landings at fewer harbours and landing sites and, in some cases, resulted in the takeover of fish trade by fish merchants [who were men]. This process displaced many women from the retailing of fish." ■

- **Gender-differentiated impacts of national export-oriented growth policies and increasing globalization/commoditization:** These factors have often led to overfishing, environmental damage, the loss of coastal or inland fisheries resources and the growth of processing factories, which in turn result in a decline in the numbers of local fishers, fish traders and traditional processors. The outcomes can be positive or negative for men, women or both. However, the issues are highly complex and context-specific, and globalization impacts are often interlinked with or reinforced

BOX 15

Globalization increasing gender inequalities and threatening survival in Tanzanian coastal communities

Despite the wealth of their marine fisheries resources, globalization is increasing gender inequalities and threatening the livelihoods of poor fishing communities in Kilwa district (Lindi region). Traditionally men fished with small (often non-motorized) boats while women engaged in seaweed farming, octopus trapping and netting very small fish in the intertidal zone. The size and sustainability of men's catches have been undermined by increasing pressure on and conflict over resources, due to the large influx of non-residents taking up fishing after losing their livelihoods in the 2004/2005 drought, and the expanding operations of large fishing companies offshore. Women have also been disadvantaged by the commoditization of seaweed and octopus on international markets since the mid-1990s. As octopus became more valuable, large Tanzanian fish traders began to compete with local traders. This pushed up prices, and men moved into octopus trapping, displacing women, who lost an important source of food and income. However, local men's (and the communities') benefits may be short-lived. Groups of men rent boats from intermediaries (to whom they have to sell their catch) to go to the reefs (off limits for women for customary social reasons), and use modern technology such as scuba diving gear. Competition with fishers from outside the area has also increased. With a greater supply of octopus in the market and rising costs of gear and boats, profits are dropping steadily. As the men do not respect women's long-standing custom of restricting fishing to specific seasons to preserve stocks, octopus is becoming scarcer. Similarly, women have been displaced by men in seaweed farming, but once again the intervention of intermediaries and the increased farming efforts have led to declining returns, despite the increasing value of seaweed in international markets. ■

by other factors, as for example in the United Republic of Tanzania (BOX 15). This case study illustrates the interplay of at least three factors: i) the influx of many fishers after the 2004/2005 drought, with others being drawn in later by the desire to profit from the growing market demand for octopus; ii) the lack of organization of the market and the proliferation of intermediaries; and iii) men exploiting their gender-related power to take over a traditional female enterprise with increased earning potential.

Women are not necessarily the losers, as for example in Goa, where entrepreneurial women took advantage of new opportunities and were able to send their sons and daughters to school, and help them move into middle-class professions (BOX 16); or where the development of processing factories has created wage labour work for women. In the latter case, however, the growth of such factories sometimes leads to the loss of more jobs than they create. For example, while growing exports of fish out of Africa (over 70 percent of Ghana's commercial catch and 80-90 percent of the Nile perch from Lake Victoria are now exported) led to new jobs in processing factories, evidence suggests that for every factory job created, six to eight processing jobs were lost in the informal sector.¹⁰⁶ Bulk buying of fish and the growth of a large wholesale trade undermined the role of small fish traders, particularly women traders, who were the first to be displaced or confined to undersized, low-value and illegal fish.¹⁰⁷ Similarly, a 2003-2004 study of 25 fishing communities on the shores of Lake Victoria

in Uganda found that although half the communities believed that government promotion of fish exports had resulted in increased household incomes, women complained that as the Nile perch catch was being taken directly from the beach in refrigerated lorries to the processing factories, they were losing their traditional livelihoods from smoking fish, and their families' consumption of fish was declining, with negative implications for their nutrition.¹⁰⁸ In some countries, the export of fish has been compensated for by the import of cheap (frozen) fish for local processing or retailing.¹⁰⁹

Competition with factories that produce cheaper fishery equipment can also undermine women's livelihoods. For example, in Brazil, women who traditionally engaged in net weaving, often at home, were finding their orders from local

boat owners dwindling as the latter bought factory-produced nets. The lack of an organization to regulate their working conditions and negotiate contracts and prices resulted in these women gradually losing this work.¹¹⁰

- **Gender inequalities in market access:** Women generally have less access than men to transport (and are more constricted by safety concerns if travelling alone or in small groups), market information, information on fish quality and hygiene standards and regulations (especially for export markets), and marketplaces, which often lack sanitary facilities including separate toilets for women and their young children. Women are also exposed to greater harassment in markets, have more difficulty in finding secure storage facilities for their unsold produce, and are thus more prone to theft. Women traders' competition for scarce fish in small-scale fisheries systems not uncommonly leads to sex-for-fish exchanges whereby women guarantee their supply of fish from male fishers (but expose themselves to HIV/AIDS and other sexually transmitted diseases).¹¹¹ The opening (or closing) of borders following conflict or regime changes can have significant, often gendered implications for fish traders. For instance, with the opening of the Cambodia-Thailand border in the 1990s, and the legalization of cross-border trade with stricter enforcement of trade regulations, women

BOX 16

Fisherwomen in Goa, India

Since the 1970s, entrepreneurial women among the Catholic Kharvi fishing caste in Goa have taken advantage of the mechanization of male fishing (mainly trawling and purse-seining) and the increased supplies of fish and prawns to earn more and increase their social standing. Female fish vendors of the traditional Kharvi fishing community managed to create niche markets and make the transition from fish peddlers to market entrepreneurs, working in cooperatives. This led to more egalitarian gender relationships within fishing households and communities. However, these changes have had some unanticipated impacts. Because of their economic success, many fisherwomen have sent their sons and daughters to school, and encouraged them to aim for middle-class professions or non-agricultural wage jobs instead of working in the fish trade. One clearly articulated reason has been to help their children to "pass" as members of a higher caste. The livelihoods of many artisanal fishers have been threatened by the expansion of large-scale fishing operations, while others have opted for wage jobs on modern trawlers or purse seiners. Nevertheless, the future of fish marketing remains uncertain, as overexploitation and competition from foreign factory vessels could again alter the marketplace. ■

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traders saw their fish trading businesses decline. After women had run profitable businesses in the earlier years, based on smuggling fish across borders using their social networks, the open border policies benefited the large (male) traders who could bulk sales to save costs, and more easily pay the many official and unofficial fees demanded along the road.¹¹²

- **Health and safety:** As the fisheries and aquaculture sector involves a wide range of activities both within and among regions and countries, the associated occupational health and safety (OHS) concerns also vary according to the subsector and specific circumstances. Fishing from a small boat on a relatively small, protected lake, or from a large industrial vessel or small boat on the open sea; collecting shellfish and small fish on the shores or in small rivers; processing fish on a small-scale with traditional methods or in a large mechanized factory; fish farming in an intensive aquaculture system or in a homestead pond; making or repairing boats and gear – all of these activities have different risks.¹¹³ Fisheries-related safety and health hazards and the level of risk they pose also vary by gender, age and socio-economic status.ⁱⁱⁱ Bad weather, for example, will be more dangerous for fishers at sea – usually men and/or young men and boys – and for the poor, as richer vessel owners are more likely to own better-designed boats, radar, radios (for weather forecasts) and safety equipment, and to follow risk-reducing OHS procedures. In female-dominated shore-based jobs, such as artisanal fish processing, women and girls face risk of injury from smoke inhalation or burns. In cases where girls and boys (or women and men) do the same work, they may face similar risks (for example, in using toxic chemicals in aquaculture) or gender-differentiated risks. For instance, girls and women fish workers and traders are more likely to face sexual harassment, including rape, than boys and men are. Some safety measures may be less culturally acceptable for women, such as certain types of protective clothing.
- **Accidents/risks:** According to the ILO, fishing at sea is probably the most dangerous occupation in the world.¹¹⁴ This largely affects men, although the loss of men's lives can have devastating effects on their widows and children. However, case study evidence indicates that a considerable number of boys (including many under the age of 18) work at sea, in hazardous work such as handling dangerous machinery, transporting heavy loads, and working very long hours or during the night, often without life-jackets and other safety equipment.¹¹⁵ Fatality rates are increasing in artisanal fisheries in developing countries as a result of a variety of factors:

 - advances in vessel and fishing technologies, including motorization and new types of fishing gear, which permit fishers to go further out to sea where catches are higher but conditions riskier;
 - overexploitation of coastal resources, so fishers work farther away from the shore in fishing craft designed for inshore fishing, or in unsound “sea-going” boats copied by untrained builders, often using cost-cutting practices;

iii A hazard is anything with the potential to do harm. A risk is the likelihood of potential harm from that hazard being realized. FAO-ILO. 2011. *FAO-ILO good practice guide for addressing child labour in fisheries and aquaculture: policy and practice. Preliminary version*. Rome. Page 32, Box 12.

- poverty that limits access to safety equipment or radios;
- lack of training, experience and skills, especially because older generations have no experience of fishing offshore: there is a lack of traditional knowledge for today's crews about essential practices in navigation, weather forecasting, communications, living habits during extended periods at sea, and safety at sea; the problem is compounded by the growing employment of casual workers, often from the ranks of the rural landless or urban unemployed, with no fishing experience;
- lack of or ineffective OHS systems;
- commercial pressure to meet contracts and/or maximize profits, creating incentives to minimize the number of crew, and encouraging fishers to take greater risks.

International voluntary guidelines do not have much effect on artisanal fisheries, largely because standards are directed towards decked vessels of more than 12 m. Fishers must often rely on national legislation to ensure the safety of their craft, particularly when the vessel owner does not participate as a crew member. While most countries have regulations concerning the design, construction and equipment of vessels, in developing countries these are sometimes outdated, inappropriate and inadequately enforced.¹¹⁶

Fisheries presents many other health and safety hazards. Adults (especially women) and children often engage in the collection of fish, seaweed and shellfish near the shore or in inland waters, where they can be exposed to allergic reactions, water-borne diseases or wild animals (such as crocodiles and hippopotamuses in lakes and estuaries). They face other hazards in handling toxic agrochemicals in aquaculture; in unloading boats and transporting heavy loads at markets; and in processing, where they can be exposed to burns and smoke inhalation. Boat builders are also exposed to a variety of toxic materials and dangerous equipment.¹¹⁷ Children are often at greater risk than adults because of their immature bodies, more limited knowledge and experience of hazards and risks, and greater difficulty in requesting employers or family adults to give them protective clothing, or in refusing to undertake dangerous tasks.¹¹⁸ Relatively few of the studies that give examples of hazardous child labour in fisheries and aquaculture differentiate between girls and boys; this needs to be addressed in order to provide essential data to inform policy and the authorities responsible for enforcing anti-child labour legislation. Some gender-specific hazards are given in **BOX 17** as indicative examples.

- **Food quality and safety:** Fish contamination¹¹⁹ causes not only huge health problems (deaths, illness and economic losses through lost labour or medical costs), but also major financial losses to the industry, especially if importing countries ban imports from countries that fail to meet the international standards based on the Hazard Analysis and Critical Control Point (HACCP) system. Contamination can occur at any point in the production chain, from capture to consumption. At the level of capture (primarily a male

BOX 17

Examples of hazardous child labour in fisheries and aquaculture

In the Philippines, children are engaged as swimmers and divers in *muro ami* (a type of net) fishing for catching reef fish. It is an extremely hazardous form of work that exposes child labourers to the risk of ear damage, injuries from falls, shark attacks, snake bites and drowning.

Child labourers in Bangladesh's shrimp processing plants tend to work hours that prevent them from going to school. They often work for nine hours without a break, in extremely unsanitary conditions, and are frequently cheated of their pay. Cuts to hands and feet are common and can become badly infected, abscessed and swollen. Sexual abuse, including rape, is also reportedly common. For unmarried girls, the very fact that they work in the industry can tarnish their reputations and marriage prospects, regardless of whether or not they engage in sexual activity.

On Lake Malawi, young boys are sometimes used for bailing water out of the small fishing boats operating on the lake. These *chimgubidi* ("water pumps") have to work throughout the fishing trip, often lasting overnight. If they fall asleep or get seasick, they get only half pay and, in the case of seasickness, they are forced to drink lake water (to "treat the sickness"). On Lake Chilwa, young boys work as *bila* boys to guide and disentangle the seine nets when they are pulled in. This is a dangerous task, requiring prolonged periods in the water and diving to unsafe depths.

In Ghana, cases are reported of boys and girls being trafficked through intermediaries, for example, to catch *kapenta* (*Limnothrissa spp.*) in Lake Volta. The depletion of fishery resources in the lake is ostensibly the reason for hiring children, as they are a source of cheap labour. In addition, their smaller fingers are believed to be efficient in removing *kapenta* from small-meshed gillnets. They often also have to dive to release entangled gillnets from tree stumps, and suffer high rates of schistosomiasis and Guinea worm disease, and sometimes even drown. Night fishing involving children also leads to high rates of school dropouts. ■

responsibility, although women also fish or glean in some inland and coastal systems), it can stem from pathogenic micro-organisms that are part of the normal flora of the fish, or from contaminants from industrial waste or agrochemicals. It can also develop from unhygienic handling, processing and storage practices throughout the value chain: on boats, on the shore or during transportation, processing, storage and retailing – activities that are often strongly gender-differentiated according to the country/culture and type of fish. Finally, contamination from parasites can occur from eating raw fish (because of cultural preferences) or improperly cooked fish, usually the responsibility of women. Thus, efforts to tackle problems of fish quality and safety need to be well-targeted and gender-sensitive.

- **HIV/AIDS:** Various studies in Africa and Asia show HIV/AIDS prevalence rates among fishers that are three or more times higher than those among the general population, with women often having higher infection rates than men.¹²⁰ The impacts on fisheries are severe and include reduced production and availability of fish, a vital source of protein for low-income groups; loss of family income and experienced labour in fisheries; disproportionate reduction in female labour in fisheries, as women bear

BOX 18

HIV/AIDS vulnerability among fishing communities

The following are the predominant risk factors:

- High rates of mobility and migration among (male) fishers and (female) fish traders, with the social norms and hierarchies that generally constrain sexual behaviour in home communities often breaking down in fishing camps or ports.
- The strong gender division of labour in most fishing operations means that most market transactions are also strongly gendered. Poverty among women, and gender inequalities in economic and social power often make women traders vulnerable to sexually exploitative relations. These can lead to “sex-for-fish” deals, where women and girls secure access to fish for sale or processing, by offering sexual services to fishermen in lieu of, or as well as a monetary exchange.
- Regular cash incomes among fishers, without opportunities for saving or investment in fishing or other businesses, combined with easy availability of beer sellers and sex workers.
- Poor health service infrastructure in remote fishing areas; mobile fishers’ lack of knowledge of health services available in large ports; poor condom availability; and neglect by national/regional HIV/AIDS prevention and treatment programmes of fishers who are migratory or live in remote areas.
- As fishing is among the highest-risk occupations, this often leads to a culture of risk denial or risk-taking among fishers in the sexual arena. Also, as fishing people are often socially marginalized, this may lead men to exaggerated or “oppositional” forms of masculinity, as in other socially excluded communities that challenge the behavioural norms of “mainstream” society; this often results in spending on drink and sexual services when onshore. ■

the brunt of caring for the sick; loss of knowledge and skills that are passed from generation to generation; and short-gain, environmentally destructive practices such as overfishing near shores. The predominant risk factors are given in **BOX 18**.¹²¹

2.2.3 Wage work in industrial fisheries

As mentioned earlier, evidence indicates a common failure across the developing regions to respect labour laws and provide decent working conditions in fish industries. This applies to both men and women, whether working in the fishing fleets or in factories. However, women are often further disadvantaged, as wage work in fisheries industries is rife with gender inequalities, typified by the following:

- **Gender inequalities in employment status:** Numerous case studies of fish processing factories, where women often comprise the majority of the labour force, find that the industry is marked by rigid occupational segregation by gender in all regions, with women largely working in low-status, less-skilled and low-paid jobs, and on informal casual and

temporary contracts that disqualify them from receiving social benefits.¹²² Their informal casual status also restricts their opportunities for training and advancement compared with men, who predominate among the supervisors/managers or skilled technicians. Moreover, women are generally paid less than men, even for the same or equivalent work.¹²³ Although many factories are not unionized, even when they are, women are often precluded from membership because of their casual status, and when they are members, they rarely hold leadership positions.

- **Failure of companies to provide decent working conditions and apply labour laws:** This applies to deep-sea and coastal marine fishing, which are predominantly male, as well as to the fish processing factories, which employ both male and female labour. However, in these factories, women workers, who often represent well over half the workforce, tend to be considerably disadvantaged *vis-à-vis* their male counterparts. For example, women workers in the Tanzanian Nile perch processing factories were segregated into low-status, poorly paid, “caring” types of work such as laundry work, fillet trimming, packing, sweeping and cleaning, while men predominated in higher-paid jobs such as those involving procurement, administration, quality control, environmental engineering, accounting, production supervision, ice machine operation, and whole fish filleting and skinning. Women were hired as casual workers, and thus were not eligible for holiday or maternity leave or social benefits. They also worked day and night shifts, making it difficult to attend to family responsibilities.¹²⁴ In Thailand, a study of shrimp processing factories where the wage labour workforce was entirely female found harsh conditions: the work involved standing all day, workers had to ask permission to go to the toilet, there were no unions, overtime was compulsory and all jobs were casual.¹²⁵ Studies in the Indian states of Kerala and Tamil Nadu found the conditions of women workers in shrimp processing factories had become increasingly precarious, with no attempt to apply international labour standards, despite the acceptance of international quality control standards for the fish and shrimps. Labour contractors recruited young women who were taken to processing plants sometimes two to three days’ journey from their homes. The women lived in crowded and unhygienic conditions, worked long hours, had restricted freedom of movement, and were paid wages at the end of the season after deductions had been made for food, medication and other charges. Despite the protests of the National Fish Workers’ Forum – a mass movement representing male and female artisanal fish workers and poorer groups in fishing communities – and Supreme Court decisions to support some of their demands, solutions to these issues have rarely been implemented.¹²⁶ Even in the middle-income countries of Argentina, Brazil and Chile, work conditions in fish factories are often gruelling, and various ploys are adopted to avoid paying costly social charges. Recent evidence indicates, for

example, that in Argentina (Patagonia) women generally had continuous but *informal* work in fish factories, so they were not eligible for medical or social coverage. In contrast, Uruguay provided a positive experience where most women fish workers had permanent jobs so they had access to social and health care, including maternity leave and return rights to work.¹²⁷

In the Brazilian State of Pará, the majority of women in coastal communities had never enjoyed formal work experience with social security coverage, but women working in the large fish plants, especially in the state capital, were an exception. However, the companies owning these plants have recently started to change hiring practices by outsourcing the work and selling parts of their fleets to former boat commanders and to workers' cooperatives, some of which provide female labour for the processing lines. This is likely to jeopardize men's and women's access to social security. Because of the fluctuations in the volume of fish unloaded, and periodic bans on shrimp fishing on the northern coast, companies increasingly resorted to casual labour when the supply of fish or the demand was low, to avoid bearing the fixed costs of the workforce. However, when there was a full load of fish, women were expected to work overtime, regardless of their family commitments.¹²⁸

Chile typifies a common situation where industries in developing countries try to avoid adopting national or international labour standards to keep their products cheaper *vis-à-vis* those of developed countries, which are obliged to respect labour laws and rights, although the transnationals based in developed countries acquiesce in these ploys. Such devices are known as "social dumping", with developing country workers, especially women who predominate in casual jobs, deprived of fair labour standards and legal rights; these include minimum salaries, OHS measures, freedom of association, collective bargaining, layoff conditions and prohibition of discrimination on grounds of gender, race or migration. Given Chile's leading role in many fish and other agricultural sector export markets, workplace hygiene and quality control are generally good, while less attention has been given to working conditions and labour rights. In a study of 23 fish processing plants in southern Chile, just under 43 percent were unionized, and generally had contracts or collective agreements in place to deal with working conditions and remuneration. More than half the workers in the study plants were women, mainly hired directly on indefinite contracts, but supplemented by seasonal contractual workers during times of higher volumes of raw materials, or higher market demand. While the average wage was about 30 percent higher than Chile's minimum wage, most plants paid a combination of fixed wages and bonus or incentive payments. The former represented an average of 72 percent of the salary, but the pressure of meeting the targets of the bonus system increased stress, and had negative impacts on workers' health.¹²⁹

- **Gender-blind responses by government, companies and unions:** Although there is growing evidence of poor working conditions in the fish industry for all developing regions, governments and companies rarely take action. Fisheries ministries or departments tend to focus on production and environmental issues and leave employment issues to labour ministries or departments, which tend to give little attention to the fisheries sector, and almost none to gender issues in fisheries. Fish processing companies – especially those specializing in exports – are increasingly shifting from permanent employment to informal, flexible work arrangements and systems of remuneration, and/or outsourcing production to contractors who hire unregulated contract labour.¹³⁰ While these flexible arrangements are often promoted as a mechanism to facilitate cost-cutting measures, they also enable fisheries industries to adapt rapidly to variations in supply and demand, while maximizing corporate profits. However, the costs of this flexibility are passed on to the precarious workforce.¹³¹

3

Good practices in closing the gender gap and realizing women's hidden potential in fisheries and aquaculture



This chapter highlights some good practices that could be replicated, adapted or scaled up to realize women's hidden potential in fisheries. It also outlines examples of successful gender-equitable implementation modalities, including modalities for enforcing labour laws, safety laws and regulations, and quality and hygiene standards. The focus is on public action to reduce gender disparities in the fisheries sector and exploit women's hidden potential. Following Drèze and Sen (1991), public action is viewed as "not merely what is done *for* the public by the State, but also what is done *by* the public for itself".¹³² This means recognizing and supporting civil society along with organizations of fishers, fish processors/traders, fish workers and employers, not only in identifying gender discrimination in fisheries and pressuring government to take action, but also in taking independent action. The major challenge is to integrate the actions by different stakeholders so they perform complementary, positive roles. The state has a key role to play by providing an enabling environment to foster equitable provision of services to fishing communities, and private sector commitment to decent, gender-equitable employment in fisheries (through, for example, fiscal and other incentives or quotas), while providing a fisheries policy and regulatory system in addition to labour laws and regulations, with appropriate enforcement mechanisms in formal/informal and rural/urban markets.¹³³

3.1

Strategies and good practices across the fisheries sector

This section offers some overarching strategies and good practices to capture women's lost potential in fisheries, which deserve consideration and application, where appropriate, in both small-scale and industrial fisheries value chains. These practices need to be viewed in the context of the rapid expansion of aquaculture in many countries and the problems it sometimes brings, as well as the problems

of declining marine and inland catches (BOX 19). Although these declining catches *directly* affect mainly male fishers (although women fishers may be affected in some small-scale coastal systems), women are *indirectly* affected through the declining supply of fish for processing or marketing in small-scale or factory systems. Thus, in addressing the pressing problem of declining catches, policy-makers need to recognize the complexity of the links in fish value chains, and men's and women's complementary labour roles in these chains.

3.1.1 Promote pragmatic action to capture women's lost potential

The promotion of pragmatic actions to capture women's lost potential in fisheries needs to be supported by enabling policies and legislation as well as adequate investments and recurrent budgets, to achieve the following:

- Ensure gender equity in new fisheries policies and legislation, including in access to resources, and where necessary revise existing policies and laws to eliminate gender discrimination. For example in Brazil, women traditionally participated as shellfish or algae collectors, in fishing along the shore and in fish processing, but until the 1988 Constitution they were not legally permitted to work in fishing, which was considered a male activity. Only in 1988 did a Presidential Act abolish the prohibition on female labour in

BOX 19

Recovering the "sunken billions"

Recovery of the global "sunken billions" of some US\$50 billion a year needs a two-pronged approach: reduction in fishing effort and fleet capacity, and rebuilding of fish stocks in a sustainable way. Policy-makers need to tackle fisheries reform as part of a broader public policy agenda embracing fiscal reforms, pathways out of poverty, social equity in the distribution of benefits, and greater transparency in stewardship and accounting for natural capital. This will require broad-based political will founded on social consensus among fishers on equitable transition pathways. These include provisions for creating alternative economic opportunities, establishing social safety nets for affected fishers, strengthening marine tenure systems, curtailing illegal fishing, and reducing/eliminating distorting subsidies.

Successful implementation of fisheries reform will require the empowerment of poor fishing communities, especially marginalized men and women within these communities. Effective stakeholder consultation, the establishment of secure user and property rights, and collective action by a strengthened civil society are essential. These social measures will need to be complemented by institutional and technical reforms, including decentralization and co-management initiatives to create more manageable fishery units, sound scientific advice, and technical measures such as closed seasons and effective registration of vessels. To be effective, these measures will also need to be paired with fiscal reforms geared towards the following: phasing out subsidies that enhance fleet overcapacity and overfishing; redirecting public support to strengthening fisheries management capacities and institutions; and funding social safety nets to protect poor men and women in the fisheries reform process. ■

fishing. Nonetheless, today women rarely participate in deep-sea fishing, as male fishers believe that their presence on a boat brings back luck. However, the situation is slowly changing, and in some states in the north and northeast, women work with their families in small-scale fishing, and widows may even work alone on artisanal fishing boats.¹³⁴

- Incorporate gender issues into international and regional instruments on fisheries (conventions, codes of conduct, voluntary guidelines) and in trade agreements – such as those of the World Trade Organization, or regional agreements such as the North American Free Trade Agreement – and ensure their implementation.
- Improve women’s access to land, ponds, production resources, inputs and markets.
- Help men and women use the resources and opportunities they already have more effectively (for example, through improved technologies, credit, extension, or help in leasing ponds/equipment and forming marketing cooperatives). Depending on the culture and whether men and women have separate “purses”, or work together in common family enterprises, such support might need to target men and women as individuals, as families, or in mixed or single-sex groups.
- Go for “small fixes” whenever possible (for example, **BOX 20**), which are often more effective than comprehensive but overambitious programmes that may be difficult to implement. Small but *real* improvements can build the confidence, trust, social networks, capital and other resources needed to embark on further small step-wise developments. Documenting the benefits of such small fixes, and disseminating the evidence of good practices can encourage scaling up or out by other stakeholders.
- Support local collective action, recognizing that local agendas may be controlled by the more powerful fishing community members and influenced by outside traders/entrepreneurs. For example, FAO’s Sustainable Fisheries

BOX 20

Small fixes can increase fisheries production and income for poor women

Women’s traditional fisheries in streams in the southern Cameroonian rain forest, using basket traps and small dams (*aloks*), engage some 3 400 women in fishing and marketing of freshwater prawns, with an annual value of US\$3.4 million. According to local opinion, at least ten times the present volume could be absorbed in markets in Douala and Yaoundé (and regional towns) at current prices, if only transport and technology constraints and farmers’ pesticide residues in streams could be solved – increasing revenues by 10 percent. ■

Livelihoods Programme (SFLP) helps support marginalized groups of men and women by strengthening meso-level institutions such as unions and cooperatives, as well as local community-based organizations (CBOs) and NGOs.¹³⁵

- Strengthen administrative action, for example, by ensuring that female fisheries extension agents are recruited; that both male and female extension staff are given gender-awareness training; that they both work with women (unless this is culturally proscribed); and that women fishers, processors and traders are involved in stakeholder discussions on fisheries issues (BOX 21).

BOX 21

Reversing gender-blind policies in new management regimes in the Congo

In 2005, the Congo's fisheries administration agreed with the fishers of Makotipoko on the Congo River on new measures to protect fisheries resources. However, by excluding women from the discussion, they failed to address efficiency issues in the link between the capture and processing nodes of value chains for different fish species, as well as the implications for women's work in fisheries. For example, the new measures included the banning of some fishing practices used by women, while promoting new practices about which women had no information. To address these issues, Makotipoko community members proposed a gender action plan to analyse the effects of the new resource management regulations on fishing techniques, on fish processing, and on the livelihoods of those involved; to provide women with training in new fishing techniques, including aquaculture; and to ensure that the all-male extension staff provided services to women as well as to men. ■

3.1.2 Improve the knowledge base

- Invest in knowledge and statistical systems for collecting, analysing and disseminating more comprehensive and reliable data relevant for decision-making: These data should be disaggregated by gender for different types and scales of fisheries systems, with a particular focus on filling data gaps in small-scale commercial and subsistence capture fisheries and aquaculture. The data should also be disaggregated by major node of the different value chains to permit analysis of relations among the nodes, especially between production/capture and post-harvest. Such data are vital in justifying and directing investments to underperforming fishers and fish workers – especially poor women, who are typically neglected by fisheries policies and programmes – to improve production, productivity and their families' consumption of good-quality protein, thus remedying the sector's lost contribution to national development and welfare.

In practice, many developing countries will not be able to finance major investments in fisheries data collection and analysis. Given their limited resources, it would be cost-effective to develop synergies with other national data collection surveys such as household income, expenditure or consumption surveys, large-scale studies on livelihoods, nutrition or natural resource governance, and national or sectoral labour surveys (including surveys on child labour), by adding specific questions on gender and age categories in fisheries. This would also help mainstream fisheries issues into other planning and decision matrices and strategies.¹³⁶

- **Undertake analysis of gender roles and gender relations, disaggregated by age and socio-economic class, throughout fisheries value chains** (for human consumption, fishmeal or other uses, including fish feed value chains such as forage/feed conservation technologies): Identify constraints and opportunities for men's and women's participation, disaggregated by age and socio-economic group; the interactions among their roles and responsibilities; their benefits as individuals, groups, associations or cooperatives; and entry points for policy and other interventions to recoup women's lost potential.
- **Set up systems to monitor public, private, donor and civil society investments in the fisheries sector and their impacts, in a transparent and accountable manner:** This would include identifying allocations of investment by type and scale of activity, beneficiaries (by socio-economic category, gender and age group) and outcomes (and their sustainability), in terms of production, incomes, employment, nutrition, empowerment and the environment.
- **Make these data widely available as public goods, and publicize their availability among all concerned stakeholders through professional networks, Web sites, journals and other media:** It would be especially important to ensure that organizations representing own-account or wage labourers in the small-scale fishery or aquaculture sector, including social movements working in this sector, are informed of and have access to these data to use for advocacy and negotiation purposes. Such data should also be available to citizens, in view of the growing importance of consumer demands for ethical and fair trade and decent working conditions in fish supply chains.

3.1.3 Recognize and promote the interrelationships among efficiency, gender equity and women's empowerment

While there is a need to work for "efficiency outcomes" in fisheries value chains, it may be impossible to achieve these without complementary gender-transformative policies and actions – to challenge/change the very norms, values and practices that block their implementation processes and impede gender justice.

The links among efficiency, gender equity and women's empowerment often emerge from and/or are reinforced by a variety of mechanisms, including legal or administrative measures to give women access to land or ponds for fisheries; market forces; skills training programmes; and, most notably, male decision-makers' deliberate choices. Sometimes the precipitating factor in all these mechanisms is the search for efficiency, with gender equity arising as a by-product. In other cases, policies, laws and projects that set out to improve gender equity also lead to women's greater and more efficient participation in fisheries, thus improving their own incomes and/or the efficiency and returns to other actors (including men) in other nodes of the fisheries value chain.

Initiatives to improve women's access to land or ponds for fish farming, often through leases, have had mixed results. For example, the Oxbow Lakes Small-Scale Fishermen's Project in Bangladesh, which initially targeted only men but

later supported the formation of women's groups to ensure access to ponds on similar lease arrangements, showed how easily such action can be sabotaged by powerful men or the women's husbands. Of the ten pond-farming groups formed, five remained under women's control, two were taken over by men and three were leased to men by the women.¹³⁷ In general, small-scale NGO projects that help groups of poor women obtain access to ponds seem to be more successful, as there is less incentive for elite capture.¹³⁸

Market forces often play a key role as, for example, in the case of the entrepreneurial women traders in Goa, described in **BOX 16**. This case illustrates

and confirms findings from other agricultural sectors that social norms and attitudes regarding women's status and roles evolve in response to new economic opportunities, with women's higher and more regular earnings helping them to command greater respect and influence over household and community decisions.¹³⁹ Projects that provide women with skills training also help build these interrelations among efficiency, gender equity and empowerment. Projects in Bangladesh and Viet Nam, for example, taught women new skills in fish farming and increased their mobility and status. The husbands of the women involved in the Viet Nam project greatly valued their wives' new technical skills, and some of them even started to help their wives with the domestic work, giving the women more incentive to solicit women's participation in fishing or fishing socioprofessional organizations to improve efficiency. Likewise, in Tafouka, the Niger, the village council of elders invited representatives of women's groups to participate in the council in order to take better account

of women's needs. This increased the social cohesion and motivation of the village's community-based organizations (CBOs) and led to their unionization, enabling the community to join a national federation of CBOs that gave them access to a grain bank-based credit scheme and input supply shops. In Burkina Faso, male and female CBO leaders signed an agreement that led to greater equity in access to landed fish. The process of implementing the agreement also fostered social dialogue and information sharing, and women started participating in local radio programmes. The result included more gender-equitable community power relations and more efficient fisheries. In the Gambia, the boards of the Fisheries Service Centre (which provided ice and cold storage and processing facilities) and

BOX 22**Women can be impressive fish union presidents**

Joanna Rodrigues Mousinho was elected the president of a fish *colônia* in a Brazilian fishing community with a registered membership of 1 000 men and 1 225 women, and fought to defend the rights of the fish workers and shellfish gatherers. As a result of her struggles, this *colônia* was the first in Brazil where women received licences to fish and were recognized as fish workers equal to men. The *colônia's* members are now all registered in the national welfare system. Some 810 women fish workers have retired and receive retirement benefits. Women fish workers receive maternity allowances and an unemployment allowance during the off-season. They (or their families) are also eligible for social security benefits in case of accident or death. Most women pay *colônia* dues for themselves and their husbands, who often do not make payments on time. Joanna remarked that "in the beginning it was very difficult because most of the men believed that the position of a woman was behind the stove or behind the sink washing clothes. Now I am very happy with my work in the *colônia*. I am well accepted and many people support me... It has not been easy administering this group, and to also be a fish worker, a mother and a grandmother." ■

the credit union recognized that certain gender-inequitable rules and regulations were causing the exclusion of women, which was harming the chain efficiency. After reviewing these gender issues and their own policies and services, the board leaders and the fisheries department agreed on new policies and procedures that would improve gender equity in opportunities in fish processing and marketing, and thus enhance efficiency.¹⁴⁰ Similarly, in Brazil, where *colônias*^{iv} have opened up and admitted women, integration has followed naturally, efficiency has increased and the exchange of ideas and access to new social spaces has led to a reconsideration of traditional gender roles. A few women have been elected president of the *colônias*, exercising very considerable responsibility (BOX 22).¹⁴¹

3.1.4 Free up women's time

- Providing labour-saving technologies for domestic and fisheries work (domestic stoves, ovens for fish processing, more efficient processing and storage equipment, etc.), better infrastructure (electricity, running water, refrigeration, roads, equipped landing sites and markets) and services (transportation, health, extension, education, credit, etc.), promoting more equitable sharing of domestic and caring work with spouses, or providing child-care arrangements within the community or at fish processing factories – these improvements will help free up women's time to take advantage of new opportunities in fisheries, and young girls' time to attend school. They depend on factors such as changing social norms and attitudes (with men feeling that it is culturally acceptable to help their wives in their domestic/caring work);¹⁴² institutional arrangements in fish industries for paternity leave; and respect for maternity benefits, which are legally mandated for regular workers, but not always implemented in many developing countries. As many female (and male) fish workers are casual, and thus do not qualify for maternity, paternity and other social benefits, there are major challenges for fish worker unions to negotiate such agreements with government and/or individual fish industries.

3.1.5 Improve safety, hygiene and health

Measures to improve safety, hygiene and health need to be gender- and age-sensitive to cover differing needs.

- **Accidents/risks at sea (which mainly affect men and boys):** Various FAO, ILO and International Maritime Organization (IMO) conventions, recommendations, guidelines and technical assistance programmes are helping many developing countries by improving:
 - accident reporting on causes of danger and vessel loss, to focus and prioritize actions to improve safety;
 - formulation, revision and enforcement of national regulations and technical standards on vessels, equipment and fishing practices, in collaboration with all stakeholders;

iv Fishers' unions at the municipal level.

- training throughout the sector (including marine, coastal and inland fishing) of marine authorities, boat builders, boat owners, skippers, and crews;
 - gender-sensitive preparedness for natural disasters (for men at sea, and especially for women and youth working on the shores);
 - dialogue and collaboration between governments and male and female fisher representatives;
 - national sea safety programmes and institutional support for fisheries training centres.¹⁴³
- **Safer use of agrochemicals in aquaculture:** This is an issue of concern to men, women and children engaged in aquaculture. As women and children have less contact with (male) extension workers in most countries, they are almost certainly less aware of the risks than men are, and also less likely to have protective clothing or gloves. Gender-, age- and wealth-sensitive measures are urgently needed to tackle this problem. FAO's Junior Farmer Field and Life School projects have had some success in training groups of youth, aged between 15 and 18 years, in a range of interconnected skills in agriculture, nutrition, health, hygiene, business (including production), pest and disease management, and income generation.¹⁴⁴ Such programmes can play a significant role in improving the safe handling of agrochemicals in agriculture and aquaculture, and in discouraging children's exposure to hazardous chemicals, with spin-off learning for other family members.
- **Safety against harassment or violence against women in public transport or markets:** Measures are needed to permit women to take their small loads of fish on buses without harassment, and to provide separate toilet and washing facilities in marketplaces, along with areas for storing their goods (to avoid thefts). More accountable public regulation of tax and border officials is needed to eliminate the common demand for informal payments along trade routes, which exploit both men and – particularly – women, who are more subject to harassment.
- **Fish quality and safety:** In recent years, both the fishing industry and the fish and food inspection services in many developing countries have made substantial progress in adapting processing and inspection methodologies to satisfy Hazard Analysis and Critical Control Point (HACCP) requirements for export markets. However, only a few countries have made the HACCP system obligatory for fish products sold and consumed in internal markets, even though this would reap large public health benefits, with investments usually being quickly recovered through lower rejection rates and more efficient practices throughout the value chains.¹⁴⁵ No information appears to be available on strategies and successes in gender-differentiated training in these standards and practices, which would vary by country or region, depending on the prevailing gender division of labour. This important data gap needs to be filled in order to inform policy and ensure gender-equitable funding of training programmes.

While these standards tend to be confined to export (and some large internal) markets, little effort has been made in most developing countries towards raising awareness of, and providing training in, quality and safety practices in small-scale commercial or subsistence fisheries or aquaculture. Although this is urgently needed, and such efforts would need to be gender-sensitive and target the men and/or women undertaking different tasks appropriately, it should be recognized that HACCP standards would be very costly for governments to implement in the small-scale sector, particularly at small and often remote ports. These costs would also drive up the cost of fish for the consumer, and could undermine food security. Good practices are being introduced to improve hygiene. For example, in Uganda's mukene^v fisheries around Lake Victoria, drying is largely done in unhygienic conditions on the ground, resulting in a poor-quality product with high post-harvest losses and lower prices than clean and well-dried mukene, FAO introduced improved methods of drying on nets or drying racks. The racks produced the best-quality mukene, with much lower post-harvest losses; but they held less fish than the ground, and the start-up investment costs were often beyond the means of poor women (without credit), even if they could expect higher returns from the racks.¹⁴⁶ Provisions were made to ensure that women project participants had access, as a group, to credit from savings and credit cooperatives (SACCOs). However, the women preferred to take individual loans rather than to be collectively responsible for repayment of group loans for drying racks. SACCO rules insisted that loans had to be endorsed by the borrower's spouse, which further complicated the formation of groups and collective debt. This example illustrates the need for fishery technology development initiatives to be well anchored in the context of the users' needs, skill levels and financial means.

- **Healthy processing practices:** Many traditional methods bring serious health hazards; for example, smoking fish in traditional ovens brings women (and the children who assist them) health risks from smoke inhalation, burns and exposure to raw heat. Traditional ovens also have high fuelwood consumption, and often produce poor-quality smoked fish, with significant post-harvest losses. An improved fish smoking oven, developed by FAO and Ghana's Food Research Institute of the Council of Scientific and Industrial Research, was introduced in Ghana in 1969 and has since been introduced in many other countries (BOX 28).¹⁴⁷
- **HIV/AIDS:** In countries suffering a high incidence of HIV/AIDS, the rate of infection in fishing communities usually exceeds the national average. To address this, FAO and numerous donors and NGOs have supported national development policies and programmes to help raise awareness of HIV/AIDS risks among fishing communities, and to improve prevention, treatment and mitigation. Poverty and gender power relations lie at the heart of the pandemic, so these programmes generally focus on identifying and addressing gender-specific social, economic and occupational vulnerabilities to HIV/AIDS, and gender-differentiated impacts on

^v Silver fish (*Rastrineobola argentea*) is commonly known as mukene or omena.

sufferers or caregivers. As demonstrated in **BOX 23**, various innovative approaches have improved livelihoods, stimulated awareness and attitude changes, and encouraged local communities to take responsibility for their own responses. While these approaches have successfully targeted both men and women, prevailing gender power relations have sometimes

BOX 23**Innovative approaches to tackling HIV/AIDS in fishing communities***The Congo (Brazzaville)*

From 2003 to 2005 the National AIDS Council and FAO's SFLP helped two fishing communities use community theatre groups to dramatize situations of risk from HIV/AIDS, and stimulate their communities to discuss the issues and take responsibility for local action. Such action included collecting information on the vulnerability of different categories of people; producing a video of a theatrical play and broadcasting it on local television stations; broadcasting radio discussions on risk-generating situations and ways of containing them; integrating prevention and mitigation into the objectives of the umbrella organization of fisheries socioprofessional groups; and strengthening partnerships among the community, the umbrella organization and the Congolese Red Cross. The projects also improved access to HIV/AIDS care and support, and set up a local microcredit institution to promote a culture of saving, and to provide credit for diversifying livelihoods or helping families affected by chronic illness. The results also contributed to the development of a national training manual for peer education on the risks of casual sex.

Uganda

In response to studies showing that HIV/AIDS prevalence in fishing communities was three times the national average in 2003/2004, and because fishing communities were not being effectively reached by government HIV programmes, the Department of Fisheries Resources developed a Strategy for Reducing the Impact of HIV/AIDS on Fishing Communities. Interventions, often channelled through beach management units, included raising awareness on HIV/AIDS prevention and treatment, promoting sustainable use of fisheries resources, inculcating a culture of savings, promoting community savings, improving access to social and health infrastructure and services, and providing mobile health services, health education and safe water sources.

Kenya (Suba district)

In response to an ILO study which found that male fishers had sex with local women and female fish traders from Nairobi and Kisumu in exchange for free fish, or the chance to buy fish at reduced prices, district AIDS committees consisting of community members were set up to sensitize people to HIV/AIDS, design prevention strategies (including advice on the use of condoms), and train peer educators. Other activities implemented with ILO support aimed to reduce the poverty push factors leading to risky transactional sex. The Mbita Fishing Cooperative was set up to improve fishery incomes, and also included committees to provide counselling and advice on access to treatment for HIV/AIDS. The fish processing and storage complex in Mbita was rehabilitated so that fishing cooperatives could store their fish longer, and avoid having to sell their catches immediately to big Nairobi businesses at exploitive prices. A District Credit and Savings Union was formed to help fishers save money, and community gardens were established for growing crops to supplement the diets of HIV/AIDS-affected persons. ■

BOX 24

Benin crab value chain: gender and HIV/AIDS

In Benin, crab fishers and local collectors are particularly marginalized, as power relations in the chain are dominated by the Lomé or Accra wholesalers and importers. These power relations are also gendered, as approximately 30 percent of the crab fishers, all the collectors and most of the traders are women. In a trade characterized by migratory trading, the incidence of HIV/AIDS is high. To help improve their livelihoods, empower the women and reduce HIV/AIDS vulnerability, FAO's Fisheries and HIV/AIDS in Africa Programme supported the development of economic interest groups, through which it channelled its complementary technical and social interventions. On the technical side, it introduced ice and insulating material and encouraged the transport of only adult crabs, leading to considerable reductions in post-harvest losses in transit and increased incomes. The project also introduced techniques for rearing *Cardisoma* spp. (land crabs) through mariculture and the fattening of juveniles in the low season. A simple technology, accessible to women and young people, this work did not prevent school attendance or increase women's work, as the tanks were located at home and most of the feed was found nearby.

On the social side, the project trained peer educators, a quarter of whom were young men and women, who were selected by the various actors in the chain. Often working at collection and export landing sites, these peer educators provided awareness-raising sessions on health-related matters including HIV/AIDS, and training in negotiation skills to strengthen local capacities to bargain in the markets. They also engaged in social marketing of products such as condoms, water purification tablets, diarrhoea treatment medicines and mosquito nets.

Women's greater economic power and solidarity gained from participation in an economic interest group increased their bargaining capacity, and probably helped them to insist on protection during at-risk sex. The economic interest groups facilitated social dialogue among men, women and young people, and reinforced commitment to children's schooling, while the synergies generated by the combination of economic and health activities facilitated mobilization and social cohesion at the community level. ■

so disempowered women that more tightly focused gender-specific programmes may be needed as, for example, in the Benin crab value chain (BOX 24).

Drawing on these examples of good practice, fisheries policy-makers and practitioners could take relatively simple but effective steps to tackle HIV/AIDS in the fisheries sector by:

- *replicating, adapting or scaling up successful experiences* such as peer-to-peer education, innovative approaches (for example, through theatre or cartoons in areas of high illiteracy), voluntary counselling and testing facilities at beaches and landing sites, and monitoring of impacts, including support for local community initiatives;
- *strengthening the roles of and linkages among government, civil society, private sector and donor support* in addressing HIV/AIDS among fishers, tackling underlying problems related to poverty and disempowerment (for instance, through off-season labour programmes, fish farming and the provision of microcredit), and exchanging experiences on lessons learned;

- *strengthening the knowledge base*, particularly by collecting quantitative and qualitative data to inform policy and investment decisions;
- *strengthening service providers' engagement with fishing communities and the wider fisheries sector*, to transfer and/or adapt good practices from other sectors to the fisheries sector for quick gains, integrate HIV/AIDS services with other development programmes (livelihoods, industrial relations, education, health care), and develop services that better target the needs of *migrant* fishers;
- *increasing resource flows* to strengthen resource mobilization efforts among stakeholders, including those at different levels in the fisheries sector.¹⁴⁸

3.1.6 Eliminate the worst forms of child labour in fisheries

While the long-term challenge of eradicating poverty is the fundamental precondition for eliminating child labour, some specific, short-term strategies and incentives can help poor fishing communities eliminate at least the worst forms of child labour – including trafficking, forced labour and hazardous work. The ILO divides such work into three main types of action:

- **prevention**, by identifying children at risk and stopping them from becoming child labourers in the first place, especially in hazardous labour;
- **withdrawal, referral and rehabilitation** of children from the worst forms of child labour;
- **protection** of children who are of the minimum legal employment age (14 to 17 years, depending on the country) but are at risk.¹⁴⁹

Some good practices that cross-cut these three action areas include:

- international conferences and their action plans, such as the 2010 Hague Roadmap and the Framework of Action adopted by the International Conference on Child Labour in Agriculture in Washington, DC, July 2012;¹⁵⁰
- endorsement by Heads of State, for example, the Second Declaration on the Prevention and Elimination of Child Labour, July 2012, signed by the presidents of the three Southern Common Market countries (Argentina, Brazil and Uruguay);¹⁵¹
- campaigns such as those run by the Global March Against Child Labour, including the march preceding the 2012 International Conference on Child Labour in Agriculture. Reports on abusive work conditions, including child labour in shrimp farming, have raised consumer awareness, leading to boycotts of individual companies' products or even overall bans on exports from entire countries; however, such boycotts will not lead to better conditions for child workers – who need their jobs – unless they are complemented by legal action to enforce decent labour standards and laws;¹⁵²

- media and social media (including theatre, TV/radio soap operas, wall paintings, posters, blogs) for advocacy and publicizing the advances and obstacles in tackling child labour;
- awareness-raising and capacity-development programmes and workshops for public, private and civil society organizations to develop strategies and action plans for combating child labour, particularly its hazardous forms. Examples (which scarcely mention gender issues, despite their importance in these countries) include the ILO-IPEC (International Programme on the Elimination of Child Labour) project (2010-14) to develop a capacity-building programme to combat the worst forms of child labour (including forced labour) in the Thai seafood processing industry,¹⁵³ and FAO-ILO activities to combat child labour in fisheries in Cambodia,¹⁵⁴ and in agriculture (including fisheries) in Malawi¹⁵⁵ and Mali.¹⁵⁶

Other good practices focus on specific action areas:

Prevention

This means tackling the root causes of child labour in small-scale fisheries and aquaculture, so that children who are potentially at risk do not become child labourers. While the primary cause is poverty, this issue is complex and may involve interactions between the livelihood assets that can change suddenly (for example, with the death, injury or illness of the main breadwinner), and those that change more slowly (such as fish resource depletion or degradation from overfishing, pollution, or fish diseases). Access to competent and relevant schooling is also critical, although often not available in remote communities or for migrants. Prevention thus requires a holistic approach across sectors, combining improvements in the sustainable management and use of fish resources, measures to increase adult incomes from fisheries and other sources, social benefits (health, accident and death insurance, pensions for fish workers and widows/widowers), better health and education facilities, and infrastructure.

International and national labour laws and standards, and legislation against the worst forms of child labour, are fundamental but useless without specific measures to ensure their implementation. These include awareness-raising among parents, local communities and fisher/processor associations, cooperatives, trade unions, and employers' organizations; financial or other incentives for sending children (especially girls) to school; articles prohibiting child labour in codes of conduct in the fisheries sector, and in specific codes of practice in individual fish processing factories; labour inspection systems; and training in sea safety measures and the safe handling of fishery-related equipment, agrochemicals, etc.¹⁵⁷

Well-trying incentives for encouraging children to go to school include cash payments (often to mothers), school feeding programmes, or food for schooling, where the child's family also benefits from the rations. Incentives for migrants include lessons in their own languages and flexible timing of school terms. Improved infrastructure, more relevant curricula and incentives for teachers to serve in remote fishing communities also improve attendance. Special incentives

are sometimes needed to get more girls into schools. Apart from cash payments, successful practices include ensuring that schools – and transport to and from schools – are safe, increasing the number of female teachers, having separate boys' and girls' lavatories, and – in some cultures – having girls-only schools. Improving rural infrastructure such as water and energy systems, roads, landing sites and ice facilities can reduce the time girls spend in domestic tasks such as water and fuelwood collection, freeing up their time for schooling. Evidence that women who earn and control their own incomes are more likely than men to spend on food and education for their children¹⁵⁸ indicates that promoting women's economic empowerment is likely to have high pay-offs in reducing child labour.

The most effective and sustainable results come from combined actions by multiple stakeholders, including different ministries (labour, agriculture, fisheries, education, health), fishers' organizations, trade unions, employers' organizations, NGOs and civil society organizations (CSOs). Trade unions have had some success in disseminating information among union leaders and members to build their awareness of child labour abuses, legislation against child labour and the rights of working children and youth, and also in improving provisions in collective bargaining agreements with individual companies to prohibit child labour.¹⁵⁹ The growing corporate social responsibility (CSR) movement is increasingly taking action against child labour, and for some companies, the reputation of being "child-labour

free" can constitute an important economic incentive. Ethical and fair trade organizations have worked with trade unions, companies and NGOs to encourage and help major retailers improve their methods for inspecting and monitoring their supply chains – not only to eliminate child labour, but also to ensure the application of core labour standards and health and safety provisions.¹⁶⁰ Some employers' organizations are also taking serious initiatives to address child labour in fisheries (BOX 25).

BOX 25

Employers tackling child labour in Thailand's fishing and seafood industry

A series of assessments on the worst forms of child labour in 2005 found that workplace injuries were very common throughout Thailand's fishing and seafood industry. In one province, for example, 30 percent of the survey's child respondents reported that they had been injured on the job. The injuries were attributed to overwork, heavy loads and lack of sleep. The workplaces ranged from unpleasant to hazardous. The Employers' Confederation of Thailand (ECOT), which was an active member on national child labour committees, agreed to tackle hazardous child labour within the fishing and seafood industry. A memorandum of understanding was signed among the confederation, other employers' organizations and provincial governments, in which the signing parties undertook not to hire children for hazardous work (as a preventive measure), and committed to supporting schooling or vocational training for child workers currently in the industry (as a rehabilitation measure). Working with other employers' organizations, ECOT agreed to provide recreational areas and child-care facilities around port areas so that young children would not have to accompany their parents to work. Training and planning sessions were also held with staff from almost a hundred seafood-processing enterprises. ■

Withdrawal, referral and rehabilitation

The withdrawal of children from child labour is more effective when planned together with parents, communities, fishers' and employers' organizations, fishing vessel or enterprise managers, and state bodies (such as port inspection officers). However, rescue operations are sometimes needed to withdraw children from the worst forms of child labour. To be sustainable, the process needs to be part of a holistic programme that includes providing opportunities and incentives for getting the released children into school or skills training; stimulating the (local) labour market so they can find jobs when they reach the legal working age; and carrying out monitoring to ensure that children do not work in the same or another workplace before they are legally of age. Children's parents and families also need to have alternative income-generating opportunities for the withdrawal to be sustainable (BOX 26).¹⁶¹

BOX 26

Trafficked children on Lake Volta, Ghana

The International Organization for Migration (IOM) has withdrawn close to 700 children from child labour in the fisheries sector on Lake Volta, Ghana. These children were taken to government rehabilitation centres and given counselling, medical assistance, education and art therapy for three and a half months. In the villages of origin, IOM and its local partners worked with the chiefs, parents and other community members to inform them about the dangers of child labour and human trafficking, and parents were helped in developing additional income-generating opportunities so that they would not be forced/tempted to send their children away again. In receiving communities, fishers who released children also received training and microcredit to enable them to carry out alternative livelihood activities, or to improve their fishing techniques without using child labour. ■

Protection

While hazardous work should be discouraged for adults and prohibited for children and youth, improved protection can make risky working conditions safer. Thus general measures to improve OHS in the workplace will also benefit children and youth. Some protection measures are particularly relevant for youth of 15 to 17 years of age, who have reached the legal minimum age for employment but are subject to restrictions on the types of work they are allowed to do. The ILO Work in Fishing Recommendation No. 199 (2007) sets out conditions for work on board fishing vessels, including conditions with regard to the protection of young people between the ages of 16 and 18 (BOX 27).

Protection measures in fishing include appropriate technical and safety training for children and youth before working on fishing vessels, in fish processing or on fish farms. Such training could be in special schools or programmes (vocational training or apprenticeships) or be integrated into the regular school curricula. Training of employers and adult family members (if children/youth work within the household or extended family context) is equally important. Appropriate personal protective equipment for children (such as properly fitted personal flotation devices and life jackets when on fishing vessels, or ear protection in a boat building workshop) should be provided as required.¹⁶²

BOX 27

ILO Work in Fishing Recommendation No. 199, 2007

The ILO Work in Fishing Recommendation states, in Part I on Conditions for work on board fishing vessels, the following with regard to the protection of young people:

1. Members should establish the requirements for the pre-sea training of persons between the ages of 16 and 18 working on board fishing vessels, taking into account international instruments concerning training for work on board fishing vessels, including occupational safety and health issues such as night work, hazardous tasks, work with dangerous machinery, manual handling and transport of heavy loads, work in high latitudes, work for excessive periods of time and other relevant issues identified after an assessment of the risks concerned.
2. The training of persons between the ages of 16 and 18 might be provided through participation in an apprenticeship or approved training programme, which should operate under established rules and be monitored by the competent authority, and should not interfere with the person's general education.
3. Members should take measures to ensure that the safety, lifesaving and survival equipment carried on board fishing vessels carrying persons under the age of 18 is appropriate for the size of such persons.
4. The working hours of fishers under the age of 18 should not exceed eight hours per day and 40 hours per week, and they should not work overtime except where unavoidable for safety reasons.
5. Fishers under the age of 18 should be assured sufficient time for all meals and a break of at least one hour for the main meal of the day. ■

Training is also needed to raise awareness of the risks of using agrochemicals and veterinary products in aquaculture, to discourage their use by children/youth, and to teach adults how to use them safely. Of particular relevance to women and girls are improved processing equipment and methods that enhance efficiency and are safer to use: for example, the improved fish smoking ovens described in **BOX 28**.

3.1.7 Strengthen collective fishery organizations and women's leadership roles within these

There is an urgent need in all developing countries to strengthen collective fishery organizations, including producers' and traders' associations, cooperatives, and workers' and employers' organizations, in order to promote economies of scale in production and processing (including related equipment such as ice facilities, cold storage, refrigerated trucks and efficient processing machines); improve access to input and output markets; enhance the bargaining power of small actors to negotiate better prices and conditions with powerful players; agree and enforce sustainable fisheries resource management; and fight for the labour rights of wage workers.

BOX 28

The Ghanaian Chorkor oven

In Ghana, traditional fish smoking ovens used by women and girls were inefficient, resulting in poor-quality smoked fish, significant post-harvest losses and heavy fuelwood use, contributing to forest depletion. Women suffered health risks from smoke inhalation, burns and exposure to raw heat. An improved fish smoking oven, developed by FAO and Ghana's Food Research Institute of the Council of Scientific and Industrial Research, was introduced in 1969 and quickly became popular; it was easy and safe to use, had a high processing capacity, used little fuelwood, required a shorter smoking time, and produced high-quality smoked fish. The Chorkor oven has since been introduced and used in many other countries, including Cameroon, Ethiopia, the Gambia, Guinea, Kenya, Lesotho, Nigeria, Sierra Leone, Uganda, the United Republic of Tanzania, and Zambia. ■

As women have generally played minor roles in these organizations, and their interests have typically been ignored, there is a vital need to build women's leadership roles in all these organizations and to sensitize men to respect and support women leaders – and to be willing to address gender inequities in organizations and in the fisheries sector. This almost invariably calls for remedial measures to tackle the prevailing discrimination against women throughout these organizations. Some successful measures include:

- quotas for women in membership and decision-making positions in fishery organizations;
- gender-sensitive training in management and leadership skills and negotiation techniques;
- awareness-raising among men and women of gender-equity issues and their respective labour rights;
- remedial education, literacy and numeracy training given in gender-sensitive ways, as women are more likely to have dropped out of or not attended school, and may have different learning aptitudes from those of men;
- training in environmental and product quality regulations and trade requirements (for example, the use of antibiotics in aquaculture), and aquatic animal health.

Some recent initiatives have strengthened women's representation at national policy levels. For example, in the Gambia, where women predominate in fisheries post-harvest work, FAO's Sustainable Fisheries Livelihoods Programme (SFLP) helped community-based organizations (CBOs) of fisheries post-harvest operators to form apex associations at the local government level and, in August 2006, to establish a National Fisheries Post-Harvest Operators' Platform (comprising ten CBOs and four apex groups, and representing 1 550 members). Training in organizational development, business skills and literacy increased women's confidence and participation in decision-making processes. The 2005 Fisheries Bill provided for a post-harvest operator representative on the National Fisheries Advisory Committee, enabling the platform to contribute to formulation of the 2007 Fisheries Act, which recognized the important contribution of small fisheries.¹⁶³

3.2 Good practices in small-scale capture fisheries and aquaculture

3.2.1 Provide integrated packages of services to reduce gender inequalities in fisheries

Such packages need to integrate complementary components that will have a synergistic effect – technical assistance, credit, training and skills development, infrastructure and transport, and participation in and support for community organizations. Even small, integrated projects can bring significant improvements in fisheries production and incomes, benefiting very poor communities. All such packages need to be innovative to overcome existing problems, contain incentives for participation/adoption, and be implemented through culturally acceptable approaches, with the following goals:

- improving gender equity in access to productive resources (land, ponds, boats/gear, equipment, fish fingerlings, feed);
- addressing gender inequities in extension and training, with a focus on building women's knowledge of/skills in using new technologies to increase production/productivity, improve fish quality and meet hygiene standards and regulations (especially for export markets), and reduce harvest and post-harvest losses (BOX 29);
- improving women's access to markets to increase sales/incomes, including through gender-sensitive services (transport, toilets);
- providing both women and men with gender-sensitive training in business skills, enterprise development, literacy and numeracy skills, with a focus on correcting current gender disparities in these areas;
- improving access to finance, especially for women and poor men without physical/financial collateral, through microfinance institutions (MFIs) – in particular, using such approaches as group lending or SACCOs.

In many cultures, it is more effective to provide such packages of services to groups of women rather than to individuals, as groups give women solidarity and make it harder for husbands and other (male) family members to appropriate their resources or incomes. For example, in Cameroon, the WorldFish Center supported women's groups in developing a small-scale commercial aquaculture cage system to grow out wild-caught juveniles of freshwater prawns (*Macrobrachium vollehovenii*) on prepared feeds, and to put in place their larviculture.¹⁶⁴ In

BOX 29

How to carry out gender-sensitive extension and training in small-scale fisheries and aquaculture

- Recognize women's and men's different learning styles. Women are often less familiar with formal learning environments and have lower levels of literacy, which can result in different learning needs and capacities from those of men.
- Take into account the social and cultural context within which the programme is being implemented, men's and women's different responsibilities in fisheries and aquaculture, and their different kinds of knowledge about aquatic resources and skills in different nodes of the value chain. Depending on the cultural context, it may be better to train men and women in mixed or single-sex groups.
- Adopt an affirmative action policy in staff hiring to ensure gender balance and commitment to staff training in gender-sensitive extension and training methods.
- Ensure that implementing agencies have gender-balanced field staff covering both technical and social issues, and provide for gender sensitization of these staff.
- Recruit and train local extension agents/trainers who are well integrated into and accepted by the local communities.
- Organize extension/training sessions in locations near women participants' homes and at times that fit into their schedules, enabling women to attend with minimum disruption to their domestic and caring work.
- Focus training on teaching/strengthening practical, hands-on skills and related information.
- Ensure that training and new technologies that lead to an increase in fish production will improve the economic and social position of women (and not result in a transfer of control of the product to men, or an increase to women's workloads if the product is not under their control). It may be necessary first to raise women's awareness of this issue to ensure women's active participation in their own development.
- Collect/analyse gender-disaggregated data to correct the invisibility of women's contribution to the fisheries sector, including data on gender profiling, time use, access to and control over fisheries-related resources, cost/benefit analyses, and management decision-making.
- Involve the men in local power structures and the husbands of women participating in fisheries training, encouraging discussions between men and women and joint agreements on development strategies.
- Avoid aiming to transfer technology from the laboratory to fish workers and fish farmers, but focus instead on efforts to educate workers and farmers in basic principles of the new technology; then encourage them to innovate and adapt the technology to their own conditions. It is critical to involve both men and women and to allow them to discuss and decide on the strategy to be evolved in such an adaptation process, so that it suits their family economy and fishing/aquaculture environment. ■

Bangladesh, women's groups were assisted in developing aquaculture, improving their livelihoods, and empowerment (BOX 30). In Kerala, women preferred to develop mussel farming within self-help groups than to work as individuals (BOX 31). In cases where fisheries or aquaculture is undertaken as a family enterprise under the control of the husband/senior male in the family, there may be a need for different strategies. In Bangladesh, for example, the supply chain for farmed tiger prawn (*Penaeus monodon*), which is one of the most important global supply chains in Asia, has been subjected to repeated trade upsets over product quality and production methods; farm productivity and profitability are falling, and export shrimp consignments are increasingly failing quality checks. As the smallholder sector relies mainly on family labour, including female labour, early training efforts to boost quality were relatively ineffective until they were reoriented to include women, through joint training of farming couples and women-only training.¹⁶⁵

BOX 30

Supporting women's groups in aquaculture in Naokhali, Bangladesh

The Greater Noakhali Aquaculture Extension Project (supported by the Danish International Development Agency) assisted very poor rural women with small backyard ponds to nurse prawns from post-larvae to juvenile stage, for sale to richer farmers to raise in grow-out ponds. The project linked the women to private prawn hatcheries, which provided them with post-larvae on interest-free credit in kind. With a small capital investment (Tk 6 000 or US\$86), in less than two months women could sell about 3 000 juvenile prawns, with a profit of about Tk 6 000. When the rains were favourable, they could harvest two crops a year. This increased income helped women reclaim mortgaged land, purchase goats and cattle, or pay for children's education and household improvements. Other project activities included supporting resettlement villages in developing community ponds for prawn-carp grow-out, again with the hatcheries and a private feed mill providing interest-free credit. As many men in these settlement villages had left in search of work, women often dominated in the pond management committees. Many inputs were supplied through CBOs, in some of which women represented the majority of the members; in others, as a result of their economic empowerment, women played an important role in the executive committees. ■

3.2.2 Promote gender-balanced roles in small-scale fisheries resource management

Among the many different types of arrangements for fisheries resource management, this section looks in particular at co-management and community-based management systems, while noting that there are considerable variations within these systems, depending on culture and local specificities.

Co-management of fisheries resources¹⁶⁶

Co-management of fisheries resources by the government, resource users and other stakeholders is an increasingly popular response to growing concern about fisheries resource degradation. Co-management committees typically include representatives from local government and decentralized technical departments, such as fisheries and public works; socioprofessional organizations (SPOs) of fishers, processors, and traders, along with traditional community-based fisheries organizations; and a range of other stakeholders including representatives of

BOX 31

Women's empowerment through group mussel farming in Kerala, India

Mussel farming has been developing in Kerala coastal villages, with more than 3 000 women in 16 villages owning mussel farms in 2005/2006. Beginning with the initiation of technical training and financial support from the Central Marine Fisheries Research Institute in 1996, women in Kasargod district were helped to start their farms as family enterprises or as women's self-help groups (SHGs). The majority preferred SHGs, which typically comprised five or six women leaders – who were literate and able to negotiate with banks, seed suppliers and marketing agents – and another 14 to 16 (illiterate) women members. The main motivating factors were flexible working hours, proximity of the farm to their homes, easy technology to master, low risk, and reasonably good profits. Nearly 70 percent of the women farmers were aged between 21 and 40, and 60 percent were literate and had attended primary school. The women increased the farm area and the intensity of farming, showing their management skills, and promptly repaid their loans. Production increased from 2 tonnes in 1996 to 7 500 tonnes in 2006. The farms also created additional employment in their communities: during the farming season individual farmers hired about three, and the SHGs 18 to 25, extra women to seed the ropes (generating labour worth about US\$14 000 in 2005/2006), and women labourers were also hired for harvesting. Mussel farmers began using coir rope for seeding, stimulating the local coir spinning industry where the labour was mainly female. About 10 percent of the mussels were sold as shell-on by local women vendors in nearby markets, while wholesalers sold in more distant markets especially to hotels, sometimes employing local women to shuck the meat. The increased and steady income and the self-confidence generated by running their own SHG enterprises proved an empowering experience for these women. ■

traditional rulers, chambers of commerce, large-scale fishery industries, MFIs and NGOs. As the committees have legal status, they are well placed to increase awareness among national authorities of the needs of fishing communities. However, the committees can lead to the exclusion of underprivileged fisheries resource users – especially women, poor men and migrants. The following are key to protecting these groups, and ensuring successful fisheries co-management: i) an enabling policy and legal framework with government support; ii) effective institutions (including local fisheries organizations) and linkages among different stakeholder institutions; iii) genuine participation and ownership by male and female resource users and other stakeholders, avoiding elite capture and exclusion of underprivileged groups (e.g. women and migrants); and iv) incentives for individuals to participate.

Incentives are particularly vital for the poor. Because of their high levels of vulnerability and their day-to-day search for food, the poor are often forced to overexploit resources for daily survival, and are unable to respect closed seasons. In view of their different (complementary) responsibilities in productive work and in feeding their families, men's and women's interests often vary; thus men and women are likely to value, and respond to, different and even conflicting incentives. Migrants are also likely to have different interests from those of local populations. In the context of poverty, measures to ensure sustainable fisheries resource management need to be reinforced by complementary initiatives to strengthen and diversify the livelihoods of the poor who are dependent on

these resources. “It is necessary to move co-management programmes beyond a narrow concern for regulating access to fishery resources, and to see community-based fishery management organizations as local development organizations, working in partnership with local government service providers and other stakeholders (including private microfinance organizations, business advisory services, education providers and so on) to address both poverty reduction and responsible fisheries”.¹⁶⁷

Working on this premise, in West and Central Africa, FAO’s SFLP used a mixed set of analytical methods/tools (including poverty profiling, stakeholder analysis and gender profiling) to identify key constraints to the co-management committees’ effective functioning, and also threats to the inclusion of underprivileged groups (even though all the committees included women, and those in marine areas included migrants). The SFLP then introduced development activities to address these issues. Three factors – illiteracy, difficult access to credit, and weak organizational capacities of fishing communities – were found to be the major reasons behind the low participation level of rural communities in decision-making with regard to fisheries resource management. The development activities focused on human capacity development, such as numeracy and literacy training (especially but not only for women); improving access to health information and services; developing technical skills, such as improving fish processing techniques (particularly fish smoking as a means of reducing post-harvest losses) and supporting alternative income-generating activities); and building social capital through development of fishery SPOs.

Encouraged by their improved educational levels and organizational skills, men and women beneficiaries created new (or strengthened existing) fishery SPOs. In the Congo, 46 SPOs were created, with women comprising 46 percent of the membership. In Gabon, ten SPOs were created and registered with the fishery authorities, prior to obtaining legal status from the Interior Ministry. Women accounted for 45 percent of the membership and one-third of their boards, while 22 percent of the members were migrants. In Guinea, 86 cooperatives comprising both men and women were granted legal status. Other benefits of the literacy training included enhanced ability of fishing community delegates to produce more reliable reports in meetings with other stakeholders (e.g. project staff and government officials); improved information sharing, which promoted better understanding of the issues at stake; and a trend for community organizations to select their representatives on the basis of skills, competence and ability to defend community interests within decision-making arenas.

The synergy between livelihoods and resource management was also reinforced by other SFLP activities. For example, the legalization of the SPOs, the adult literacy and negotiation skill training, and the resulting increase in self-confidence helped men and (especially) women to negotiate with MFIs, improve their fisheries production/processing, and diversify into other income-generating activities. In Burkina Faso, for instance, from 2003 to 2006 some 120 women organized into an SPO, and a fisheries product processors’ union benefited from loans of close to CFAF 27 million (US\$50 950), which was then used primarily to improve fisheries investments (purchase of fish, construction of ovens, acquisition of fish smoking grills), but also to diversify into petty trading and vegetable and livestock production. In the Congo, a community bank (with some 50 members)

was formed in 2006 at the Base-Agip beach, with the support of SFLP and the national AIDS eradication council. And in Guinea, a small-scale fishing savings and credit mutual association was established, which had funds amounting to GF 700 million in December 2006, made up of fishers' own funds.

Among very poor fishing communities, alternative income opportunities are vital to reducing overexploitation of fisheries resources, and thus are a key part of any co-management process. SFLP provided some Ghana fishing communities with training to help them diversify into activities such as snail breeding, batik, cosmetics production, bakery and Kente weaving, as well as improving their productivity and incomes in fisheries. In the Congo, SFLP activities promoted community cassava fields and market gardening. In Gabon, the Ongam fishing community established a community banana plantation; domestic animal raising was developed in the Lémé and Massamboué fishing communities, and market gardening was promoted in the Cap Estérias fishing community. And in Mauritania, mechanical repair and maintenance workshops for outboard engines were set up, and net-making activities (traditional shoulder-held nets to replace the banned monofilament gillnets) were developed; women began household rubbish collection and started providing food and accommodation for guests in mini-tourism initiatives.

These examples point to positive synergies between investing in development to improve livelihoods and promoting resource management goals through co-management. While financial support was primarily used to acquire improved production equipment (fishing gear for men and improved fish processing techniques for women), often with the guidance of co-management committees, the equipment often complied better with regulations and was less destructive of the resources. In such small-scale systems that were not (yet) caught up in the global fisheries industry and the frenzy to increase production and profit, such improved equipment was generally more efficient, for example, in reducing the by-catches of juveniles and post-harvest losses. Thus, in these cases, male or female fishers and female processors were investing in both their own livelihoods and the responsible governance of the resources that sustained them. This demonstrates that incentives for fisheries management can be fostered through strengthening livelihoods and reducing uncertainty and vulnerability.

Strengthen management by fisheries CBOs

In traditional fishing communities, men and women fishers or shellfish collectors almost universally follow community-based rules to protect their resources, such as closed seasons or the use of specific types of net, basket, dam or other method (to limit the catch of juveniles and other by-catch). These rules may be administered by traditional leaders or community groups (usually all-male), or – in systems with distinct gender divisions of labour – they may be enforced by women (as in the case of the women octopus fishers in the United Republic of Tanzania, described in **BOX 15**) or by men. These broad gender roles may be cross-cut by socio-economic class and the prevailing type of tenure. Thus, in the open-access coastal or inland systems on which poor women often depend for collecting small fish or shellfish, women are more likely to play important roles in community resource management. However, in the case of fish farms (on land or in ponds) that are privately owned or leased from absentee landlords or the state,

women are commonly excluded from community resource management systems, as they rarely hold landownership or lease rights, even if they play a major role in aquaculture production. With growing incidence of women's groups leasing ponds for fish farming, or with the formation of women fishers' or processors' associations in coastal or inland areas, it is vital to include the women – together with men of different socio-economic classes – in gender-equitable community management systems and to draw on their respective expertise. This ensures that their varying concerns are adequately addressed and that they all understand/accept the community rules, and also provides a sense of ownership and thus incentives for adhering to these rules. An additional and important benefit is that women members often bring a more harmonious and cooperative spirit to CBOs, as evidenced by a study of 46 men's, women's and mixed groups in 20 countries in Latin America, Africa and Asia, which showed there was less conflict and more solidarity when women were present in CBOs.¹⁶⁸

While there are countless references in the development and anthropological literature, sometimes of an anecdotal nature, describing men's and women's traditional fisheries resource management practices, there is a dearth of analytical information on the gender composition of fisheries CBOs, and the gender power dynamics in their organization and functioning. However, of greater importance and urgency is the absence of analyses, based on sound field data, of the way these traditional fisheries CBOs have adapted to (or failed to address) new environmental and resources management problems brought about by transformation processes in traditional fishing communities. These include growing population pressure, the influx of migrants, trawling by industrial fleets, overexploitation of fisheries resources for the market (to maximize profits), and pollution from industrial development, tourism, or increased use of agrochemicals (in neighbouring agriculture or forestry). Similarly, the rapid growth of aquaculture is bringing new sets of community-based resource management problems¹⁶⁹ such as water-logging, increased salinity levels, declining soil quality and water-borne diseases. Although the literature highlights some negative impacts on traditional resource management practices and organizations, there are few field-based studies of how fisheries CBOs have responded to these new problems; whether and how their organizations and leadership have evolved to incorporate gender-specific issues and knowledge; and whether new CBOs (including women's CBOs) have sprung up to deal with these serious emerging issues. Examples of successful gender-sensitive fisheries CBOs are scarce but include, for instance, the Lake Victoria area of Uganda where at least 40 percent of the positions in beach management units are reserved for women – partly because they stay near the landing sites where they handle the processing of mukene (while men are off fishing), and partly because they are considered more trustworthy.¹⁷⁰ The World Bank's Coral Reef Rehabilitation and Management Programme in Indonesia gave women's groups key roles in improving the protection of coral reefs through community-based management, with women also managing village and district funds.¹⁷¹ Clearly this is an area where more research is needed to identify good practices, as well as ways of helping strengthen gender-equitable participation in fisheries CBOs.

3.2.3 Strengthen women's roles in organizations representing small-scale fishers, fish processors and traders

Organizations, including cooperatives, for fishers, fish processors and fish traders make a substantial contribution to increasing productivity and returns, by building economies of scale in terms of equipment, inputs and markets, and by attracting extension advice and credit. They also provide a powerful mechanism for negotiating better terms of business with other actors in the value chain and, particularly in the case of regional and national fish organizations/federations, for engaging in advocacy and dialogue with policy-makers. For a variety of sociocultural reasons, women are less likely than men to belong to such organizations, particularly mixed ones, where they are often hesitant to speak out at meetings and rarely accede to decision-making positions. Women often prefer to establish their own cooperatives or associations, but these are generally small and bring other sets of problems. Women's often marginal roles in mixed fish workers' organizations, and the limited influence of their own smaller organizations, should matter to policy-makers – not just from an equity perspective, but also because women's relative absence in these fish organizations means a loss of the valuable knowledge, experience and skills, and the invisibility of the needs, of nearly half the fisheries workforce.

The urgent challenge is to help strengthen women's membership and leadership roles in mixed organizations and, where culturally appropriate, help women establish their own cooperatives and associations. With regard to mixed fish workers' organizations, there is a need to tackle social norms which often ascribe leadership roles to men and, in each case, to strengthen women's leadership and managerial capacities to run these organizations efficiently, and to increase their bargaining power *vis-à-vis* policy-makers, officials and other value chain actors.

BOX 32

Organizing women clam collectors in Tunisia

Although the value of Tunisian clam exports averages about US\$1.25 million a year, artisanal clam collectors, who are mostly women, earn very little as they have weak bargaining power within a larger system characterized by intermediaries, unfair transport fees, lack of official interest, and no training or extension. When clam development groups were set up in 2004 to address technical-sanitary, traceability, administrative and organizational problems in the clam value chain, all the groups' board members were men. Between 2008 and 2011, FAO provided groups of women clam collectors with technical support and helped them organize themselves. Two women were sent on a study visit to a women clam collectors' association in Morocco, which had successfully negotiated fairer prices and costs. These Tunisian women then shared their experiences with their colleagues, who began to mobilize for change and start bargaining for better prices and lower transport costs. The project also advocated for female representation in the development groups, which changed their boards to comprise four men and four women. A separate association of women clam collectors was set up to help them negotiate better prices in the market. FAO helped groups of women clam collectors develop an aquaculture system for growing out the small clams that were regularly caught accidentally, but discarded because they were too small to be marketed. FAO also developed and disseminated a code of practice for growing out these undersized clams to help the women improve their profits. As a result of the project, the women's incomes increased by some 22 percent a year. ■

In many cases, outside assistance from development agencies or NGOs has proved a key catalytic force in tackling gender inequalities in fisheries organizations. For example, FAO's SFLP found that by analysing gender issues (including social norms and practices) in SPOs and microfinance, and providing training (in literacy and numeracy, business skills and enterprise development), women's participation increased in the management of fisheries SPOs, village management committees, infrastructure, and credit unions or fishery cooperatives in Chad, the Gambia, the Niger and Nigeria.¹⁷² In Tunisia, FAO played a catalytic role in getting women clam collectors represented on the boards of clam development groups, and in setting up their own associations to strengthen their bargaining power in the market (BOX 32).

In other cases, women's own abilities and determination have enabled them to join male-dominated fish organizations and reach top elected positions in mixed organizations. For example, in Brazil, women's institutional roles are slowly beginning to change. In the State of Pará, for instance, about 10 percent of the registered members of the *colônias* (guilds representing fish workers at the municipal level) in 2006 were women. Where *colônias* have opened up and admitted women, integration has followed and the exchange of ideas and access to new social spaces has led to a reconsideration of traditional gender roles.¹⁷³ In the State of Pernambuco at least three *colônias* had women presidents in 2005, one of whom had previously been elected president of the State's Federation of Fishers, and several had female secretaries or treasurers.¹⁷⁴ In the Lake Victoria area of Uganda, women often hold management positions in beach management units and in the fishing community SACCOs.¹⁷⁵ And in Chile in 2010, the president of the *Confederación Nacional de Pescadores Artesanales de Chile* (CONAPACH) was a woman.¹⁷⁶

Increasingly, women fish workers are establishing their own associations, cooperatives and unions. For example, Ugandan women mukene processors on Lake Victoria run several women-only processors' associations to help women identify common problems, and to negotiate with other actors along the mukene value chain, especially boat owners and buyers.¹⁷⁷ In Brazil, several women fish workers' associations have been founded where women hold positions of importance. Some of these have attracted small bank loans to promote income generation, and training programmes to disseminate information on women fish workers' rights and the need to register for social welfare benefits.¹⁷⁸ In Guinea, women fish smokers and traders have organized themselves into cooperatives, and in 2008 they established a cooperative union, the Guinean National Union of Women Fish Smokers. In the Philippines, women fish workers have organized at the village and national levels, including for advocacy work, and their achievements include the inclusion of women under the definition of fisheries in the Philippines Fisheries Code of 1998, and a section on women fishers in the 2009 Magna Carta for women. And in Thailand, the Women's Network for the Defence of Fisherfolk Rights was formed in 2010 to protect women's rights to access, use and management of natural resources, and to advocate for appropriate policies.¹⁷⁹

Men's and women's rights are also being championed by fish workers' unions. For example, in Brazil, the fish workers' movement, which is active only in the northern region and some states of the northeast, is fighting for the right to free and democratic association, an end to fiscal incentives for industrial fishing, labour rights, recognition of women's work, development programmes, control of environmental degradation, and so on.¹⁸⁰ Also in Brazil, the Movement of Artisanal Fishermen

and Fisherwomen, established in 2009, has drawn up demands in the *Articulação Nacional de Pescadoras* (National Articulation of Fisherwomen) covering such issues as workers' rights (including access to social security), land rights and access to fishery resources in the face of large-scale tourism; aquaculture and infrastructure development; environmental degradation; and access to education and health care.¹⁸¹

In India, fish workers' unions play an active role in fighting for the rights of small-scale fish workers (both men and women). Since the Marine Fisheries Census of 2005 showed that, among marine fishing communities nearly 74 percent of those engaged in fish marketing were women, the unions have given special attention to improving the facilities in markets where women sell fish. For example, the Orissa Traditional Fish Workers' Union succeeded in forcing improvements in facilities at the *Humma haat* dry-fish market in Ganjam district, including the provision of toilets, electricity and a storage shed; the posting of police officers to ensure security; and regular checks of weighing machines, to prevent the women from being cheated by merchants. Several fish unions and associations have helped women establish mutual-aid cooperative thrift societies to protect their earnings and provide credit when needed. As transport is a serious problem for many women traders, the Andhra Pradesh Traditional Fishworkers' Union helped women's societies obtain access to schemes that provided battery-operated bicycles for transporting their fish. Other organizations, for example *Shanthidan* in Tamil Nadu, successfully campaigned for women to be allowed to carry their fish baskets on government-run buses. Many unions provided training, including in more hygienic processing techniques; facilitated access to improved equipment such as solar dryers, drying platforms or cold stores; and started night schools for children of fishing communities, as well as helping women obtain identity cards to enable them to access to various benefits. Despite these successes, there is need for much more action not only to extend these modest gains to other states, but also to fight for other rights such as access to land, fish, credit, training and marketplace crèches.¹⁸² Interestingly, as women gain confidence and experience in successfully running their own collective organizations, they are more ready to diversify into economic activities that are traditionally the domain of men (BOX 33).

While progress is clearly being made in strengthening women's leadership roles in mixed and single-sex fish organizations, and in fighting for better work conditions and their labour rights, much more action is needed throughout the developing world. Policy-makers carry a large responsibility to provide these representative fishery organizations with an enabling environment for participating freely in policy dialogue, fighting to address their members' grievances, and promoting gender equality within these organizations, as well as in government fisheries-related policies. These issues are not just about equity, but are also crucial in providing incentives and support for improving women's production and incomes in fisheries.

BOX 33

Women diversifying into a male fishing domain

Members of the Kolokol Ewola Women's Group in Northern Kenya saved income from basket sales each month and invested in a fishing boat. Now, sales of fresh and dried fish to markets in Nairobi, Uganda and Rwanda have become their main source of income. "Culturally and traditionally, Turkana women do not fish... Now that we have a boat, we go out on the Lake with our sons and nephews... we have cut out one of the links in the fish supply chain", Grace Engole, the group's chairperson, explained in a 2010 interview with Carol Wills. This diversification has been particularly important as the market for the palm-leaf baskets woven by the Kenyan women has been in steep decline. ■

3.2.4 Introduce gender-equitable social security for small-scale fish workers

Most developing countries have rudimentary health and social welfare systems, which are particularly deficient in remote fishing communities. Women (especially) and the aged, who are the main caregivers, tend to be more disadvantaged than middle-aged men, especially if there is a need to travel far to hospitals or welfare offices. Why should this matter to policy-makers? It should matter not only from an equity and social justice perspective (which is important in its own right), but also because the absence of good health and social security benefits (including insurance and maternity benefits) has a hugely negative effect on fisheries production and productivity. This absence affects fish workers not only directly, for example, when they are ill or injured (and fishing is probably the most dangerous occupation), but also indirectly, for instance, when they need to devote time to caring for the aged or sick, to spend precious money on medical or funeral expenses, or to survive the death of the main family provider (perhaps in an accident at sea). While social welfare benefits are often available to fish workers (in fleets or factories) with formal contracts, the majority of men and women engaged in small-scale fisheries are unprotected. Thus it is vital that fisheries policy-makers work with other sectors (health, social welfare, labour and industries) to extend such welfare coverage to the entire fisheries workforce – both male and female.

As decision-makers become increasingly aware of these issues and the synergies between good health, welfare and productivity, some countries are attempting to provide better social welfare systems to informal sector workers, including fish workers. Among the most promising systems offering *good practice* is that of Brazil. In conception, not only is this system gender-equitable, but it also aims at social redistribution, although it still faces many problems in implementation. In Pará State, for example, where 11 percent of the artisanal fishers are women, most fishers qualify for the “special insured” category where they are entitled to non-contributory welfare benefits (pension, sickness, maternity, disability, and work-related accident benefits). They are also entitled to social unemployment insurance while the fishing season is closed. Since 1991, women fish workers have been entitled to these benefits as spouses or as fishers in their own right, but often their worker status is not recognized because of lack of documentation, or documentation that gives their occupation as “housewife” (despite their work in fisheries). Fisher organizations are increasingly raising awareness of these rights among both men and women members, by helping them acquire the necessary papers, deal with the bureaucracy, and fight discrimination against fish workers, especially female fishers (often considered a low-status profession).¹⁸³ As the leaders of the municipal *colônias* can decide whether to accept women as members or only as their husbands’ dependants, it is vital that women obtain these papers and register as *colônia* members, as membership in a professional fishery association is a criterion of eligibility for social security benefits.¹⁸⁴

India also provides an example of *good practice* with its National Welfare Scheme for Fishers, initially launched by the Ministry of Agriculture in 1992/1993 with three components: the Group Accident Insurance Scheme, Development of Model Fishermen Villages, and the Saving-cum-Relief (SCR) Programme. A fourth component on Training and Extension was added in 2009/2010. The SCR scheme (in which Rs 1 800 contributed equally by the state, the central government and the fisher are given as subsistence during the three-month monsoon closed season)

has been extended to women fishers in some states, while women in other states are demanding the scheme be extended to them. In many states women fish processors and vendors are not given official identity cards that give them access to welfare schemes such as SCR, insurance and old-age pensions. Although this welfare scheme is a very promising initiative, much more needs to be done to disseminate information about it to both men and women fish workers, remove barriers to women's participation, and increase budgetary allocations so that the scheme can be implemented more widely throughout the country.¹⁸⁵

3.2.5 Foster innovations in communications for gender-equitable fisheries development

Modern information and communications technology (ICT) can bring many benefits to men and women along the fisheries value chain. Men are able to benefit from electronic technologies such as Global Positioning Systems and fish finding devices, and improved safety at sea through the use of radios and mobile phones (for weather forecasts and keeping contact with other fishing boats and the shore). They can also use this equipment to collaborate with national authorities on surveillance of illegal fishing, as supported by FAO's SFLP on the Guinean coast.¹⁸⁶ Radios, mobile phones, laptop computers with Internet connection and televisions also give men and women access to fish marketing and price information, banking services, and information on new fish-related technologies (BOX 34). Literacy and numeracy training for women has helped them overcome their initial disadvantages in many cases, and boosted their self-confidence in using these technologies.

BOX 34

Women traders using mobile phones for fish marketing

Omena, a small fish found in Lake Victoria, is the mainstay of the local economy. On the Kenyan side of the lake, about 30 000 male fishers, operating from some 150 fishing villages catch about 100 000 tonnes of omena every year. Once the men land the fish, they sell it to small-scale traditional fish processors-cum-traders, who are predominantly women. The women dry the fish in the sun on mats or fishing nets in the villages. They have only five or six hours to dry and sell the fish, and omena that fails to dry in time is sold at throw-away prices for animal feed. The women also face problems in marketing their fish because they have no information about markets outside their villages (as few travel to these markets). Instead, they wait for fish brokers (usually women) to come to their villages to buy dried omena. However, there is usually plenty of omena and too few brokers, who often collude among themselves to keep prices low.

In Karungu village, for instance, omena provides employment for 200 men fishers, 500 women fish processors/traders and another 120 women brokers coming from outside the village. It is also an important food for local families. In a project supported by the ILO's COOPAFRICA, the Kenya Marine and Fisheries Research Institute set up a new fish market information network, and women fish processors-traders began to tap into it using their mobile phones. This transformed these women's lives, as they were now better equipped to attract and negotiate with the brokers. By December 2009, six months after the start of the project, prices of omena in these fishing villages had risen by 20 percent. This meant that Karungu women traders and their families could enjoy higher and more stable incomes. ■

3.3

Good practices in industrial fisheries

Growing international concern about labour exploitation – especially through the corporate social responsibility (CSR) movement, spurred by consumers – is putting pressure on governments, and employers' and workers' organizations, to set standards and agree on codes of conduct, and to enforce them. One positive result of the rising power of large national and international retailers and restaurant chains is the imposition of more rigorous health and safety, environmental and social responsibility standards.¹⁸⁷ However, sadly, the fisheries sector seems to be lagging far behind other agricultural sectors with regard to implementing international or national labour laws and standards.¹⁸⁸ Fisheries ministries/departments tend to focus on production and environmental issues, and leave employment issues to labour ministries/departments, which tend to give little attention to the fisheries sector. Fish processing companies, especially those specializing in exports, are increasingly shifting from permanent employment to informal, flexible work arrangements and systems of remuneration, and/or are outsourcing production to contractors that hire unregulated contract labour.¹⁸⁹ While these trends affect both men and women, women are particularly affected, in part because they form the majority of the workforce in fish processing industries, and in part because the few permanent jobs are usually reserved for men.

While ethical codes of practice under the CSR movement are becoming increasingly important in other agricultural sectors (such as horticulture or flowers), they typically exclude workers on informal contracts.¹⁹⁰ However, there are a few examples of their application in fisheries. A well-known exception is the Aqua Finca company in Honduras, which follows ethical operating principles that include ethical working conditions and labour contracts, as well as environmental ethical practices.¹⁹¹

Advocacy has an important role, and there are growing attempts by NGOs and consumer organizations to draw attention to these conditions. In 2000, for example, with FAO assistance, the Centre for Marketing Information and Advisory Services for Fishery Products in Latin America and the Caribbean created a network of women working in the fishing industry in Latin America. The network documents the situation of women in fisheries in the region, and seeks to feed recommendations for improvements to policy-makers.¹⁹²

Clearly the main responsibility lies at the national level, and governments need to play a key role in enacting and enforcing gender-equitable labour legislation, and in devising codes of practice that can be used by unions and employers' organizations in their negotiations. Government, unions and NGOs can play important roles in sensitizing workers, especially women, who tend to be less educated and informed on their labour rights. Unions often pursue the interests of male workers, and need to give more attention to gender equity. International trade union movements such as the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers Associations (IUF), and international NGOs such as the International Collective in Support of Fishworkers (ICSF), can play catalytic roles in this respect. However, UN organizations, especially FAO and the ILO, also have key roles to play, not only in contributing to this advocacy but also in providing gender-sensitive policy, legal and technical

advice on labour standards in the fishing industry (at sea, on the shore and in factories) – in the form of general conventions, recommendations and guidelines, as well as tailored assistance to specific countries.

The challenges are huge: there is urgent need to break down gender-based occupational segregation (changing attitudes/social norms, training women in technical and leadership/supervisory skills); ensure wage parity between the genders for work of similar value; strengthen fish workers' unions and women's roles in them; and implement labour rights and standards (with attention to women's concerns such as maternity leave, benefits and crèches).

Fisheries policy-makers may ask why gender equality in employment in the fisheries sector matters. Apart from the ethical goal of gender equity and social justice, as called for in the Millennium Development Goals (MDGs) – particularly MDG 3 “Promote gender equality and empower women” – gender equality matters because fair and decent work conditions that ensure gender equity increase incentives for working well, and thus enhance productivity and output. The fisheries sector seems to be lagging in this recognition, and could learn from experience in other sectors. For example, the Cargill Sun Valley poultry company in Thailand introduced performance-related annual pay increments, resulting in employees earning more than the minimum wage after a year, as well as performance-related bonuses, encouraging performance and company loyalty. It also implemented family-friendly and women-friendly policies that were reflected in the corporate culture. These policies included providing training and education programmes for men and women, which helped them advance professionally, and promoting women from the ranks of production workers to become supervisors. Supervisors were encouraged to be responsive to workers' needs, and could arrange leave of absence without pay to enable an employee to deal with a family emergency, such as a sick child, or to attend to the harvest. The company respected Thai law with regard to maternity leave with pay and medical care (other companies did not always adhere to this), and sometimes provided supplementary assistance, such as some payment for hospitalization. Pregnant women were reassigned to less physically demanding work and were not required to work overtime. The company also required annual physical examinations of all employees (to avoid product contamination), and employees appreciated this health service. Financial assistance was given for schooling of employees' children, a free bus to and from work was provided (which provided safety for those – especially women – travelling early in the morning or late at night), and codes of conduct for preventing sexual harassment were promoted.¹⁹³ The fishery industry could improve productivity and reduce staff turnover and absenteeism among its male and, especially, female workforce by replicating some of Cargill's successful practices in introducing performance incentives, providing a family-friendly environment, respecting labour laws and ensuring decent working conditions.

Future directions



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4.1

Reforming policies

International and national fisheries laws, policies, management plans and programmes are often gender-blind but not gender-neutral in their effects, and thus tend to reinforce existing social and gender divisions and inequalities.¹⁹⁴ For example, laws transferring ownership of fish resources to individuals or corporations often disadvantage women more than men (who can fish at sea) by closing access to common coastal or inland fisheries resources for subsistence food and incomes. Laws on open and closed seasons, protected areas, and taxes and subsidies have a differentiated impact on male and female actors. Although co-management, especially community-based co-management, is becoming increasingly popular and the process sometimes includes women, such initiatives tend to be small. They are also under-resourced and inadequately supported by government, and often exclude women or give them only minor roles in the institutional settings, with the community losing the potential contribution of women's rich knowledge of these resources and their management practices.

Gender-disaggregated sector data that are further disaggregated by age and occupational categories are needed to enable policy-makers to reform and mainstream gender into laws, policies and plans, and to take action to eliminate child labour in fisheries, particularly its worst forms. Adopting a value chain approach to analysing the sector could help take account of broader trade issues and the financial performance of the sector (value added and rent of the resources). Public services are also typically gender-discriminatory: women are often excluded from extension and training in improved technologies and production/processing practices; from credit and savings programmes; and from modern communication technologies that can help improve market information. They lack gender-friendly market facilities (including separate toilets) and access to transportation, ice, etc. If these women small-scale fishers, processors and traders were given the same opportunities to fisheries resources and services as men, their productivity and production would increase considerably, to the benefit not only of the fisheries sector and the national economy, but also to the livelihoods and food security of the women and their families.

In the industrial sector, women are largely confined to low-status, low-paid and repetitive jobs in fish processing – tasks that often require long hours of meticulous work with compulsory overtime. Most factories fail to meet international labour laws and standards, even if they meet the international quality and hygiene fish standards. As a researcher noted of one Latin American country, “the salmon aquaculture industry takes better care of the fish than its workers”. This exploitation of labour can affect both men and women wage workers, reflecting the general exploitation of labour by big business to maximize profits and/or survive in a very competitive industry. However, women tend to be

more disadvantaged than men, who monopolize the managerial, supervisory and skilled technical jobs that generally offer permanent contracts with social benefits, while women are concentrated in flexible, casual labour with no social benefits. Even if factories permit unions (and these are not controlled by government), women are less likely to be union members or leaders, to be aware of their rights and to fight for these rights, despite increasing examples of women's activism. In such cases, governments need to take a stand to protect the labour rights of workers in fisheries and other industries, and to encourage the adoption of CSR and codes of practice with regard to labour conditions, laws and regulations. Particular attention needs to be given to the often invisible, marginalized female workforce, as a matter of social justice, and to improve women's working conditions in ways that will protect their health, reduce occupational accidents and improve morale and productivity.

While such measures will help realize women's lost potential in fisheries, women will have less incentive to engage unless there is also a positive change in social attitudes and practices so that, for example, women can control their own incomes, enjoy self-esteem from contributing to household and community welfare, and experience the appreciation and support of men in developing their complementary fish-related work.

4.2

Assessing progress in exploiting women's lost potential in fisheries

Progress in exploiting women's lost potential in fisheries needs to be assessed at two levels. First, there is need for better, gender-disaggregated data in the form of actionable indicators that can inform future policy and programmes. Second, there is need for more in-depth research on complex issues that have varying interrelated gender, age, class, caste, ethnic, religious and sociocultural dimensions. Some suggestions of indicators and research topics are given in the following.

4.2.1 Gender-sensitive indicators

Such indicators of change should be developed in a participatory manner with the men, women and youth involved in fisheries and/or aquaculture, to determine those that are important to them (these may differ by gender and/or age). Data – disaggregated by gender and, if possible, by broad age category – should be collected and analysed for indicators that capture, *inter alia*:

- contributions of the fisheries sector to national wealth (volume and value of production and processing, by type of fish and gender of producer/processor); increases in value-added in different nodes of fish value chains; and employment, by gender, age group (disaggregated by gender) and subsector;

- access to and tenure of fishery-related resources;
- skills in fishing/processing, including access to extension/training in the use of new technologies or methods;
- recruitment of men and women as extension staff, and extent of training in gender-sensitive fisheries technologies and issues;
- access to and use of savings and credit by men and women (as individuals and/or as single-sex or mixed groups of fish workers), disaggregated by type of savings and credit system, size of loans and savings, and repayment rates;
- access to market information, use of modern communication technologies (for example, mobile phones), and skills training in negotiation;
- health and nutrition status of men, women and – especially – children;
- attitudes of husbands and other men to women's participation in fisheries activities, including training; and women's attitudes regarding participation, male support, and their own self-esteem and self-confidence in taking decisions, and in organizing to undertake development initiatives and/or fighting to protect their interests;
- the effects of improved availability of domestic technologies (running water, fuel, electricity) and child-care facilities on women's work in artisanal or industrial fisheries;
- the involvement of women of different age groups and marital status in membership, management and leadership roles (in single-sex or mixed fish worker associations, groups and cooperatives), and in community-based fish resource management; and the performance of these groups compared with male-dominated groups in terms of production, incomes and influence in policy fora;
- women's and men's roles in membership, management and leadership in fish industry unions and mass movements, and their respective success in achieving their labour and other rights;
- the gender composition of the labour force in different fisheries subsectors, by type of work, status in the professional hierarchy, and average wage level; and the extent of gender disparities in wage rates for work of comparable value.

4.2.2 Research priorities¹⁹⁵

The following are research topics that have critical gender dimensions:

- Research “decent” employment and incomes – including seasonality and security of work, contractual status (such as permanent/casual, full-time/part-time and factory-based/home work), and adherence to labour laws (with associated social benefits) and to occupational health and safety laws and regulations.
- Analyse the gender-specific impacts of globalization on local fishing communities, assessing, for example, the following: the trade-offs between new opportunities for some groups of men and/or women and the threats to the livelihoods of others; the ways in which globalization often drives fisheries to overexploitation, excess capacity and intensive aquaculture

(shrimps) that frequently lead to environmental degradation, and to small fishing communities' loss of access to inland or coastal common property resources; and the gender-related implications of these changes for household livelihoods and food security.

- Examine how industrial fisheries and global trade encourage governments to privatize fish resources and common marine, coastal, riverine and lake property resources, and/or to lease these to corporate or joint ventures for tourism, industries or intensive aquaculture enterprises; and assess the gender-specific impacts and implications for national and local fish production/sales of the effects of these industrialization and globalization processes. These impacts and implications include loss of fishing grounds for local communities; resorting to illegal fishing/fish purchases by poor men and women who are displaced by large trawlers or commercial traders and factories; environmental damage to coastal and inland water bodies; loss of juvenile stocks; and precarious livelihoods and food insecurity.
- Investigate how globalization affects the development and spread of production and processing technologies, energy-intensive transportation, and modern communication technologies and methods; and identify how these affect the gender-differentiated organization of work, consumption and environmental protection, benefiting some groups (such as women using mobile phones for access to market information) while marginalizing others.
- Study how fish workers organize themselves (for example, in processing or marketing cooperatives, or in fighting for their rights), giving special attention to how women operate within these organizations, how they improve their situations (by influencing decision-making within the organizations and/or at the municipal, regional and national levels), and the stories they tell of their experiences, hopes and frustrations.
- Document labour and occupational health and safety conditions in artisanal and industrial fisheries at sea, in factories and artisanal processing units, and in markets; identify problems – intensity of work, child labour (by gender), gender segregation and status hierarchies, contractual status (permanent, casual, flexible), promotion opportunities and achievements, and gender wage inequalities – and good practices in addressing these issues; and assess the roles of employers and unions in meeting international labour standards and occupational health and safety conditions – or in avoiding the application of these (along with the costs of taxes, regulations and social benefits), to keep labour costs down and increase profits.
- Undertake regional, national or subnational risk assessments, identifying hazardous activities in specific fish value chains that pose risks to children and young people, with a view to introducing measures to prevent child and youth work in these activities, or to putting in place OHS measures to eliminate or reduce the risks they face. If such child risk assessments are undertaken within a broader risk assessment, appropriate gender-sensitive

criteria and standards should be used to distinguish between different age groups and genders. As children are at greater risk than adults, and women are often at greater risk than men, tasks that are not hazardous for adults (or for men) may be hazardous for girls, boys and/or women (especially pregnant or lactating women).

- Research the nexus of poverty, social inequalities and child labour, with a focus on national or subnational studies, as these relationships are likely to be context-specific. Particular attention should be given to identifying the gender division of labour between girls and boys in fisheries-related tasks; the reasons for this division of labour; the differential impacts on girls and boys; and the different types of incentives that may be needed to get girls out of child labour and into school, compared with incentives that might be more effective for boys.
- Research the situations of men and women migrant workers compared with those of national fish workers, including gender-specific differences in vulnerabilities among these groups (permanent versus flexible, casual contracts, wage differentials, and relative access to labour rights in the same industries); and assess why migrants are being driven to leave their homes.
- Explore alternative models for globalization, including organized resistance, such as mass fish worker movements and the emergence of socioprofessional organizations and women fish workers' associations; assess the roles and benefits/losses by gender, ethnicity, and wealth category of different groups in these organizations; and analyse the outcomes of government policies that promote trade (leaving the market to deal with environmental resilience and social equality), compared with those of government initiatives that promote social dialogue and constructive relationships (between workers, employers, communities, etc.) as well as equity, health, labour rights and sustainability.
- Conduct research on the linkages between fisheries and other sectors (with particular reference to gender-specific opportunities and constraints), and on the potential benefits of improved policy coherence across sectors.
- Promote more comparative and collaborative research across and within regions and countries; strengthen international and national research networks to facilitate learning and knowledge exchange; identify similarities and differences in what works and under what circumstances; and act as a mechanism for change.
- Conduct research on gender-specific impacts of climate change on fisheries livelihoods, and the adaptation and coping strategies most appropriate for women and vulnerable groups.

Annexes



Annex 1

Glossary of fisheries terminology

Fisheries sector

The fisheries sector includes the harvest (catching) subsector, downstream industries such as fishing vessel construction and net making, and upstream economic activities such as processing and marketing. Recreational fishing and its associated economic activities are considered a subsector. A distinction is also made between “capture fisheries”, and “fish farming” or “aquaculture” in inland areas or in controlled fish farms in coastal and mangrove areas.

Fishing grounds

Inland fisheries cover fisheries in rivers, lakes and other freshwater bodies. The terms “inland fisheries” and “freshwater fisheries” are used interchangeably.

Coastal fisheries imply fishing closer to the shore, using (relatively) small boats, shore-based/handheld gear, or gleaning.

Marine fisheries cover deep-sea fisheries that are often exploited by industrialized fleets operating for weeks at a time, and less-distant, offshore fishing grounds where smaller boats can fish daily (or for a few days) before returning to shore.

Commercial or subsistence fisheries

Commercial fisheries include production and other sector-related activities that are undertaken for profit.

Subsistence fisheries are undertaken by “those fishers who are poor, fish mainly for food and may exchange or sell surplus harvest to meet other basic needs” (Sowman, 2006).

Scale of fishing operations

Large-scale fisheries: This term is used interchangeably with “industrial fisheries” and should not be confused with “forage fisheries”, which are fisheries that produce fishmeal.

Small-scale fisheries: These are commonly defined in national legislation, so definitions depend largely on location. A small-scale fishing vessel in one country may be considered large-scale in another. Small-scale fishing boats can be motorized or non-motorized. While traditional craft are often powered by wind or paddles, there has been an important increase in motorization during the last few decades. Small-scale fisheries also operate without boats by using shore-based or handheld gear. In 2002, it was estimated that the world fishing fleet consisted of some 4 million vessels. About two-thirds of these were undecked (and generally less than 10 m long), of which 65 percent were non-motorized

(approximately 1.8 million vessels). Large vessels of more than over 24 m (or 100 GT) represented only about 1 percent of the total fishing fleet (FAO, 2007b).

Defining small-scale fisheries

An FAO working group on small-scale fisheries concluded that it was neither possible nor useful to formulate a universal definition of small-scale fisheries, considering their diversity and dynamism. Accordingly, the following description of the subsector was agreed on:

Small-scale fisheries can be broadly characterized as a dynamic and evolving sector employing labour intensive harvesting, processing and distribution technologies to exploit marine and inland water fishery resources. The activities of this subsector, conducted full-time or part-time, or just seasonally, are often targeted on supplying fish and fishery products to local and domestic markets, and for subsistence consumption. Export-oriented production, however, has increased in many small-scale fisheries during the last one to two decades because of greater market integration and globalization. While typically men are engaged in fishing and women in fish processing and marketing, women are also known to engage in near shore harvesting activities and men are known to engage in fish marketing and distribution. Other ancillary activities such as net-making, boatbuilding, engine repair and maintenance, etc. can provide additional fishery-related employment and income opportunities in marine and inland fishing communities. Small-scale fisheries operate at widely differing organizational levels ranging from self-employed single operators through informal microenterprises to formal sector businesses. This subsector, therefore, is not homogenous within and across countries and regions and attention to this fact is warranted when formulating strategies and policies for enhancing its contribution to food security and poverty alleviation (FAO, 2007a, p. 7).

Sub-categories of small-scale fisheries

Many countries categorize their fisheries, and “small-scale fisheries” generally represents a distinct category. However, the terminology varies and can include a wider range of categories: artisanal, traditional, subsistence or recreational.

An **artisanal fishery** commonly describes a traditional fishery such as the canoe fisheries off West Africa. The term “tends to imply a simple, individual (self-employed) or family type of enterprise ... most often operated by the owner” (FAO, no date). It also tends to refer to the use of low levels of technology rather than to the scale of the activity. However, the terms “artisanal fisheries” and “small-scale fisheries” are often used interchangeably.

A **subsistence fishery** is “a fishery where the fish caught are shared and consumed directly by the families and kin of the fishers rather than being bought by middle-(wo)men and sold at the next larger market” (FAO, no date). Pure subsistence fisheries are rare because excess production would be sold or exchanged for other products or services even in the smallest fishery; strictly speaking, all fisheries (except perhaps recreational) are commercial. However, when referring to subsistence fishing, a more household-centred than commercial activity is implied.

The classification criteria for small-scale fisheries often include technical considerations, particularly the size of the vessel or the gear type. Fishing

grounds and operational distance from shore can be other criteria, especially if there are different management regulations for the different fleet segments. Many countries consider all inland-water operations small-scale. Monitoring and management efforts in the marine sector tend to be focused on the large-scale and marine fleet segments, which can constitute an incentive for fishers to be considered small-scale, as there are fewer restrictions for small-scale vessels. The structure of the subsector and its ownership can also be used as criteria.

The exact criteria for defining fishery categories – and hence the subsets of boats and operators that are included – should depend on the purpose for which the classification is made. The social and economic importance of the small-scale sector is often underestimated because of a lack of information. If the role of small-scale fisheries in poverty reduction and food security is to be strengthened, more information may be needed on the socio-economic characteristics of the subsector and its overall development context in order for governments to formulate effective policies and actions. When defining the subsector, consideration may then need to be given to ownership structures and their importance to local economies. For resource management purposes, criteria related to fishing areas, target species and gear are likely to be relevant.

Links and interactions

The discussion above has focused on definitions of fishing operations, i.e. the act of catching fish at sea (or in a lake or river). However, a fishery does not consist only of primary production; it is a larger system that includes up- and downstream activities, among which fish processing and marketing are of major importance.

For fishing operations, the definitions of small-scale, large-scale, land-based and post-harvest activities are somewhat ambiguous. Generally, small-scale processing is labour-intensive and uses a minimum of technology. However, the picture is complicated because small-scale fishers may supply fish to industrial processing plants, and vice versa. For small-scale fishing communities, such arrangements can be either beneficial or unfavourable. Larger-scale operators may have better access to markets than small-scale fishers, and can therefore provide a lucrative distribution channel. In other situations, however, large-scale fisheries may compete with the small-scale sector for access to and control over both resources and markets.

NOTE: This section extracted from World Bank, FAO & WorldFish Center. 2010. *The hidden harvests: the global contribution of capture fisheries*. Washington, DC, World Bank. Annex 6. See also additional references below.

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Annex 2

Tools

Sustainable use of fisheries resources

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Global Partnership for Oceans: a coalition of governments, international organizations, civil society groups and private interests committed to mobilizing knowledge and financial resources to address threats to ocean health, resilience and productivity. The Partnership was launched in 2012.

United Nations Oceans Compact: “Healthy Oceans for Prosperity – An Initiative of the Secretary-General” aims to strengthen UN system-wide coherence in delivering on its oceans-related mandates. Launched by the Secretary-General in August 2012, in Yeosu, the Republic of Korea.

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Child labour in fisheries, aquaculture and agriculture

Conventions

1973 ILO Convention on the Minimum Age for Admission to Employment and Work (No. 138): sets the minimum age for work at 15 years (with possible exception for developing countries at age 14). For work considered hazardous, the age is 18. Children between the ages of 13 and 15 may do light work if it does not threaten their health and safety, or hinder their education or vocational orientation and training.

1989 UN Convention on the Rights of the Child.

1999 ILO Convention on the Worst Forms of Child Labour (No. 182): focuses world attention on the need to take immediate action to eradicate those forms of child labour that are hazardous and damaging to children's physical, mental or moral well-being.

2007 ILO Work in Fishing Convention (No. 188): *inter alia*, sets a minimum age for work on board fishing boats and requires special protection for young fishers (Article 9). The minimum age for work on board a fishing vessel shall be 16 years. The convention permits the possibility of 15-year-olds working as fishers, but only in certain circumstances. There are also situations, for example relating to safety and health concerns, where fishers must be at least 18 to be assigned to certain activities. These activities are to be determined at the national level, after consultation with fishing vessel owners and fishers' representatives, taking into account the risks concerned.

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Web sites and programmes

ILO Sectoral Activities: www.ilo.org/sector (“Shipping; ports; fisheries; inland waterways” in the right column)

FAO and ILO on child labour in agriculture: <http://www.fao-ilo.org/fao-ilo-child>

International Organization for Migration (IOM): <http://www.iom.int/>

International Programme on the Elimination of Child Labour (IPEC):
<http://www.ilo.org/ipeclang--en/index.htm>

Safety for Fishermen: <http://www.safety-for-fishermen.org>

International Partnership for Cooperation on Child Labour in Agriculture (ILO, FAO, IFAD, CGIAR and IUF):
<http://www.ilo.org/ipeclang--en/index.htm>

Understanding Children’s Work (UCW), an interagency research cooperation project on child labour: <http://www.ucw-project.org/>

Annex 3

Gender- and age-disaggregated statistics in the fisheries sector: an overview of proposed topics, parameters and data sources

Topic	Parameters	Data sources
Contribution to national wealth	Volume and value of production and processing, by fish species and gender of producer/processor Value added in different nodes of fish value chains, by fish species and gender of producer/processor	National accounts
Labour and time use	Time worked in fishing and fish processing activities, by type of activity and step in fish value chain Amount of labour hired for activities related to fishing and fish processing, by type of activity	Agricultural censuses Household surveys Labour surveys Value chain surveys
Employment	Employment in occupations related to fishing and fish processing, by type of occupation, grade in professional hierarchy, and step in fish value chain Conditions of employment (working hours, pay, contract duration, etc.), by type of occupation	Employment surveys Household surveys Value chain surveys
Fisheries-related water resources	Ownership and/or use of landing sites, fishing camps, ports and other entry points for fishing Ownership and/or use of aquaculture facilities, by type of production facility (pond, rice-cum-fish cultivation, etc.), size, and source of water	Agricultural censuses Household surveys
Fisheries inputs	Units of fishing gear operated, by type of gear Units of fishing gear owned, by type of gear Units of fishing gear acquired/purchased, by type of gear Costs to rent fishing gear, by type of gear Other costs related to fishing activities Costs related to aquaculture activities, by type of activity and purpose	Household surveys
Fisheries outputs	Amount of catch, by fish species Amount of fish produced in cultured fisheries, by fish species Amount of fish products processed, by type of product Fishing gear leased, by type of gear and income earned	Household surveys

Topic	Parameters	Data sources
Fish trading	<p>Amount of fish purchased from other fishers or fish processors, by fish species</p> <p>Amount of fish or fish products sold, by fish species</p> <p>Income from fishing, aquaculture and fish processing, by type of activity and fish species</p> <p>Expenditures related to fish trading activities (packaging, transportation material and equipment, etc.), by fish species</p>	Household surveys
Financial services	<p>Use of savings, by type of saving, purpose and amount</p> <p>Use of credit, by type of credit, purpose, amount and repayment rates</p> <p>Receipt of social security benefits, by type of benefit and source</p> <p>Receipt of remittances and other kin-related transfers</p>	Household surveys
Training and technology	<p>Receipt of training and/or extension services, by source of service and type of training</p> <p>Recruitment as extension staff and extent of training, by type of training</p> <p>Use of fishing- and aquaculture-related technologies, by type of technology</p> <p>Use of ICT (mobile phones, computers, etc.), by type of technology</p>	<p>Household surveys</p> <p>Administrative records</p>
Human resources	<p>Skills in fishing, aquaculture and fish processing, by type of skill and source of training</p> <p>Health and nutrition status</p>	<p>Household surveys</p> <p>Health and nutrition surveys</p>
Participation, decision-making, attitudes	<p>Membership in farmers' organizations, cooperatives, unions and other types of mass movement, by type of organization and nature of membership (member, manager, leader, etc.)</p> <p>Membership in fisheries decision-making institutions, by nature of membership, type of organization and scope of influence (local, community, district, national, etc.)</p> <p>Attitudes to male/female participation in fisheries and aquaculture activities</p> <p>Self-confidence to take decisions, organize others, undertake development activities, etc.</p>	<p>Administrative records</p> <p>Household surveys</p> <p>Qualitative surveys</p>

Endnotes

Author names in bold are the first appearance of the work in this list of endnotes.

- 1 **FAO**. 2010. *The State of World Fisheries and Aquaculture 2010*. Rome.
- 2 **NACA (Network of Aquaculture Centres in Asia and the Pacific)/FAO**. 2000. *Aquaculture Development Beyond 2000: The Bangkok Declaration and Strategy*. Conference on Aquaculture Development in the Third Millennium, Bangkok, 20-25 February 2000. Bangkok, NACA.
- 3 *Phuket Consensus: a re-affirmation of commitment to the Bangkok Declaration*. Adopted by the Global Conference on Aquaculture, Phuket, Thailand, 22-25 September 2010.
- 4 See, for example, **Williams, M.J., Porter, M., Choo, P.S., Kusakabe, K., Vuki, V., Gopal, N. & Bondad-Reantaso, M.** 2012. Guest Editorial: Gender in aquaculture and fisheries – moving the agenda forward. *Asian Fisheries Science*, 25S: 1-13.
- 5 FAO, 2010 (see endnote 1), page 6. In addition to the 44.9 million full- and part-time fishers, about 6 million occasional fishers and fish farmers were recorded (about two-thirds of whom were in China and India) (page 29).
- 6 The figures cited in this paragraph come from FAO, 2010 (see endnote 1). For estimates regarding the 120 million working in commercial capture fisheries, see also **World Bank, FAO & WorldFish Center**. 2010. *The hidden harvests: the global contribution of capture fisheries*. Washington, DC, World Bank.
- 7 See, for example, **World Bank, FAO & IFAD**. 2009. Module 13: Gender in fisheries and aquaculture. In *Gender in agriculture sourcebook*. Washington, DC, World Bank. Page 568; **Choo, P.S., Nowak, B., Kusakabe, K. & Williams, M.** 2008. Guest Editorial: Gender and fisheries. *Development*, 51: 176-179 (page 176); **Weeratunge, N., Snyder, K. & Choo, P.S.** 2010. Gleaner, fisher, trader, processor: understanding gendered employment in fisheries and aquaculture. *Fish and Fisheries*, 11: 405-420 (pages 407-408); and **Williams, M.** 2012. *Putting gender on the programme of the Network of Aquaculture Centres in Asia (NACA)*. Posted by Meryl Williams (former Director-General of WorldFish) 24 April 2012 on the Web site of the intergovernmental NACA (available at http://www.enaca.org/modules/news/article.php?article_id=1938).
- 8 **FAO**. 2012. Mainstreaming gender in fisheries and aquaculture: from recognition to reality. In *The State of World Fisheries and Aquaculture 2012*. Rome.
- 9 FAO, 2010 (see endnote 1), page 182.
- 10 World Bank, FAO & WorldFish Center, 2010 (see endnote 6), page 32. The methodology used to estimate the values for developing and developed countries data presented in the *Hidden harvests* study is described in detail in pages 13-22 and in Annex 6, together with an analysis of the different data sources in the fisheries sector and their strengths and weaknesses. The data for developing countries (cited in the present study's Table 1) are drawn from case studies of 17 developing countries that together are home to 70 percent of the world's fish workers, and account for 40 percent of global and 56 percent of developing country reported catches (page 15). The developed country information was compiled from a sample of 11 developed countries representing about 14 percent of global reported catches, and 47 percent of developed country catches. The combined samples of these 17 developing and 11 developed countries account for 88 percent of reported marine catches and 74 percent of reported inland catches (page 16); for a list of the countries included, see page 15.
- 11 **Kusakabe, K. & Kelkar, G., eds.** 2001. *Gender concerns in aquaculture in Southeast Asia*. Gender Studies Monograph No. 12. Bangkok, Asian Institute of Technology, School of Environment Resources and Development. Cited in **FAO**. 2011. *The State of Food and Agriculture 2010-2011. Women and agriculture: closing the gender gap for development*. Rome. Page 16. The figures refer to aquaculture production (excluding post-harvest activities) (K. Kusakabe, personal communication, 13 April 2012).
- 12 For a discussion of the issues and some case study evidence, see World Bank, FAO & WorldFish Center, 2010 (see endnote 6), page 40.
- 13 **Westlund, L.** 2008. Analyzing and addressing the multiple dimensions of poverty. In L. Westlund, K. Holvoet & M. Kébé, eds. *Achieving poverty reduction through responsible fisheries. Lessons from West and Central Africa*. FAO Fisheries and Aquaculture Technical Paper No. 513. Rome. For more information, see this perceptive paper, which describes the methodology used by FAO's SFLP for livelihoods and poverty profiling, and analyses the advantages of the methodology and the results obtained.
- 14 **FAO**. 2010. *Report of the FAO Workshop on Child Labour in Fisheries and Aquaculture in cooperation with ILO*, Rome, 14-16 April 2010. Rome; **FAO-ILO**. 2011. *FAO-ILO good practice*

guide for addressing child labour in fisheries and aquaculture: policy and practice. Preliminary version. Rome.

15 Allison, E.H., Béné, C. & Andrew, N.L. 2011. Poverty reduction as a means to enhance resilience in small-scale fisheries. In R.S. Pomeroy & N.L. Andrew, eds. *Small-scale fisheries management – frameworks and approaches for the developing world*, pp. 216-238. Oxford, UK, CABI.

16 O’Riordan, B. 2006. *Growing pains*. Samudra Report No. 44 July 2006. Chennai, India, International Collective in Support of Fishworkers. Pages 8-13. Cited in FAO-ILO, 2011 (see endnote 14).

17 FAO, 2010 (see endnote 14), page 9. According to 2001 census data for India, there were 12.7 million economically active children in the age group of 5 to 14 years in India, the majority of whom worked in the informal sector, especially in agriculture, fishing and aquaculture. However, this figure does not include the millions of child labourers in subsistence fishery and aquaculture whose work remained invisible.

18 FAO. 2006. *Children’s work in fisheries – a cause for alarm?* by V. Iversen. Rome, FAO Sustainable Fisheries Livelihoods Programme.

19 For a detailed discussion of these issues, see FAO, 2010 and FAO-ILO, 2011 (both in endnote 14).

20 FAO, 2010 (see endnote 1), Box 5, page 71. For a discussion of reasons for under-reporting, see World Bank, FAO & WorldFish Center, 2010 (see endnote 6), pages 6-7.

21 World Bank, FAO & WorldFish Center, 2010 (see endnote 6), page 6.

22 Schultz, T.P. 1993. Investments in the schooling and health of women and men: quantities and returns. *Journal of Human Resources*, 28(4): 694-734. Cited in FAO, 2006 (see endnote 18), page 9.

23 For a discussion of the evidence, see FAO, 2006 (see endnote 18), page 9.

24 FAO-ILO, 2011 (see endnote 14); UNICEF (United Nations Children’s Fund). 2005. *Trafficking in human beings, especially women and children in Africa*. Second edition. Florence, Italy, UNICEF Innocenti Research Centre.

25 ILO. 2002. *Bitter harvest. Child labour in agriculture*. Geneva, Switzerland, Bureau for Workers’ Activities.

26 FAO, 2006 (see endnote 18).

27 ILO. 2007. *Child trafficking. The ILO’s response through IPEC*. Geneva, Switzerland, IPEC (International Programme on the Elimination of Child Labour).

28 See, for example, the review of recent evidence by Iversen in FAO, 2006 (endnote 18); UNICEF, 2005 (endnote 24); and Zdunnek, G., Dinkelaker, D., Kalla, B., Matthias, G., Szrama, R. & Wenz, K. 2008. *Child labour and children’s economic activities in agriculture in Ghana*. SLE Publication Series S233. Berlin, Centre for Advanced Training in Rural Development, Humboldt Universität Faculty of Agriculture and Horticulture, and Rome, FAO. 143 pp.

29 FAO-ILO, 2011 (see endnote 14), page 22; Zdunnek et al., 2008 (see endnote 28).

30 World Bank & FAO. 2009. *The sunken billions: the economic justification for fisheries reform*. Washington, DC, World Bank.

31 Neis, B. & Manesch, M.C. 2005. Moving forward. In B. Neis, M. Binkley, S. Gerrard & M.C. Manesch, eds. *Changing tides, gender, fisheries and globalization*. Halifax, Canada, Fernwood Publishing; ICSF (International Collective in Support of Fishworkers). 2000. *Workshop on Gender and Coastal Fishing Communities in Latin America*, Prainha do Canto Verde, Ceara, Brazil, 10-15 June 2000.

32 World Bank & FAO, 2009 (see endnote 30). The estimated annual loss of US\$50 billion to the global economy is a conservative estimate. It excludes consideration of the losses due to recreational fisheries, marine tourism and illegal fishing; the economic contribution of dependent activities such as fish processing, distribution and consumption; and the value of biodiversity losses and compromises to the ocean carbon cycle. These exclusions suggest that the losses to the global economy from unsustainable exploitation of living marine resources substantially exceed US\$50 billion per year. See this study for details on the methodology used to estimate the losses.

33 For a more in-depth discussion of the issues, and recommendations for addressing them, see World Bank & FAO, 2009 (endnote 30).

34 FAO, 2010 (see endnote 1).

35 Neis & Manesch, 2005 (see endnote 31); Dey de Pryck, J. & Termine, P. (forthcoming). Gender inequalities in rural labour markets. In A. Quisumbing, R. Meinzen-Dick, T. Raney, A. Croppenstedt, J.A. Behrman & A. Peterman, eds. *Gender in agriculture and food security: closing the knowledge gap*. Rome, FAO and New York, USA, Springer.

36 Barria, S. & Mathews, R.D. 2010. *Economic liberalisation and gender dynamics in traditional small-scale fisheries. Reflections on the proposed EU-India Free Trade Agreement*. Occasional Paper No. 8. New Delhi, Focus on the Global South.

37 World Bank, FAO & WorldFish Center, 2010 (see endnote 6), page 14.

38 See FAO, 2010 (endnote 1) for figures on production and trends by product and region (pages 18-26), and on employment (pages 26-30).

39 For a discussion of these issues, see FAO, 2010 (endnote 1), pages 83-86.

40 For a discussion of the constraints in Asia, see FAO, 2010 (endnote 1), pages 138-142. On the issue of seeds, see FAO. 2007. *Assessment of freshwater fish seed resources for sustainable aquaculture*, by M. Bondad-Reantaso. FAO Fisheries Technical Paper No. 501. Rome.

41 FAO, 2010 (see endnote 1), page 86.

42 FAO. 2007. *Negotiating gender changes within fisheries development*, by C. Okali & K. Holvoet. Rome, Sustainable Fisheries Livelihood Programme.

43 Some of these “simple fixes” may not be simple in all contexts. For example, the production of ice to reduce losses can be challenging for poor fishing communities if they do not have access to electricity, clean water

and technical and financial management skills. Paradoxically, with the integration of small-scale fisheries into global markets, small producers are gaining access to ice from traders supplying fresh fish markets or processing plants. However, such market integration may bring negative gender-differentiated spinoff effects (Robert Lee, personal communication).

44 FAO, 2010 (see endnote 1). The figures may be underestimates owing to unrecorded contributions of subsistence fisheries.

45 **Béné, C.** 2010. *Global change in African fish trade: Engine of development or threat to local food security?* OECD Food, Agriculture and Fisheries Working Paper No. 10. Paris, OECD (Organisation for Economic Co-operation and Development). Sub-Saharan Africa is the only part of the world where fish supply per person is declining while production is still increasing. Although the region's fish trade balance in value terms increased from almost zero in 1990 to US\$750 million in 2001, it had a large negative balance in terms of quantity, with fish consumption falling by 14 percent over this period to a world-low record of only 6.7 kg/year/capita in 2006. The huge revenues earned through the fish trade have not been translated into reductions in the gap between fish demand and supply in these countries.

46 FAO, 2011 (see endnote 11), pages 43-44.

47 **FAO.** 2000. *The State of World Fisheries and Aquaculture 2000.* Rome.

48 World Bank, FAO & IFAD, 2009 (see endnote 7).

49 Similar views are expressed by Williams *et al.*, 2012 (see endnote 4).

50 For example, in the United Republic of Tanzania, fish are often exchanged for fuelwood, fruit, tomatoes, maize and cassava flour. Bargaining is common: see **Medard, M.** 2005. Women's strategies in the globalized Lake Victoria fisheries. In B. Neis, M. Binkley, S. Gerrard & M.C. Maneschy, eds. *Changing tides, gender, fisheries and globalization.* Halifax, Canada, Fernwood Publishing. As in neighbouring villages, inhabitants of the artificial island of Foueda, located on the barrier reef of the Lau Lagoon, Malaita, Solomon Islands, barter fish with the people of the main island Malaita for crops and vegetables such as taro, yam and bananas. Bartering and food exchange bring closer kinship ties between these neighbouring peoples: see **Buga, B. & Vuki, V.** 2012. *The people of the artificial island of Foueda, Lau Lagoon, Malaita, Solomon Islands: traditional fishing methods, fisheries management and the roles of men and women in fishing.* Women in Fisheries Information Bulletin No. 22. New Caledonia, SPC (Secretariat of the Pacific Community).

51 On redistributing surplus fish to the elderly and disabled, see, for example, **Nayak, N.** 2005. Fishing for need and not for greed. Women, men and the fish workers' movement in India. In B. Neis, M. Binkley, S. Gerrard & M.C. Maneschy, eds. *Changing tides, gender, fisheries and globalization.* Halifax, Canada, Fernwood Publishing. On the importance of fish as gifts to neighbours in order to maintain/promote social relationships, see **Brummett, R.E., Youaleu,**

J.L.N., Tiani, A.-M. & Kenmegne, M.M. 2010. Women's traditional fishery and alternative aquatic resource livelihood strategies in the Southern Cameroonian Rainforest. *Fisheries Management and Ecology*, 17: 221-230.

52 World Bank, FAO & IFAD, 2009 (see endnote 7).

53 **Tindall, C. & Holvoet, K.** 2008. From the lake to the plate: assessing gender vulnerabilities throughout the fisheries chain. *Development*, 51: 205-211.

54 Williams *et al.*, 2012 (see endnote 4).

55 **Nandeesh, M.** 2007. Asian experience on farmer's innovation in freshwater fish seed production and nursing and the role of women. In M. Bondad-Reantaso, ed. *Assessment of freshwater fish seed resources for sustainable aquaculture.* FAO Fisheries Technical Paper No. 501. Rome, FAO; and **Williams, M.J., Agbayani, R., Bhujel, R., Bondad-Reantaso, M.G., Brugère, C., Choo, P.S., Dhont, J., Galmiche-Tejeda, A., Ghulam, K., Kusakabe, K., Little, D., Nandeesh, M.C., Sorgeloos, P., Weeratunge, N., Williams, S. & Xu, P.** 2012. Sustaining aquaculture by developing human capacity and enhancing opportunities for women. In R.P. Subasinghe, J.R. Arthur, D.M. Bartley, S.S. De Silva, M. Halwart, N. Hishamunda, C.V. Mohan & P. Sorgeloos, eds. *Farming the waters for people and food.* Proceedings of the Global Conference on Aquaculture 2010, Phuket, Thailand, 22-25 September 2010. Rome, FAO and Bangkok, NACA. Pages 785-874.

56 For a discussion on these issues, see **World Bank.** 2011. *World Development Report 2012. Gender equality and development.* Washington, DC.

57 Westlund, 2008 (see endnote 13).

58 FAO, 2007 (see endnote 42), page 13.

59 FAO-ILO, 2011 (see endnote 14); Zdunnek *et al.*, 2008 (see endnote 28).

60 **Overå, R.** 2005. When sisters become competitors. Coastal women's innovative utilization of trawler by-catch in Ghana. In B. Neis, M. Binkley, S. Gerrard & M.C. Maneschy, eds. *Changing tides, gender, fisheries and globalization.* Halifax, Canada, Fernwood Publishing.

61 **Gammage, S., Swanburg, K., Khandkar, M., Zahidul Hassan, M., Zobair, M. & Muzareba, A.** 2006. *A gendered analysis of the shrimp sector in Bangladesh.* Report prepared for USAID (United States Agency for International Development), Washington, DC.

62 **Diegues, A.C.** 2006. *Artisanal fisheries in Brazil.* Samudra Monograph. Chennai, India, International Collective in Support of Fishworkers.

63 World Bank, FAO & IFAD, 2009 (see endnote 7).

64 **Brummett et al.**, 2010 (see endnote 51), page 228.

65 **ICSF.** 2000. Brazil: Work of fisherwomen in fishing communities of the State of Pernambuco. In *Workshop on Gender and Coastal Fishing Communities in Latin America*, Praia Verde do Canto Verde, Ceara, Brazil, 10-15 June 2000. Background Paper No. 8, page 132.

66 **Meinzen-Dick, R., Behrman, J.A., Pandolfelli, L., Peterman, A. & Quisumbing, A.** (forthcoming). Gender and social capital for

- agricultural development. In A. Quisumbing, R. Meinzen-Dick, T. Raney, A. Croppenstedt, J.A. Behrman & A. Peterman, eds. *Gender in agriculture and food security: closing the knowledge gap*. Rome, FAO and New York, USA, Springer.
- 67 ICSF, 2000 (see endnote 31).
- 68 Meinzen-Dick *et al.*, forthcoming (see endnote 66). See also examples from Brazil, Chile, Ecuador, Mexico and Peru in ICSF, 2000 (endnote 31).
- 69 **De Silva, D.A.M. & Yamao, M.** 2006. The involvement of female labor in seafood processing in Sri Lanka: the impact of organizational fairness and supervisor evaluation on employee commitment. In P.S. Choo, S.J. Hall & M.J. Williams, eds. *Global Symposium on Gender and Fisheries: Seventh Asian Fisheries Forum, 2004*, pp. 103-114. Penang, Malaysia, WorldFish Center. Cited in FAO, 2007 (see endnote 42).
- 70 **FAO.** 2004. *Women in the fisheries sector of Argentina, Uruguay and Southern Brazil*, by H. Josupeit. FAO Fisheries Circular No. 992. Rome.
- 71 De Silva & Yamao, 2006 (endnote 69).
- 72 **Dolan, C.S. & Sorby, K.** 2003. *Gender and employment in high-value agriculture industries*. Agriculture and Rural Development Working Paper No. 7. Washington, DC, World Bank; FAO, 2004 (see endnote 70).
- 73 See, for example, FAO, 2004 (endnote 70); Gammage *et al.*, 2006 (endnote 61); and Dey de Pryck & Termine, forthcoming (endnote 35).
- 74 Dey de Pryck & Termine, forthcoming (see endnote 35).
- 75 **ILO.** 2009. *Global employment trends 2009 – Update*. Geneva, Switzerland.
- 76 FAO-ILO, 2011 (see endnote 14).
- 77 FAO, 2007 (see endnote 42).
- 78 **Rubinoff, J.A.** 1999. Fishing for status: impact of development on Goa's fisherwomen. *Women's Studies International Forum*, 22(6): 631-644 (page 638).
- 79 **Hapke, H.** 2012. Capturing the complexities of globalization in fisheries: gendered divisions of labour and divisions of labour and difference. *Asian Fisheries Science*, 25S: 75-92.
- 80 Rubinoff, 1999 (see endnote 78).
- 81 Personal Communication, Simel Esim, ILO, August 2012.
- 82 **Mowla, R. & Kibria, M.G.** 2006. An integrated approach on gender issues in coastal fisheries. In P.S. Choo, S.J. Hall & M.J. Williams, eds. *Global Symposium on Gender and Fisheries: Seventh Asian Fisheries Forum, 2004*, pp. 21-28. Penang, Malaysia, WorldFish Center. Cited in World Bank, FAO & IFAD, 2009 (see endnote 7), page 570.
- 83 Rubinoff, 1999 (see endnote 78).
- 84 See, for example, Rubinoff, 1999 (see endnote 78), page 633; and **Thompson, P.** 1985. Women in the fishing. The roots of power between the sexes. *Comparative Studies in Society and History*, 27(1): 3-32.
- 85 See, for example, Weeratunge, Snyder & Choo, 2010 (endnote 7).
- 86 **Westlund, L.** 2010. *Gender and small-scale fisheries in Asia and the Pacific: considerations, issues and good practices*. Background paper prepared for the Asia-Pacific Regional Consultative Workshop on Securing Sustainable Small-Scale Fisheries: Bringing together responsible fisheries and social development, Bangkok, 4-6 October 2010.
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- 89 **Holvoet, K.** 2008. Mainstreaming gender in fisheries. In L. Westlund, K. Holvoet & M. Kébé, eds. *Achieving poverty reduction through responsible fisheries. Lessons from West and Central Africa*. FAO Fisheries and Aquaculture Technical Paper No. 513. Rome.
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- 92 **FAO.** 2010. *Value chain actors plus: an innovative approach for the fishery sector in response to HIV/AIDS. Experience of Benin in the crab value chain*, by K. Holvoet. Rome, Sustainable Fisheries Livelihood Programme.
- 93 Holvoet, 2008 (see endnote 84).
- 94 **FAO.** 2011. *Mainstreaming gender into project cycle management in the fisheries sector*, by M.C. Arenas & A. Lentisco. Bangkok.
- 95 Tindall & Holvoet, 2008 (see endnote 53).
- 96 Rubinoff, 1999 (see endnote 78), page 641.
- 97 *Ibid.*, page 637.
- 98 Westlund, 2010 (see endnote 86).
- 99 **Goss, J.** 2005. Shrimp farms or shrimps harm? In B. Neis, M. Binkley, S. Gerrard & M.C. Manesch, eds. *Changing tides, gender, fisheries and globalization*. Halifax, Canada, Fernwood Publishing.
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- 103 Tindall & Holvoet, 2008 (see endnote 53).
- 104 Katrien Holvoet, personal communication.
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- 106 **Abila, R.O. & Jansen, E.G.** 1997. *From local to global markets: the fish processing and exporting industry on the Kenyan part of lake Victoria – its structure, strategies and socio-economic impacts*. Working Paper, No. 8. Oslo, University of Oslo. Cited in FAO, 2007 (see endnote 42).
- 107 FAO, 2007 (see endnote 42), page 25.
- 108 **Tanzarn, N.** 2006. The dynamics of HIV and AIDS among fishing communities in Uganda.

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110 Maneschy & Álvares, 2005 (see endnote 100).

111 See, for example, **WorldFish Center**. 2006. *Proceedings of the International Workshop: Responding to HIV and AIDS in the Fishery Sector in Africa*, Lusaka, 21-22 February 2006. Cairo.

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113 FAO-ILO, 2011 (see endnote 14), pages 11-16.

114 **CDC (Centers for Disease Control and Prevention)**. 2010. Commercial fishing deaths: United States, 2000-2009. *MMWR*, 59(27): 842-845. Cited in **ILO**. 2000. *Note on the Proceedings: Tripartite Meeting on Safety and Health in the Fishing Industry, Geneva, 13-17 December 1999*. Geneva, Switzerland. Page 12. "In spite of a gradual decline in fatalities since 1992, a recent survey of commercial fishing deaths in the USA revealed that fishing was still the occupation with the highest number of fatalities in the country."

115 FAO, 2010 (see endnote 14).

116 **FAO**. 2000 and 2008. *The State of World Fisheries and Aquaculture 2000 and 2008*. Rome.

117 FAO-ILO, 2011 (see endnote 14), pages 11-16.

118 *Ibid.*, pages 18-24.

119 FAO, 2000 (see endnote 116).

120 WorldFish Center, 2006 (see endnote 111).

121 For case studies, see, for example, **Merten, S. & Haller, T.** 2006. "Fish for sex" exchange in the Kafue Flats: risky opportunities of rural women. In *Proceedings of the International Workshop: Responding to HIV and AIDS in the Fishery Sector in Africa*, Lusaka, 21-22 February 2006. Cairo; and FAO, 2010 (see endnote 92).

122 World Bank, FAO & IFAD, 2009 (see endnote 7).

123 FAO, 2004 (see endnote 70); Gammage *et al.*, 2006 (see endnote 61).

124 Medard, 2005 (see endnote 50).

125 Goss, 2005 (see endnote 99).

126 Nayak, 2005 (see endnote 51).

127 FAO, 2004 (see endnote 70).

128 Maneschy & Álvares, 2005 (see endnote 100).

129 **Díaz, E.** 2005. A sea of women. Gender-informed health and safety policies and Chile's women fish processing workers. In B. Neis, M. Binkley, S. Gerrard & M.C. Maneschy, eds. *Changing tides, gender, fisheries and globalization*. Halifax, Canada, Fernwood Publishing.

130 See, for example, Dolan & Sorby, 2003 (endnote 72); and Maneschy & Álvares, 2005 (endnote 100).

131 Dey de Pryck & Termine, forthcoming (see endnote 35).

132 **Drèze, J. & Sen, A.** 1991. Public action for social security: foundations and strategy. In E. Ahmad, J. Drèze, J. Hills & A. Sen, eds. *Social security in developing countries*. Oxford, UK, Clarendon Press. Pages 28-29.

133 Dey de Pryck & Termine, forthcoming (see endnote 35).

134 Diegues, 2006 (see endnote 62).

135 FAO, 2007 (see endnote 42).

136 For a discussion of this topic, see World Bank, FAO & WorldFish Center, 2010 (endnote 6), pages 7-8.

137 **Nathan, D. & Apu, N.A.** 2004. *Case study of the Oxbow Lakes Small-Scale Fishermen's Project (OLSFFP) IFAD Innovation Mainstreaming Initiative, Bangladesh: 1990-1997*. Rome, IFAD. Cited in **Velu, A., Gessese, N., Ragasa, C. & Okali, C.** 2009. *Gender analysis of aquaculture value chain in Northeast Vietnam and Nigeria*. Agriculture and Rural Development Discussion Paper No. 44. Washington, DC, World Bank.

138 Velu *et al.*, 2009 (see endnote 137).

139 For examples in agriculture, see Dey de Pryck & Termine, forthcoming (see endnote 35).

140 Holvoet, 2008 (see endnote 84).

141 Diegues, 2006 (see endnote 62). See also excerpts of a fascinating interview with Joanna Rodrigues Mousinho by **Indu, M.G.** 2005. Proud to be a fishworker. In B. Neis, M. Binkley, S. Gerrard & M.C. Maneschy, eds. *Changing tides, gender, fisheries and globalization*. Halifax, Canada, Fernwood Publishing. Elected president of a fish *colônia* in a Brazilian fishing community with some 1 000 men and 1 225 women members, and having previously been elected as president of the Federation of Fishers of the State of Pernambuco, Joanna is an extraordinary woman who has fought to defend the rights of fish workers and shellfish gatherers.

142 **FAO**. 2012. *Zero draft of the voluntary International Guidelines for Securing Sustainable Small-Scale Fisheries*, Rome, which states, paragraph 9.6, "Small-scale fisheries actors and their communities should promote the sharing of household work between men and women to avoid women's overburden when engaging in productive activities. An environment that is safe and free from violence and sexual abuse, within households and the community, should be fostered."

143 FAO, 2000 and 2008 (see endnote 116).

144 FAO-ILO, 2011 (see endnote 14), pages 43-44.

145 FAO, 2000 (see endnote 116).

146 **Wathum, P.** 2011. *Increasing supply of Mukene (Rastrineobola argentea) for human consumption. TCP/UGA/3204 (D). A socio-economic study*. Consultancy report for FAO.

147 FAO-ILO, 2011 (see endnote 116), Box 18, page 48.

148 For more detailed analysis and recommendations, see WorldFish Center, 2006 (endnote 111).

149 FAO-ILO, 2011 (see endnote 116), page 40.

150 *Global March Against Child Labour*. Framework of Action adopted by the International Conference on Child Labour in Agriculture

organized by the Global March, in Washington, DC, July 2012.

151 For a copy of the declaration in Spanish, see http://www.ilo.org/ipec/WCMS_184558/lang-en/index.htm

152 Allison, Béné & Andrew, 2011 (see endnote 15).

153 ILO. 2011. *New standards on child labour for Thailand*. (Available at: http://www.ilo.org/asia/whatwedo/events/WCMS_166322/lang-en/index.htm).

154 ILO-FAO. 2012. *Summary report for National Consultation Workshop on Combating Child Labour in Fisheries Sector and Making a Brighter Future for Small-Scale Fisheries through Community Fisheries in Cambodia*, Phnom Penh, 22-24 February 2012. This and the ILO-FAO programmes in Malawi and Mali were undertaken on behalf of the International Partnership for Cooperation on Child Labour in Agriculture.

155 **International Partnership for Cooperation on Child Labour in Agriculture**. 2011. *Report of the FAO-ILO Workshop on Capacity Development on Child Labour in Agriculture*, Salima, Malawi, 23-27 May 2011.

156 FAO-ILO. 2011. *Atelier national d'information et de partage sur le travail des enfants dans l'agriculture au Mali. Rapport*. Bamako, 8-9 December 2011.

157 For more detailed proposals, see FAO-ILO, 2011 (endnote 14); and **The Hague Global Child Labour Conference**. 2010. *Roadmap for achieving the elimination of the worst forms of child labour by 2016*, The Hague, 10-11 May 2010. Dutch Ministry of Social Affairs and Employment and ILO.

158 FAO, 2011 (see endnote 11).

159 ILO, 2002 (see endnote 25). This publication cites various good practices by trade unions in the agriculture sector or in specific commodities (bananas, cocoa, oil-palm), but none in the fisheries sector.

160 Ibid.

161 FAO-ILO, 2011 (see endnote 14).

162 Ibid.

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