



# WOMEN'S ECONOMIC EMPOWERMENT IN FISHERIES

IN THE BLUE ECONOMY OF THE INDIAN OCEAN RIM

A Baseline Report





**Australian Government**  
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# ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
BMU	Beach Management Unit (Kenya)
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CSO	Civil society organization
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIP	Fishery improvement project
GDP	Gross national product
GNI	Gross national income
ILO	International Labour Organization
IUU	Illegal, unreported and unregulated (fishing)
IORA	Indian Ocean Rim Association
LMMA	Locally managed marine areas (Madagascar)
MT	Metric tonne
NGO	Non-governmental organization
PPP	Purchasing power parity
SADC	Southern African Development Community
SDG	Sustainable Development Goal
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WIO	Western Indian Ocean



# EXECUTIVE SUMMARY

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This report provides a baseline analysis of women's economic empowerment in the fisheries sector in the blue economy of the Indian Ocean rim region.<sup>1</sup> The report focuses on the 22 Member States of the Indian Ocean Rim Association (IORA) and includes both marine and inland fisheries and aquaculture sectors.

IORA is an intergovernmental organization aimed at strengthening regional cooperation and sustainable development within the Indian Ocean region. IORA Member States share a common coastline along the Indian Ocean Rim, and fishing is a traditional activity in the region, with many countries having well-developed inland and marine fishery sectors. IORA has therefore identified the goal of growing the blue economy in a sustainable, inclusive and people-centred manner as one of its special focus areas, with fisheries and aquaculture included among six priority pillars.

Women constitute nearly half of those employed in fisheries globally.<sup>2</sup> In many IORA countries, women engage in various types of fish harvesting activities, fishing and gleaning, usually in near-shore and intertidal zones. Women are predominant in the post-harvest sector in both small-scale and industrial processing in most IORA countries. Fisheries, however, remains a traditionally male-dominated sector where women's contributions are greatly devalued. Women's work in fisheries and aquaculture lacks formal recognition, and women are vastly underrepresented in policy and decision-making.

Nevertheless, women fishers contribute significantly to household income and food security, and their economic contributions are often the mainstay of family and community sustenance. The active engagement of women in representation and leadership also contributes to better efficiency and more sustainable

fishery practices. The economic empowerment of women is therefore not an issue of social justice alone but also important for sustainable economic growth within fisheries.

The role of women is particularly significant in poor countries where livelihood options are limited. Over three fourths of the population living in the IORA region is concentrated in its poorer nations where the per capita income is less than half that of world average per capita income levels in purchasing power parity (PPP) terms. Women's waged work in industrial fishing and in other sectors sustains families and communities when traditional fishing is undermined by competition, various human-made conflicts and environmental degradation due to climate change and disasters.

The lack of formal recognition of women's work extends to government policy in the fisheries and aquaculture sector. This lack of recognition is the chief cause of women's exclusion from government programmes and schemes and from regulation of their work. This exclusion extends to data collection and analysis of fisheries, in turn, resulting in the further marginalization of women from sectoral policy, programmes and activities of governments, the private sector and civil society organizations (CSOs).

This report urges States to recognize the importance of the traditional and small-scale fisheries and aquaculture sector for sustainable and equitable development and to formally recognize the central role played by women. It therefore recommends coherence within government policy to ensure that the fisheries sector and women's activities therein are prioritized. It urges state agencies, the private sector and CSOs to ensure that gender is mainstreamed into policies and programmes for the sector, including technology development, research and data collection.

# INTRODUCTION

This report provides a baseline analysis of women's economic empowerment in the fisheries sector in the blue economy of the Indian Ocean rim region. The report focuses on the 22 Member States of the Indian Ocean Rim Association (IORA), which is an intergovernmental organization aimed at strengthening regional cooperation and sustainable development within the Indian Ocean region.<sup>3</sup>

Considering that IORA Member States share a common coastline along the Indian Ocean, and that the ocean provides a substantial portion of the population with food and livelihoods, the blue economy was identified as a special focus area at the 14<sup>th</sup> IORA Ministerial Meeting in 2014. The objective of the blue economy is interpreted by IORA as promoting smart, sustainable and inclusive growth and employment opportunities within the region's maritime economic activities. IORA's six "priority pillars" in the blue economy are: fisheries and aquaculture; renewable ocean energy; seaports and shipping; offshore hydrocarbons and seabed minerals; marine biotechnology, research and development; and tourism.<sup>4</sup>

IORA is equally committed to advancing gender equality and women's economic empowerment, with the latter selected as a special focus area at the 13<sup>th</sup> IORA Council of Ministers meeting in 2013. Ministers and heads of delegations have since issued a series of declarations furthering their commitment to the economic empowerment of women.<sup>5</sup> Most recently, the Balaclava Declaration on Women's Economic Empowerment and Gender Equality as a Pre-Requisite for Sustainable Development was issued at the Ministerial Conference on Women's Economic Empowerment held in Mauritius in 2018. This Declaration acknowledges that the blue economy provides important opportunities for women and that: "Women can be encouraged to reach their full potential in a variety of occupations and inclusion throughout Blue Economy value chains, such as in

shipping and maritime transport, offshore mining and coastal tourism through better access to education, training, technology and finance".<sup>6</sup>

The IORA region is diverse in terms of levels of economic development (See **Table 1**), with as many upper-middle-income and high-income countries as there are lower-middle-income and low-income countries. In terms of population, however, over 75 per cent of the total population in the region live in countries from the lower-middle-income and low-income groups.

The first of IORA's blue economy priority pillars, the fisheries and aquaculture sector, is vital to Indian Ocean Rim countries, supporting millions of people with food, income and jobs. Yet IORA Member States also differ substantially on various parameters related to the development of the fisheries sector and the relative importance of fisheries (fish capture and culture and fish-based ancillary industry) to the overall economy. One difference is the technological development of their fisheries and, therefore, the employment offered to women and men along the fisheries value chain. The relative importance of fish as a source of food security also varies. Fish is the source of more than half the animal protein for Bangladesh, Indonesia and Sri Lanka;<sup>7</sup> conversely, fish contributes to only 10 per cent of average per capita protein consumption in Iran<sup>8</sup> and around 15 per cent in Australia.<sup>9</sup>

Governments tend to favour large-scale fisheries for national socioeconomic growth based on the view that industrial fishing is more efficient than the small-scale sector. However, a study analysing fisheries in Cambodia, Malaysia, Thailand and Viet Nam concludes that in terms of fish used for human consumption, the small-scale sector outperforms industrial fishing.<sup>10</sup> Globally, the small-scale fisheries sector is a more efficient employer than industrial fishing in terms of utilization and efficiency of catch, environmental sustainability and

TABLE 1

## Income groupings among countries in the IORA region

Income group	Countries and territories
High income	Australia, Oman, Seychelles, Singapore, United Arab Emirates
Upper-middle income	Iran (Islamic Republic of), Malaysia, Maldives, Mauritius, South Africa, Thailand
Lower-middle income	Bangladesh, India, Indonesia, Kenya, Sri Lanka, Yemen
Low income	Comoros, Madagascar, Mozambique, Somalia, United Republic of Tanzania

Source: Adapted from ILO 2017a.

employment generation (see **Table 2**), with most of the fish caught in the small-scale sector meeting human consumption needs.<sup>11</sup>

Globally, in terms of employment, 90 per cent of all fishers and fishworkers are small-scale, and nearly all of them live in developing countries. The majority of fishers are actually concentrated in the IORA region. However, several variations and country-specific factors in the region's fisheries merit attention.

While Bangladesh, India and Indonesia are all examples of large fish producers with low per capita fish production, Bangladesh stands out as an economy with a large section of the population dependent on subsistence fishing.<sup>12</sup> In Thailand, where fish production is rapidly declining, the processing sector is the major employment generator, relying on imported fish and migrant workers.<sup>13</sup> Somalia and Yemen are examples of lower-income and conflict-affected countries where fish is an important contributor to gross domestic product (GDP). At the same time, Somalia has what is classified as illegal, unreported and unregulated (IUU) fishing, accounting for nearly three times the reported revenues from legal fishing.<sup>14</sup> Mauritius and Seychelles are medium-income countries where the servicing of distant vessels contributes to the fishing sector income; large numbers of migrant workers are also employed in seafood-processing plants. Kenya and the United Republic of Tanzania both have large inland fishing from Lake Victoria.

Fish and seafood production in these countries has grown steadily over the decades and is expected to continue to grow to meet the rising global demand. Many of these countries are also attractive destinations for coastal tourism. In this context, the marine, coastal and aquatic inland ecosystems in the IORA region are likely to experience intensifying levels of exploitation, and the populations dependent on these ecosystems—such as fishing and coastal communities—may face growing vulnerability from associated threats of displacement and livelihood loss. The Food and Agriculture Organization of the United Nations (FAO) has noted that the impact of overfishing and climate change has already accelerated the reduction of major fish stocks within the region.<sup>15</sup>

Furthermore, the IORA region faces a significant challenge in ensuring policy coherence among the six priority pillars of the blue economy, which often represent deeply competitive interests. The growth of seaports and shipping, tourism or offshore hydrocarbons and seabed minerals, for instance, may significantly pollute and degrade marine and coastal ecosystems, putting fisheries and aquaculture at risk. Further, even within fisheries and aquaculture, the industrial sector and the small-scale sector may be in conflict, with the growth of the former often at the expense of the latter.<sup>16</sup>

Thus, while all perspectives on the blue economy acknowledge the need to address environmental risks, they may not clearly address competing economic interests or acknowledge that large, powerful companies may lock out smaller players. This problem is explicitly recognized in the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication, also known as the SSF Guidelines, which advise that: “States should recognize that competition from other users is increasing within small-scale fisheries areas and that small-scale fishing communities, in particular vulnerable and marginalized groups, are often the weaker party in conflicts with other sectors and may require special support if their livelihoods are threatened by the development and activities of other sectors”.<sup>17</sup>

Women constitute nearly half of those employed in fisheries globally.<sup>18</sup> They make vital contributions to fish value chains and play critical roles in ensuring food security. Nevertheless, women and their livelihoods are often some of the most vulnerable to challenges and risks. In part, this is due to the fact that their roles in fisheries are significantly underrecognized and undervalued by both States and fishing communities. This is reflected in the paucity of data on women in the fisheries sector, including the near absence of data on social indicators such as health status and education levels for women in the sector. Consequently, women are greatly underrepresented in fisheries governance and decision-making, and the concerns of women fishers find low priority in national policy frameworks.

**TABLE 2**  
**Comparison of efficiency parameters in capture fisheries**

	Small-scale fisheries	Industrial fisheries
<b>How much of the fish caught is eaten by people?</b>	All	Only half
<b>How much of the fish caught is wasted?</b>	Negligible	20 per cent
<b>For every 1,000 MT of fish caught, how much fuel is spent?</b>	125 to 250 MT	500 to 1,000 MT
<b>For every 1,000 MT of fish caught, how many people get employment?</b>	400	8

Source: FAO 2017a. Note: MT = metric tonnes.

This report documents the available information on women’s employment in the fisheries and aquaculture sector in the IORA region and makes a series of recommendations on how to advance women’s economic empowerment in the sector. It covers both marine as well as inland fisheries and aquaculture. In the context of the increased spread in the availability of fish, it would be difficult to differentiate between the sectors, especially for small-scale fish processing and trading. Further, given the interconnectedness of environmental and climate impacts on the marine and inland sectors, policy measures would need to take into account the needs and challenges of both sectors together in a holistic manner.

The report is organized in two parts. Part I lays out the broad economic context of fisheries in the IORA region and examines the conditions of women’s employment in the sector and the challenges to their livelihoods due to both intrinsic and extrinsic factors. The need for gender mainstreaming in policy and practice to enable women’s economic empowerment in fisheries is highlighted, and a set of recommendations to address these challenges and gaps is provided. Part II presents brief country profiles of IORA Member States, summarizing key social and economic parameters related to fisheries. These profiles are intended to serve as a ready reckoner for gender-related information, highlighting salient features and information gaps.



PART ONE  
**WOMEN'S ECONOMIC  
EMPOWERMENT IN THE  
FISHERIES SECTOR IN  
THE INDIAN OCEAN REGION**



# 1 ECONOMIC PARAMETERS

Analysis of a country’s economic parameters helps us understand the broader context in which women live and work. This section begins by exploring certain economic parameters that shed light on the conditions of women’s employment in IORA countries.<sup>19</sup> These conditions, which would apply to the bulk of the women engaged in fisheries in the region, reveal the level of income, livelihood and food security that are

likely available to them. Nevertheless, it is important to consider that gendered social norms usually assign the primary responsibility of care work and domestic work to women. Women’s income levels and levels of livelihood and food security are therefore significantly impacted by this double burden of paid and unpaid work, which often limits their opportunities for formal, full-time paid employment, training and career advancement.

**TABLE 3**  
**Certain economic parameters for IORA countries**

Country <sup>a</sup>	Gross national income per capita (PPP 2011)*	Self-employed women workers proportion of total women employed**
	(PPP)	
	2017	2017
Indonesia	11,910	58.4%
India	6,950	81.2%
Bangladesh	4,040	68.8%
Thailand	17,080	50.8%
Malaysia	28,720	26.3%
Iran (Islamic Rep. of)	20,920	44.0%
South Africa	13,120	12.9%
Sri Lanka	12,520	44.6%

United Republic of Tanzania	2,880	90.1%
Mozambique	1,210	94.3%
Oman	40,950	4.4%
Australia	48,050	12.4%
Kenya	3,260	77.3%
Yemen	2,600	68.4%
Madagascar	1,510	91.8%
Maldives	15,160	34.1%
Seychelles	26,900	N/A
United Arab Emirates	74,570	2.4%
Comoros	2,770	83.0%
Somalia	N/A	89.0%
Mauritius	22,650	14.8%
Singapore	90,760	9.5%
<b>IORA COUNTRIES AVERAGE</b>	<b>9,226.80</b>	
<b>WORLD AVERAGE</b>	<b>17,043.30</b>	<b>47.6%</b>

Source:

\* World Bank International Comparison Program database (World Bank undated). This database provides country-wise data on gross national income (GNI) converted into PPP terms based on the 2011 international dollar. The data are subject to fluctuations due to changes in GNI estimates.

\*\* World Bank using ILO 2019a.

a Countries listed according to fish production for 2016.

**Table 3** lists two parameters: gross national income (GNI) per capita and the proportion of self-employed to total women's employment in the IORA countries. To compare income levels across the different countries and currencies of IORA, the concept of purchasing power parity (PPP) is used, which provides a means of equalizing the purchasing power of currencies by taking into account differences in the cost of living.

In terms of PPP, the weighted average per capita income for the IORA countries for 2017 was PPP 9,227.<sup>20</sup> The world average the same year was PPP 17,043. Eight of the IORA countries (Bangladesh, Comoros, India, Kenya, Madagascar, Mozambique, the United Republic of Tanzania and Yemen) had an average per capita PPP income less than half the world average. These eight countries together account for 75 per cent of the

population of all IORA countries. Further, the three most populous IORA countries—India, Indonesia and Bangladesh, respectively—are also the largest fish producers in the region. These three countries account for 78 per cent of the population of all IORA countries, with India alone constituting 59 per cent of the total. The region is thus home to some of the largest concentrations of poverty in the world.

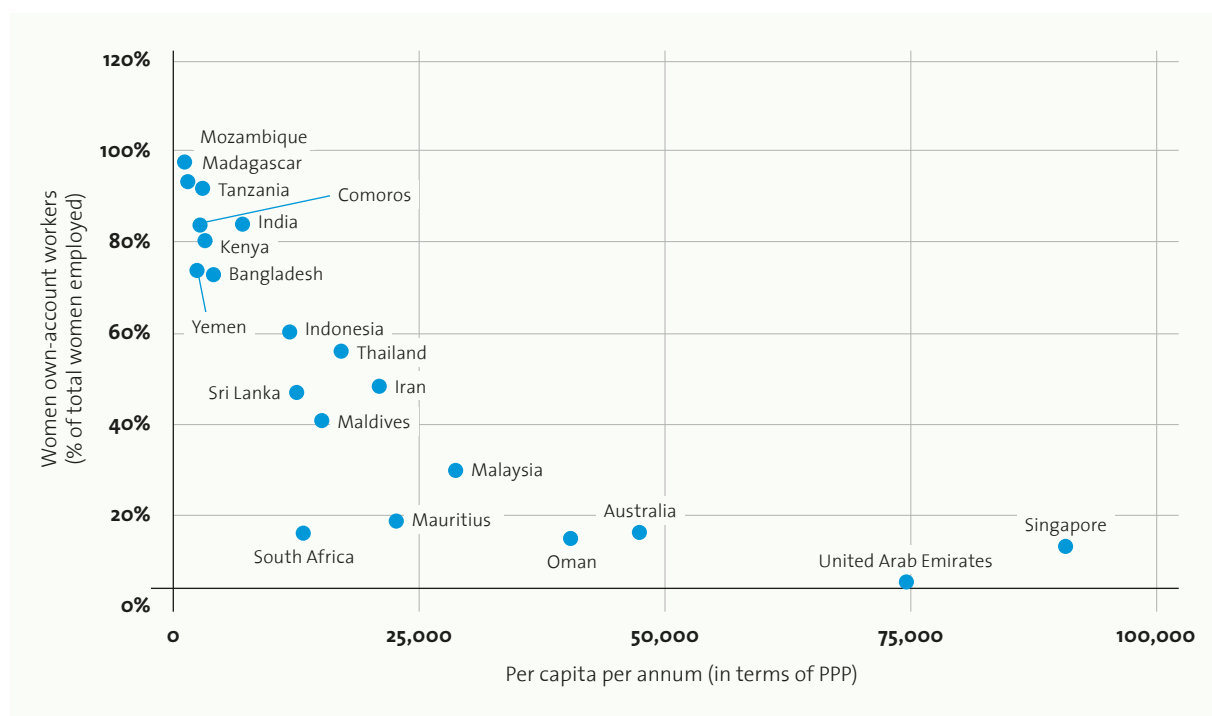
At the same time, the region also includes Singapore and the United Arab Emirates, which have average national incomes (in PPP terms) greater than five times and four times the world average, respectively. In PPP terms, Singapore has an average per capita income 75 times that of Mozambique. These substantial variations in per capita incomes would rule out region-wide fishery strategies and, instead, necessitate policy and action suited to country-specific requirements.

One indicator of the types of employment available to women would be the proportion of self-employed women to total women’s employment. Globally, over 1.4 billion workers are self-employed—a category that the International Labour Organization (ILO) classifies as “vulnerable employment” with high levels of precariousness and informal employment and less access to job security, regular incomes and social protection.<sup>21</sup>

**Table 3** estimates this ratio for the IORA countries.

It is evident from the table that the majority of IORA countries had a higher proportion of self-employed women to total female employment than the world average of 44.3 per cent. Only eight countries—Australia, Malaysia, Maldives, Mauritius, Oman, Singapore, South Africa and the United Arab Emirates—had a lower figure for this ratio. **Figure 1** represents this graphically.

**FIGURE 1**  
**Graph of own-account women in total employment versus per capita PPP income**



Source: Based on Table 3 (Note: Seychelles and Somalia are not included because of non-availability of data).



It can be seen in **Figure 1** that most of the IORA countries tend to be bunched along the top left of the graph, indicating low wages and a high proportion of self-employment among women workers. This suggests that women in these countries are faced with the twin issues of greater poverty and poor regulation of employment, which would translate to poor wages and poor levels of livelihood security, social security, social protection and social support. These features characterize the conditions in which the bulk of women in fisheries in IORA countries live and work.

The livelihood of women and men in the fisheries sector is dependent on the availability of fish in the economy. Women, in particular, are directly dependent on fish availability for various post-harvest economic activities and to provide food for their families. Trends in fish production within the IORA region may therefore be regarded as an index of the resilience of the sector.

**Table 4** presents the decadal (2006 to 2016) output figures for fish production for the IORA countries.<sup>22</sup> It also provides data on employment in the sector, including both capture fishing (inland and marine) and aquaculture, for the 11 largest fish-producing IORA countries. Some interesting trends are immediately apparent. First, fish production overall increased from 2006 to 2016 by 44.3 per cent. This was significantly higher than the world fish production increase of 24.2 per cent during the same period. However, within the IORA region there was considerable variation in trends. The three largest fish producers—India, Indonesia and Bangladesh—registered substantial production growth. In contrast, Thailand, the fourth largest fish producer among the IORA countries, saw a decline by over a third of its production.

Second, among the 11 largest fish producers in the IORA region, there was wide variation in terms of average annual per fisher fish availability (total fish production divided by number of fishers directly involved in capture and culture fishing). This parameter indicates the average amount of fish, irrespective of the mode of fish production (small-scale or industrial) produced in

the country, which would roughly indicate the average economic returns from fishing. **Table 4** reveals that among the 11 IORA countries for which estimates of direct employment in fisheries were available, the lowest figures were registered by the largest fish-producing countries, with India and Bangladesh at the bottom of the list, indicating that, per capita, the average fisher/fish farmer in these two countries had access to the least amount of fish.

Further, if we explore the relationship between “GNI per capita in PPP terms” in **Table 3** and “Average per fisher/fish farmer fish availability” in **Table 4**, a high degree of correlation (0.81) is found between the two. This direct and significant relationship implies that among the large fish producers in IORA—that is, among Indonesia, India, Bangladesh, Thailand, Malaysia, the Islamic Republic of Iran, South Africa, Sri Lanka, the United Republic of Tanzania, Mozambique and Oman—the poorer countries have less fish available per fisher or fish farmer than those that are wealthier. As discussed earlier, the poorest of the large fish-producing IORA countries are also the most populated, with 78 per cent of the population across the region concentrated in Bangladesh, India and Indonesia alone. This suggests that in the poorer countries—despite the fact that the per fisher availability, and hence the returns from fisheries, are low—fishers most likely continue to work in the sector due to a lack of better economic opportunities. This has direct implications for the food and livelihood security of women in the region’s fisheries.

Low per-fisher fish availability can reduce the average availability of fish for women, for both home use and use in processing and trade. This adversely impacts the incomes and prospects of women fish workers as well as the food security of fishing families. Women form the bulk of employees in the post-harvest fishing sector, processing and selling fish (see **Box 2**). Fish scarcity often leads to women being edged out of the fish trade both by local men, for whom fish harvest may be increasingly non-viable, and by migrants looking for survival options in the sector.

Policies and regulations are therefore needed to specifically address these challenges and protect the basic interests of women fishers and fish workers in countries affected by low per-fisher fish availability. At the same time, high per capita fish availability does not necessarily translate into increased quantities of fish for processing and trade, as industrial processing and

exports might absorb the bulk of the harvest. Special policy measures favouring the small-scale sector might therefore be needed, even in countries with high per capita fish availability, to ensure that the economic interests of women employed in post-harvest activities are protected.

TABLE 4

## Production and per fisher/fish farmer availability of fish in IORA countries

Country <sup>a</sup>	2006 fish production (1,000 MT) <sup>b</sup>	2016 fish production (1,000 MT) <sup>b</sup>	Decade growth in fisheries (2006 to 2016)	Estimated number of direct fisheries employment <sup>c</sup>	Average per fisher/fish farmer fish availability (MT/year) <sup>d</sup>
Indonesia	6,066.37	11,349.21	87.1%	5,991,543	1.89
India	7,020.11	10,761.75	53.3%	14,073,833	0.76
Bangladesh	2,328.55	3,878.32	66.6%	4,610,539	0.84
Thailand	3,909.56	2,424.66	-38.0%	435,000	5.57
Malaysia	1,449.89	1,770.27	22.1%	170,535	10.38
Iran (Islamic Rep. of)	575.35	1,092.01	89.8%	211,275	5.17
South Arica	622.30	617.68	-0.7%	168,000	3.68
Sri Lanka	282.35	549.30	94.5%	250,865	2.19
United Republic of Tanzania	335.88	375.05	11.7%	184,300	2.03
Mozambique	94.93	300.77	216.8%	201,854	1.49
Oman	147.78	279.71	89.3%	45,224	6.18
Australia	246.49	264.60	7.4%	–	–
Kenya	160.05	186.16	16.3%	–	–
Yemen	229.93	154.42	-32.8%	–	–
Madagascar	144.11	149.54	3.8%	–	–
Maldives	185.45	129.19	-30.4%	–	–
Seychelles	93.02	126.69	36.2%	–	–
United Arab Emirates	101.01	74.24	-26.5%	–	–
Somalia	30.00	30.00	0.0%	–	–
Mauritius	8.78	19.08	117.3%	–	–
Comoros	10.46	16.41	56.8%	–	–
Singapore	11.68	6.82	-41.6%	–	–
<b>IORA countries</b>	<b>23,868.57</b>	<b>34,430.73</b>	<b>44.3%</b>	–	–
<b>ALL COUNTRIES</b>	<b>136,441.66</b>	<b>169,396.46</b>	<b>24.2</b>	–	–

Source:

- a** Countries listed according to fish production for 2016.
- b** FAO 2018b for production figures.
- c** FAO 2018c for direct fisheries employment (fisheries plus aquaculture).

Figures for per fisher availability are calculated in this report by dividing the 2016 fish production by the estimated number of direct fisheries employment.

- FAOSTAT data are available only for countries producing at least 200,000 MT per annum from fisheries and 150,000 MT per annum from fish farming. Therefore, data on “estimated number of direct fisheries employment” is available only for 11 of the IORA countries; also data for South Africa, Sri Lanka, Tanzania, Oman and Mozambique are for fisheries only, because aquaculture production in these countries falls short of the required criterion.

# 2 EMPLOYMENT AND WAGE ESTIMATES

The level of income and livelihood security available to women in fisheries impacts not just their own well-being but the lives and well-being of their families and communities as well. The income earned by women in fisheries is known to have a strong and beneficial impact on household incomes.<sup>23</sup> Women's catches of fish and shellfish, if not critical for the survival of families, are vital for the fulfilment of household nutritional requirements. The quality of women's participation in the fishery economy, as well as the recognition of their roles and contributions, are linked to the level of empowerment women experience in the sector. This, in turn, affects the financial and food security of fishing families and communities

Globally, women's work in fisheries is, by and large, unrecognized and undervalued. The main reason for this is the narrow definition of "fishing" used in fisheries policy. The term is usually reserved for the act of fish capture by boat or vessel, which is designated as the "primary sector" in fisheries.<sup>24</sup> When fishing is so narrowly defined, it does not take into account shore-based fishing and the gleaning of invertebrates and other aquatic species in intertidal zones, rivers and shallow waters.<sup>25</sup> The ILO Work in Fishing Convention, 2007 (No. 188) also does not cover shore-based fishing and fish workers.<sup>26</sup> Since fishing by boat and vessel is usually performed by men in most, although not all, cultures, while shore-based fishing and gleaning activities for both income and home food are carried out mainly by women, such a narrow definition both reflects and reinforces the gender division of labour.<sup>27</sup> Within the IORA region, women's near-shore fishing and gleaning activities are critical for livelihood and food security (see **Box 1**).

Women are predominant in the post-harvest sector in both small-scale and industrial processing in most IORA countries. Much of this processing involves low-value species since high-value species enter the industrial processing value chain. In small-scale marine fisheries, women access fish from family and community sources or buy from local sellers and auctioneers. Small-scale inland fish processing includes the processing and selling of fish accessed from inland water bodies such as ponds, lakes and rivers. Various forms of aquaculture are also a source of fish and other aquatic species for small-scale post-harvest. These products are either sold fresh in nearby markets or processed for further sale or consumption. The processing involves low-value addition through methods such as drying, smoking, salting, curing and fermenting.

Countries where large numbers of women are engaged in small-scale fish processing and trade include Bangladesh, Comoros, India, Indonesia, Kenya, Madagascar, Malaysia, Mauritius, Mozambique, Somalia, Thailand, the United Republic of Tanzania and Yemen. Women may come to occupy specific roles in the fish value chain—for instance, along Kenya's coasts the women who buy and process fish for local markets from small-scale fishermen are known as *mama karanga*. These women provide a link between the fishery and poor fish consumers, but their livelihoods are often vulnerable to changes in the fishery due to a lack of education, alternative livelihoods and capital.<sup>28</sup>

## BOX 1

### Women's harvesting roles in the IORA region

Contrary to the traditional view that fishing is the preserve of men, women in many IORA countries engage in various types of fish-harvesting activities. Women in coastal areas fish and glean in shallow waters and intertidal zones. The type of fishing can vary, ranging from the use of hand-operated gear, such as hooks and lines, scoop nets or traps in Malaysia's east coast states;<sup>a</sup> gleaning and fishing without boats in Mozambique;<sup>b</sup> lagoon-based octopus fishing in Mauritius;<sup>c</sup> gathering gastropods and bivalves, gleaning sea cucumbers and spear fishing cephalopods and crustaceans among fishing communities in certain parts of Oman;<sup>d</sup> and seaweed harvesting in the United Republic of Tanzania.<sup>e</sup>

Even where women are ostensibly excluded from the primary fishing sector, they may participate in some pockets of subsistence fishing. For example, in Yemen, where fishing is a strictly male activity, women in a few villages are reported to have their own boats and directly engage in fishing.<sup>f</sup> Similarly, in Australia, where industrial fishing dominates, women in coastal Aboriginal communities may harvest fish for food.<sup>g</sup> Women's involvement in subsistence fishing, which is common in many IORA countries, is primarily a food source for families, but often surplus catch is sold in domestic markets, augmenting meagre incomes. Examples include coastal fishing in Madagascar<sup>h</sup> and low-tide marine harvesting in Comoros.<sup>i</sup> In the United Republic of Tanzania, among poor fishing communities women and children gather sea cucumbers by hand from sea beds in shallow waters for export to the Far East.<sup>j</sup> In Mozambique, a large proportion of the population, with women comprising the majority, relies on subsistence agriculture and fisheries for their livelihoods.<sup>k</sup>

#### Sources:

<sup>a</sup> Yahaya 1994; <sup>b</sup> WorldFish undated; <sup>c</sup> ASCLME undated; <sup>d</sup> Al Rashdi and McLean 2014; <sup>e</sup> United Republic of Tanzania 2016; <sup>f</sup> IFAD 2010; <sup>g</sup> Lambeth et al. 2002; <sup>h</sup> Matthews et al. 2012; <sup>i</sup> Harper et al. 2013; <sup>j</sup> Jiddawi and Öhman 2002; and <sup>k</sup> Souto 2014.

One of the largest challenges in assessing the status of women's pre- and post-harvest fisheries work is a crippling lack of data and enumeration. Many private sector companies do not collect such data and Member States do not submit secondary sector fisheries employment data to, for instance, FAO for the compilation of their report on *The State of World Fisheries and Aquaculture*.<sup>29</sup> Where such data are found, they are usually characterized by wide divergences in methodology and findings. Sex-disaggregated data collection and reporting and the use of standardized methodologies across data sets are critically needed in the fisheries sector.<sup>30</sup> The lack of reliable data leads to a vicious cycle of gender-blind policymaking that results in a race to the bottom of women's living and working standards in fisheries. In this context, **Box 2** examines the global picture of women's involvement in fisheries.

Data from both government sources and international institutions such as FAO and the World Bank have been compiled in this section to better understand the status of women's employment in fisheries in the IORA region. **Table 5** provides a snapshot of estimates on the employment of women across the fisheries value chain: in harvest, post-harvest and the overall sector. For purposes of classification, we define "high employment" as countries employing more than 5 million fishers and ancillary workers in the sector; "medium employment" as countries employing between 100,000 and 5 million; and "low employment" as those employing less than 100,000. Employment rather than production is the measure used, as the purpose is to focus attention on the conditions of employment of women and men.

## BOX 2

### Women's employment in the fisheries sector

In 2018, FAO released, for the first time, sex-disaggregated employment figures by region, qualified by the caveat that many countries had not submitted sex-disaggregated data. The use of the term “unspecified” for sex was high—as high as 7 per cent for capture fishing and 9 per cent for aquaculture in Asia, and 10 per cent for capture and 19 per cent for aquaculture in Africa. As fisheries employment is concentrated in Asia and Africa, this would suggest considerable underreporting of women's work in the sector.

Based on the full-time, part-time and occasional work of women and men in fisheries and aquaculture in 2016, FAO estimated that 14 per cent of the 59.6 million fishers engaged in the primary sector are women. FAO also reported that when both primary and secondary sectors are considered, the participation of women and men is approximately equal.

Globally, in inland fisheries, including both primary and secondary sectors, around 35 million of the 60 million workers are women—that is, women constitute nearly 60 per cent of inland fisheries employment. Thus, women constitute the majority of those employed in the secondary sector.

The World Bank estimated that in the mid-2000s, employment in small-scale fisheries in developing countries was 79 million, 23 million of whom were engaged in fishing and 56 million in post-harvest work. Further, around 5 million were employed in industrial fishing, 3.5 million of whom were in post-harvest activities. Considering small-scale and industrial fisheries together, the fisheries sector in developing countries therefore employed 84 million, with 59.5 million, or nearly 71 per cent, employed in post-harvest activities.

Data from the World Bank, FAO and other international sources are not always consistent with each other. However, the following broad observations with respect to the fisheries sector can be made:

1. Most employment in fisheries in developing countries is in the small-scale sector, in both the primary and secondary sectors.
2. More than half the employment in both small-scale and industrial fishing is in the secondary sector.
3. Women constitute around 14 per cent of the total employment in the primary sector, including capture and culture fisheries.
4. Women are in the majority of those employed in the secondary sector.
5. Overall, the employment of women and men in fisheries in both the primary and secondary sectors is approximately equal.

Sources: FAO 2018a; World Bank 2012.

TABLE 5

## Women's employment in fisheries in IORA countries

Country	Women's and men's employment: harvest (including marine and inland fisheries)	Women's and men's employment: post-harvest	Women's and men's total sector employment	Proportion of women (estimates*)
<b>High employment</b>				
Bangladesh	N/A	N/A	17.8 million <sup>d</sup>	7.8%
India	N/A	N/A	14.5 million <sup>c</sup>	27%
Indonesia	6.0 million <sup>a</sup>	6.2 million <sup>b</sup>	12.2 million	37%
<b>Medium employment</b>				
Iran (Islamic Rep. of)	0.17 million <sup>h</sup>	0.07 million <sup>i</sup>	0.24 million	N/A
Kenya	0.1 million <sup>n</sup>	2.3 million <sup>o</sup>	2.4 million	Significant
Madagascar	1.2 million <sup>p</sup>	N/A	N/A	N/A
Malaysia	0.17 million <sup>g</sup>	N/A	N/A	N/A
Mozambique	1 million <sup>m</sup>	N/A	N/A	N/A
Sri Lanka	0.6 million <sup>j</sup>	N/A	N/A	N/A
Thailand	0.8 million <sup>e</sup>	1.2 million <sup>f</sup>	2.0 million	50%
United Republic of Tanzania	0.2 million <sup>k</sup>	4 million <sup>l</sup>	4.2 million	Significant
<b>Low employment</b>				
Australia	11,818 <sup>t</sup>	4,013 <sup>u</sup>	15,831	19%
Comoros	N/A	N/A	11,400 <sup>ff</sup>	N/A
Maldives	21,000 <sup>ii</sup>	N/A	21,000	Significant
Mauritius	12,000 <sup>dd</sup>	2,000 <sup>ee</sup>	14,000	Significant
Oman	45,220 <sup>s</sup>	N/A	N/A	N/A
Seychelles	7,400 <sup>x</sup>	2,300 <sup>y</sup>	9,700	Significant
Singapore	N/A	145 <sup>gg</sup>	589 <sup>hh</sup>	N/A

Somalia	65,144 <sup>bb</sup>	30,000–60,000 <sup>cc</sup>	100,000	N/A
South Arica	57,500 <sup>d</sup>	11,000 <sup>f</sup>	68,500	N/A
United Arab Emirates	25,000 <sup>z</sup>	15,000 <sup>aa</sup>	40,000	N/A
Yemen	74,900 <sup>v</sup>	13,095 <sup>w</sup>	88,000	Low

Notes:

The terms “significant” and “low” for women’s participation are based on qualitative data where definite numbers are not available (see Country Profiles for further details). Further, in countries where qualitative data suggest that women are represented in large numbers in post-harvest, their participation has been categorized as “significant”.

**N/A** – not available.

Countries are listed alphabetically in each employment size category.

Sources:

\* See corresponding country profiles in Part 2 of this report for details of estimates.

**a** CEA 2018; **b** FAO and Worldfish 2017; **c** Government of India 2003; **d** FAO and WorldFish 2017; **e, f** FAO 2009c; **g** Faizal 2017; **h, i** FAO 2015a; **j** NARA 2016; **k, l** United Republic of Tanzania 2016; **m** UNCTAD 2017; **n, o** Government of Kenya 2008; **p** Breuil and Grima 2014; **q** Government of South Africa 2010; **r** Government of South Africa 2019; **s** FAO 2013; **t, u** ABARES 2018; **v, w** Government of Yemen 2012; **x, y** SFA 2014; **z, aa** FAO 2016d; **bb** Skeik Heile 2018; **cc** Glaser et al. 2015; **dd** IOC 2018; **ee** FAO 2006; **ff** FAO 2003a; **gg, hh** Department of Statistics, Singapore 2018; and **ii** ILO 2019a.

The data presented in **Table 5** confirm that many governments, private sector companies and international organizations do not collect data on post-harvest activities. Even when post-harvest data are collected, there can be large degrees of underestimation (see **Box 3**).

A full analysis of the data used to create **Table 5** also indicates that inland fisheries do not appear to be as well documented as the marine sector. For instance, in Bangladesh, FAO estimated that around 9.5 million (73 per cent of total sector employment) were employed in subsistence fisheries in the country’s flood plains.<sup>31</sup> It is likely that women would be present in significant numbers among subsistence inland fishers, considering FAO estimates that nearly 60 per cent of those employed globally in inland fisheries and its value chains are women.<sup>32</sup> However, as shown in **Table 5**, women’s employment in fisheries in Bangladesh is 7.8 per cent according to estimates by FAO and the International Center for Living Aquatic Resources Management (ICLARM).<sup>33</sup> This appears to be an underestimation (see **Box 4**).

The difference in the order of magnitude of employment in fisheries is substantial within the IORA countries. **Table 5** reveals that countries categorized as “low employment” employ less than 0.01 per cent of the workforce employed in “high employment” countries; while “medium employment” countries employ around 0.1 per cent of the workforce of “high employment” countries. Sectoral policy priorities, and therefore the needs for data enumeration and use, would be very different across these countries.

Data on wages in the fisheries sector are hard to come by. Most countries do not collect wage data for this sector; instead, fisheries is grouped with two other sectors of the rural economy: agriculture and forestry. A large proportion of employment in the fisheries sector is informal and includes self-employed women and men who form the majority of those engaged in artisanal fisheries and downstream activities. Further, payment for fishing in the small-scale sector may not only be through wages but also through shares of fish catch.



### BOX 3

#### Inconsistencies in fisheries census data: An example from India

The difficulty in triangulating credible fisheries data from multiple sources is well illustrated in India by comparing the Fisheries Census data for the fisheries sector in 2003 and the estimates of the Central Marine Fisheries Research Institute (CMFRI) from a census of the marine fisheries sector in 2010.<sup>a</sup>

The 2003 Fisheries Census estimated total fisheries employment as 14.5 million.<sup>b</sup> The CMFRI Census estimated total employment in marine fisheries as 1.67 million. Of these, 0.99 million were active fishers and 0.68 million were employed in allied post-harvest activities.

Among the active fishers, women were employed only in seed collection, and their number was 36,137. From the figures, women comprised 3.6 per cent of active fishers. Employment in the allied post-harvest activities included marketing of fish, making and repair of nets, fish curing and processing, peeling fish and other activities. The total women employed in these allied post-harvest activities was 407,368, which is 60 per cent of employment in this sector. The overall participation of women in marine fisheries was therefore 26.5 per cent.

But these figures merit discussion. First, if the CMFRI figure for overall employment in marine fisheries (1.67 million) is compared with the 2003 Fisheries Census data for the entire fisheries sector, including inland and aquaculture (14.5 million), the total employment in marine fisheries turns out to be only 11.5 per cent. This appears to be low. Second, the CMFRI figure for women's participation in direct marine fishing of 3.6 per cent is much lower than FAO estimates of a corresponding average of 14 per cent across the world.

Such widely divergent figures raise serious questions about the validity of the data used to formulate fisheries policies that affect the lives and well-being of millions.

Sources:

<sup>a</sup> CMFRI 2010; <sup>b</sup> Government of India 2003.

Wage data for women in fisheries are even more inaccessible. A significant proportion of women's work is unwaged and considered to be an extension of, or complementary to, housework—for example, helping men in the family in their fishing-related tasks, mending nets or maintaining accounts. Further, women are not always engaged in fishing alone. In the context of declining rural employment, most women and also men from poor fishing communities, particularly those on inland water bodies, engage in complementary work in other sectors of the rural economy, including agriculture and forest-based work.<sup>34</sup> For the purpose of analysis therefore, the assumption is made that the wages for

the primary sector of agriculture, forestry and fishing would be broadly representative of the wages that fisherwomen earn.

**Table 6** presents the sector wage data from ILO statistics for 13 IORA countries, including agriculture, forestry and fisheries sector wages for women and men. This allows us to assess the gender wage gap across this sector. The table also presents the average wage per month for women across all sectors. In the last column, the wages are standardized in PPP terms to allow for comparison across IORA countries.<sup>35</sup>

#### BOX 4

### Enumerating women's employment in fisheries in Bangladesh

Estimates place the total employment in fisheries in Bangladesh at around 17 million,<sup>a</sup> with women constituting 1.4 million, or around 7.8 per cent. This estimate of women's participation appears to be low.

FAO estimates the average engagement of women globally in the primary sector of fish capture and culture to be 14 per cent.<sup>b</sup> It also estimates that 35 million out of an estimated 60 million employed globally in inland fisheries harvest and post-harvest are women, that is, nearly 60 per cent of the total employment. According to FAO, women are more likely to participate in fishing when the water body is close to the household, as is often the case with inland fisheries. Since Bangladesh has a large proportion of inland fishing, contributing to 64 per cent of total capture fish, it is expected that the participation of women in the fishery sector would be significant and certainly higher than 7.8 per cent.

In the absence of official sex-disaggregated statistics, it is difficult to ascertain the extent of women's participation. Eighty per cent of rural families in the country reportedly catch fish to eat or sell.<sup>c</sup> According to some estimates, 43 per cent of rural women in certain communities engage in agriculture and fisheries activities as secondary occupations.<sup>d</sup> It is reported that while both women and men work in shrimp fry catching, women comprise approximately 40 per cent of the workforce.<sup>e</sup> According to one study, in most inland areas, women and young children are reported to constitute 80 per cent of the workforce for specific post-harvest tasks such as fish drying.<sup>f</sup> In the context of Bangladesh's farmed fish value chain, it has been pointed out that the gender division of labour varies with production systems.<sup>g</sup>

While fishing is traditionally perceived as a full-time activity for men, especially in rural Bangladesh, the participation of women in various aspects of inland fishing and aquaculture is significant. However, given the gender segregation, the work of women is not recognized as economic activity and therefore their substantial involvement goes unreported. As a result, the overall participation of women in formal fishery employment statistics remains very low.

Sources:

**a** FAO and WorldFish 2017; **b** FAO 2018a; **c** Sultana and Thompson 2008; **d** Shelly and Costa 2002; **e** Gammage et al. 2006; **f** Thilstead and Wahab 2014; and **g** Kruijssen 2016.

It is seen in **Table 6** that, in PPP terms, the wages for women in fisheries are among the lowest in the three largest fish-producing countries: Bangladesh, India and Indonesia. These three countries, it may be recalled, employ the largest numbers in the fishery sector and also have the lowest productivity in terms of per capita fish catch.

The gender gap is significantly high in most IORA countries. The figures for Maldives and the United Arab Emirates are negative, that is to say, the reported average wage is higher for women than for men in the sector. This may be because few women are included in the enumeration, and these might be women in formal employment, with better wages.

The sector wage gap (calculated as the gap between women's wages in the agriculture, forestry and fisheries sector and the average women's wage across all sectors of employment) is even more significant. Indonesia, Malaysia, Thailand, the United Republic of Tanzania and Yemen have a sector wage gap that is more than 50 per cent, while the gap is 36 per cent in the case of Bangladesh.

The preceding sections demonstrate how broad economic and social trends, as well as the gender division of labour and the devaluing of women's work, impact

employment and conditions for women in the fishing sector in all IORA countries. The challenges to women's economic empowerment within this sector will also therefore be diverse throughout the region. At the same time, the consistent pattern of gender and sector wage gaps suggests that a gender analysis should be conducted in all IORA countries to better understand the gender and power relationships between women and men, particularly within the primary and secondary sectors, to support effective policymaking and to address gender inequalities.

**TABLE 6**  
Sector wages for women (agriculture, forestry and fisheries)

Country <sup>a</sup>	Year	Currency	Sector wage per month (agriculture, forestry & fisheries – women) <sup>i</sup>	Sector wage per month (agriculture, forestry & fisheries – men) <sup>i</sup>	National average wage per month for women across all employment sectors <sup>i</sup>	Gender wage gap in agriculture, forestry & fisheries sector	Sector wage gap compared to overall wages for all sectors	Wage per month of women in agriculture, forestry and fisheries sector in PPP (2017) <sup>ii</sup>
Indonesia	2015	Indonesian rupiah	619,154	1,100,806	1,597,687	44%	61%	147.75
India <sup>iii</sup>	2014	Indian rupee	6,604	6,604	N/A	0%	N/A	372.48
Bangladesh	2017	Bangladeshi taka	7,123	7,758	11,170	8%	36%	229.70
Thailand	2017	Thai bhat	5,057	6,090	13,959	17%	64%	403.91
Malaysia	2016	Malaysian ringgit	1,012	1,422	2,398	29%	58%	697.93
Iran (Islamic Rep. of)		Iranian rial	N/A	N/A	N/A	N/A	N/A	N/A
South Africa	2017	African rand	2,500	2,800	3,000	11%	17%	411.18
Sri Lanka	2017	Sri Lankan rupee	10,459	16,828	23,362	37%	55%	183.27
United Republic of Tanzania	2014	Tanzanian shilling	88,704	101,276	261,337	12%	66%	125.21
Mozambique		Mozambican metical	N/A	N/A	N/A	N/A	N/A	N/A
Oman		Omani rial	N/A	N/A	N/A	N/A	N/A	N/A
Australia		Australian dollar	N/A	N/A	N/A	N/A	N/A	N/A
Kenya		Kenyan shilling	N/A	N/A	N/A	N/A	N/A	N/A
Yemen	2010	Yemeni rial	13,923	22,749	30,494	39%	54%	N/A
Madagascar	2013	Malagasy ariary	42,669	78,953	116,293	46%	63%	47.35
Maldives	2016	Maldivian rufiyaa	10,870	9,020	9,219	-21%	-18%	1,119.46
Seychelles		Seychellois rupee	N/A	N/A	N/A	N/A	N/A	N/A
United Arab Emirates	2009	United Arab Emirates dirham	7,252	1,667	5,551	-335%	-31%	3,590.10
Comoros		Comorian franc	N/A	N/A	N/A	N/A	N/A	N/A
Somalia		Somali shilling	N/A	N/A	N/A	N/A	N/A	N/A
Mauritius*	2018	Mauritian rupee	5,700	11,200	17,900	49%	68%	352.50
Singapore	2017	Singapore dollar	3,660	5,000	4,027	27%	9%	4,305.88

Sources:

<sup>i</sup> Sector wage data from ILO 2019.

<sup>ii</sup> PPP conversion factor from World Bank 2019a.

<sup>iii</sup> Government of India 2014. Note that the figures for India are the statutory minimum wages for the fisheries/fishing/seafood/fish peeling and canning sectors.

<sup>a</sup> Countries listed according to fish production for 2016.

\* Government of Mauritius, 3 July 2019.

Note: **N/A** – not available.

# 3 CHALLENGES TO WOMEN'S ECONOMIC EMPOWERMENT IN THE FISHERIES SECTOR

The fisheries sector in the IORA region is a dynamic and rapidly changing one, affected by the volatility of markets and subject to competition from other economic sectors, as well as the effects of changing environmental conditions, from pollution to climate change. Women's roles in the fisheries, being concentrated at the bottom of fish value chains, are often adversely affected by these changes.

This section focuses on the main factors that impact the employment and livelihood prospects of women in

the fisheries in the IORA region. These are illustrated in **Table 7**. The challenges associated with traditional capture and culture fisheries are examined first, followed by those introduced by external influences such as fisheries modernization, the growth of competitive sectors such as tourism and global fish trade, as well as challenges due to the influences of armed conflict and illegal, unreported and unregulated (IUU) fishing. Finally, since the issues of food security and work intensification are impacted by each of the preceding sets of challenges, these are discussed at the end of the section.

**TABLE 7**  
**Challenges to and opportunities for women’s economic empowerment in IORA fisheries**

External influences									
	Capture and culture fisheries		Modernization and industrialization				Tourism	Global trade	Armed conflict and IUU fishing
	Traditional/ small-scale	Industrial	Modernization of capture fisheries	Intensive aquaculture	Ports, harbours, shipping	Industrial seafood processing			
Examples of key challenges and opportunities	<ul style="list-style-type: none"> <li>• Unregulated, poorly remunerated</li> <li>• Poor tenure regulation</li> <li>• Post-harvest wastage and loss</li> <li>• Low credit access</li> <li>• Limited market access</li> <li>• Lack of capacity</li> <li>• No formal work recognition</li> <li>• Lack of social security</li> <li>• Occupational safety and health concerns</li> </ul>	<ul style="list-style-type: none"> <li>• Poorly regulated, poorly paid</li> <li>• Migrant labour</li> <li>• Lack of social security</li> <li>• Occupational safety and health concerns</li> <li>• Lack of capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Overfishing, overall decline in fish stocks</li> <li>• Reduced access to fish</li> </ul>	<ul style="list-style-type: none"> <li>• Potential decline in traditional aquaculture</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced access to fish</li> <li>• Livelihood loss</li> </ul>	<ul style="list-style-type: none"> <li>• Potential decline in traditional post-harvest</li> <li>• Opportunity of waged employment</li> <li>• Increased labour migration</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunity of waged and self-employment</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced access to fish</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced access to fish</li> <li>• Destruction of livelihood</li> </ul>
Food security	<ul style="list-style-type: none"> <li>• Scope for improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Scope for improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Potential negative impact</li> </ul>	<ul style="list-style-type: none"> <li>• Potential negative impact</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite</li> </ul>	<ul style="list-style-type: none"> <li>• Potential negative impact</li> </ul>	<ul style="list-style-type: none"> <li>• Significant negative impact</li> </ul>
Intensification of women’s work	<ul style="list-style-type: none"> <li>• Potential intensification of double burden of work</li> </ul>	<ul style="list-style-type: none"> <li>• Potential intensification of double burden of work</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite</li> </ul>	<ul style="list-style-type: none"> <li>• Potential intensification of double burden of work</li> </ul>	<ul style="list-style-type: none"> <li>• Potential intensification of double burden of work</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite</li> </ul>	<ul style="list-style-type: none"> <li>• Indefinite</li> </ul>	<ul style="list-style-type: none"> <li>• Potential intensification of double burden of work</li> </ul>

Note:  
**Indefinite** – Not enough information

## CHALLENGES TO WOMEN'S WORK WITHIN FISHERIES

### Challenges within traditional fisheries

#### Invisible, unrecognized, unregulated and poorly remunerated

The majority of female workers in the IORA region, in both developed and developing countries, are engaged in precarious work through non-standard forms of employment and self-employment in both the formal and informal economy.<sup>36</sup> The employment of women in traditional fisheries in the region is primarily characterized by very low incomes, high seasonality and low productivity. Poor access to training, extension services, markets and advanced technologies coupled with poor infrastructure and facilities for production and processing are further constraints for women's advancement in this sector. Levels of vulnerability and exposure to risk are higher in the case of landless households dependent on daily wage labour from fisheries activity.<sup>37</sup> Among the three countries with high fisheries employment—Bangladesh, India and Indonesia—low per capita fish production and low income levels are factors that impact current employment and may affect future employment trends for women. The primary steps for States, the private sector and fisheries organizations are to account for women's lives and labour in fisheries by improving data collection and analysis. States also need to regulate employment in the sector and formulate meaningful and effective fishery policy, in consultation with both women and men in the sector, in fulfilment of their international commitments towards gender equality and poverty eradication.

#### Poor regulation of tenure

Tenure refers to the system of rules and customs by which women gain, or are prevented from gaining, rights to access fish either individually or as part of groups and communities.<sup>38</sup> The right of access to fish and related post-harvest activities among fishing communities in marine and inland fishing is generally assured by customary practices and rights. These are

usually not officially documented. Since the right to tenure in fisheries is really a combination of rights—the right to harvest fish and other aquatic resources, the right of unfettered access to the fishing grounds, and the right to land and market places for post-harvest activities—tenure security would involve the protection of all these rights.

The Small-Scale Fisheries (SSF) Guidelines define the protection of tenure as based on the recognition of customary rights of fishing communities, and appropriate corrective measures are recommended where these rights discriminate against women.<sup>39</sup> The SSF Guidelines also recommend that where rights of fishing communities come into conflict with other competing sectors, States should proactively protect fishing community rights. Furthermore, where fisher populations are displaced by war and conflict, States should institute effective mechanisms for restitution of tenure.

In the IORA region, legislation is needed to address a range of issues affecting the tenure of fishing communities. Examples include livelihood loss due to conservation drives in Comoros;<sup>40</sup> land grabbing and displacement by real estate and tourism in Indonesia;<sup>41</sup> coastal erosion in Bangladesh and India; unequal competition from offshore oil and gas exploration, as in the case of Kenya, Mozambique, Somalia and the United Republic of Tanzania;<sup>42</sup> and tenure loss due to forced displacement in war-torn regions. In such situations, reliable and safe mechanisms, such as publicly maintained rights registries and records as well as information and research services, are crucial for the rebuilding of lives and livelihoods and the restitution of tenure.<sup>43</sup> Even where government policy has tried to specifically address issues of small-scale fisheries, these measures are often not sufficiently gender-sensitive—for instance, regulation for equitable fishing access has largely overlooked the rights of women fishers in South Africa, and programmes to build the capacity of small-scale fisheries in Oman have not included the needs of fisherwomen.<sup>44</sup>

The involvement of fishing communities, in particular of women, is critical for sustainable fisheries management. Women, as major participants in small-scale fisheries and aquaculture, have a fundamental role in fisheries development and production, and their inclusion in decision-making and policymaking is key to developing appropriate strategies for poverty alleviation and food security, particularly in view of changing global conditions.<sup>45</sup> Measures such as the establishment of Beach Management Units (BMUs) on the coasts of Kenya have been cited as examples of positive government measures in improving community participation, including the participation of women, and expanding sustainable fishery practices.<sup>46</sup> Further, there are instances of traditional practices supporting women in their fishery roles. For example, in the fishing villages of Navagaon in Maharashtra, India, fish-processing activities take place on community land whose unofficial ownership and management lies with the traditional village-level governance body, or panchayat. This land is divided among fishing families and passed down to the daughters-in-law of the house. As it is jointly owned by the community, it cannot be sold or alienated in any manner. Such customary practices need to be strengthened through the legal recognition of community property rights.

### **Inefficiencies and associated wastage and loss**

Considering that fish is a perishable product, poor women without access to storage technology and transport are most vulnerable to losses associated with its wastage. Reducing fish loss is therefore a matter of immediate concern. Globally, an estimated 27 per cent of landed fish is lost between landing and consumption.<sup>48</sup> In Comoros, for instance, post-harvest losses have been estimated to range between 30 and 40 per cent.<sup>49</sup> The SSF Guidelines urge all stakeholders in fisheries to evolve technologies appropriate to women's work in small-scale fisheries, including local cost-efficient technologies and local innovations, particularly to prevent the waste of inputs in fish handling and processing.<sup>50</sup> Two examples of such innovative technology are the FAO-Thiaroye Process, which reduces fish loss, helps improve fish quality, increases value added and reduces exposure to

heat and smoke during fish processing; and a fish market information network set up by the Kenya Marine and Fisheries Research Institute that enables women to access market information through their mobile phones, improving incomes by up to 20 per cent.<sup>51</sup>

### **Low credit access**

Another important requirement for women in traditional fishing communities, in support of their fish vending and processing activities, is access to credit. Women's loan requirements are usually frequent but small, making them appropriate recipients of microfinance.<sup>52</sup> However, women in fisheries usually face more production constraints than men, including access to credit.<sup>53</sup>

Women often have few options other than informal sources of credit at exorbitant rates of interest<sup>54</sup> or reliance on traditional customs such as, for example, *jakambi* in Kenya's Lake Victoria region where the relationship of a woman fish trader to the captain of a fishing boat allows her preferential access to fish in exchange for soft credit.<sup>55</sup> Lack of capacity, training, access to credit and alternative sources of income may force women into exploitative relationships in order to maintain livelihood options. In such cases, external capacity support can help to improve and expand work opportunities and living conditions (see **Box 5**).

The Kudumbashree initiative of the government of Kerala State in southern India is also a strategy for the economic empowerment of women. Based on the premise that women's empowerment is the best measure for poverty eradication, Kudumbashree (meaning "prosperity of the family") supports the formation of women's self-help groups and micro-enterprises. There are 15 fish-vending and 3 fish/seafood-processing units formed by groups of women in Kerala and supported under this initiative through government aid.<sup>56</sup>

Women's lack of access to credit puts them at a competitive disadvantage. In Mozambique, for instance, women are underrepresented in local fisheries management committees and credit and savings groups.



## BOX 5

### Kenyan women fish traders turn to other rural activities to escape *jaboya*

Declining fish catch in Lake Victoria has increasingly forced women fish traders along the banks of the lake in Kenya to turn to the practice of *jaboya* (or “fish for sex”) with fishermen, in order to obtain fish to carry on their trade. This has resulted in an increase in sexually transmitted infections, including HIV, and school dropouts among young women. Several aid organizations in Kenya such as World Vision and the German Federal Ministry of Economic Cooperation and Development (BMZ) have been trying to support women to diversify their work and eliminate the need for *jaboya*. The Integrated Fish Farming and Horticulture Project, for example, promotes fish farming and the adoption of improved native poultry and horticultural farming among young women in Homabay County with the help of the local government. Women now have access to good-quality fruit tree seedlings from tree nurseries, which has provided new sources of income and enabled women to turn away from exploitative relationships in fish trade.

Sources: Ojuok and Bwanawoy 2018.

Lacking the capital needed to invest in fish preservation equipment such as cool boxes, women traders cannot distribute fish in far-off areas. In Mozambique’s sunrise aquaculture industry, however, women dominate production as a result of their specific targeting by government extension officers. Examples such as the Grameen Bank in Bangladesh, the Small Industries Development Programme in Indonesia and the Shri Mahila SEWA Sahakari Bank in India<sup>57</sup> highlight the potential of working with self-employed women in fisheries to improve their potential for growth. Membership in a bank also provides formal recognition to a woman as being self-employed in her sector of work.

#### Limited market access

Most forms of public transport are inaccessible to women fish vendors carrying head-loads and baskets of fish for sale. Other than walking, often the only option is to hire private transport, which cuts into the profit of the trade.<sup>58</sup> In the United Republic of Tanzania, compared to women fish sellers, men who sell fish are more likely to possess bicycles or other forms of own-transport that give them temporal and spatial flexibility.<sup>59</sup> State intervention is necessary to improve

women’s access to fish supplies and fish markets. In Kerala state in South India, for instance, where fisherwomen have historically organized around their rights to public transport,<sup>60</sup> the state-run fisheries cooperative, Matsyafed, operates buses for fisherwomen at nominal rates between selected landing centres and 25 designated fish market sites.<sup>61</sup>

### Challenges within industrial fisheries

#### Poorly regulated and poorly paid employment

Growing competition over fishery resources and declining fish catches force women to look for alternative employment. Options include precarious work in industrial fish-processing factories, where women’s employment conditions are often reported to be poor and unregulated. In Bangladesh, the rapidly growing export-oriented shrimp-processing sector employs an estimated 50,000 workers, 70 per cent of whom are women; however, there is little regulation of employment conditions and compliance with labour laws. Women are also employed at lower wages than men, without employment tenure.<sup>62</sup>

The fish-processing industry is marked by occupational segregation, with women largely confined to low-technology and low-paid jobs while men tend to predominate in higher-paid jobs. The employment is seasonal, temporary and casual. Women are often limited to part-time work due to their unpaid care and domestic work responsibilities, hampering their economic and advancement opportunities in the sector and access to decent work. The informal, contractual arrangements held by most women in the sector do not offer any protection against occupational hazards and risks and include no social benefits. Women have very little bargaining power, are forced to accept low wages and are generally paid less than men, even for the same work.<sup>63</sup> The lack of occupational safety and health regulations in seafood-processing factories results in chronic and debilitating health problems<sup>64</sup> (see “Occupational health and safety concerns” section).

### **Migrant and other forms of vulnerable labour**

Industrial fish and seafood processing attract migrant labour. In Thailand, while fish production is rapidly declining, the processing sector based on fish imports is a major employment generator, including for migrant workers. However, there have been several instances reported of unfair employment practices involving women, men and children. In Maldives, there has been a recent trend of hiring cheap foreign labour in the fisheries and agriculture sectors, slowly replacing local women.<sup>66</sup> Mauritian ship owners reportedly prefer to employ skilled workers from Seychelles and a cheap workforce from Madagascar.<sup>67</sup> Migrant workers from China, Kenya, Madagascar and various countries in South Asia make up 20 per cent of the working population in Seychelles and are primarily employed in fishing and construction, with workers facing exploitative conditions in fish-processing plants.<sup>68</sup> In Oman, with economic growth in the energy sector, the subsequent increase in an expatriate workforce has resulted in coastal women being gradually replaced by foreign labourers. Child labour is employed in Bangladesh shrimp-processing plants, with children working up to nine hours per day in unhygienic conditions and often exposed to sexual abuse.<sup>70</sup>

## **Challenges common to traditional and industrial fisheries**

### **Lack of formal work recognition**

The absence of formal recognition of women as workers in fisheries leads to their work being unregulated and their exclusion from state policies, programmes and decision-making processes. It also limits their access to resources, information, training, credit, welfare measures and social protection. Formal recognition of women’s identity as fishers and their work in the sector is also important to secure regulatory protection for tenure, whether in the primary harvest or secondary post-harvest sector.

Women in fisheries in some countries around the world have gained official recognition for their roles in the sector, with equal rights on par with men. In the Philippines, for example, a 2003 act granted women in municipal and coastal fishing equal access to the use and management of marine resources and all the rights and benefits accruing to stakeholders in the fishing and aquaculture industry. Women fish vendors in Senegal are officially recognized and are able to access micro-credit schemes and professional organizations.<sup>71</sup> In France, the “collaborative spouse” status is recognized in the *Fishery Law* of 1997, allowing women who work in the family fishing enterprise to represent the enterprise, be elected to boards of fisher organizations and join a social security scheme for fishers.<sup>72</sup> However, the benefit of work identity is still not available to many women in IORA countries. **Box 6** illustrates the effects of this exclusion.

The need cannot be emphasized enough for periodic and mandatory occupation and income surveys in the fisheries sector to guide fishery policy, with special attention to women’s engagement across the value chain. However, the absence of a work identity means that women are excluded from official enumeration. **Table 5** revealed that estimates for employment in the post-harvest sector were available for only 11 out of the 22 IORA Member States, while estimates for employment in the harvest sector were available for

19 out of the 22. Since women find employment primarily in post-harvest activities, this is clear evidence of the extent of women's exclusion from any sector censuses and therefore from national fishery policy.

The absence of a clearly defined work identity hinders the regulation of wages and working conditions for women in the fisheries sector. **Table 6** illustrated how employment in the rural sector—including agriculture,

forestry and fisheries—provides less income than other sectors of employment in most IORA countries. Most countries also have a gender wage gap, with women earning substantially less than men. Since much of employment in the fishery sector in rural areas is informal and non-waged, returns to workers depend on their bargaining power. The bargaining power of women in fisheries remains low, given that their work lacks formal recognition.

#### BOX 6

#### Gender discrimination in access to welfare

In Puducherry and the neighbouring state of Tamil Nadu, India, coastal fishing is banned for a period ranging from 45 days to 2 months starting around mid-April. The ban impacts the livelihoods of both women and men fishers. Governments in both states have provided relief schemes to support fisher families during the ban. However, while relief in Puducherry was available to all fisher households that had ration cards, only families of registered fishermen in Tamil Nadu were included for relief. Women were not granted formal recognition as fishers in the state. Therefore, in Tamil Nadu, women-headed fisher households were excluded from the relief scheme.

Sources: FAO 2017a.

#### Lack of social security

Social security is “the protection that a society provides to individuals and households to ensure access to healthcare and to guarantee income security, particularly in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a breadwinner”.<sup>73</sup>

Among the Member States of IORA, universal, government-funded social security schemes covering old age benefits, disability support and support to survivors of workers are available to all citizens of Australia,<sup>74</sup> Seychelles<sup>75</sup> and Thailand<sup>76</sup> in addition to contributory social security programmes. Government support for social security is available for needy citizens only (means-tested) in Bangladesh,<sup>77</sup> Mozambique,<sup>78</sup> Singapore<sup>79</sup> and South Africa.<sup>80</sup> The universal benefits

extend, in addition to citizens, to all residents in Australia and to long-term residents and refugees in South Africa. Mauritius and Sri Lanka have specific social security measures for fishers, while some Indian states also have state-specific welfare schemes for the sector.

In all other IORA countries, national legislation for social security covers contributory social insurance programmes. Further, in many of the countries, the programmes are mandatory only for workers in the formal sector and are voluntary for self-employed workers. In addition, there may be regional programmes for means-tested social security in some IORA countries, as is the case in India, with state-specific, public-funded programmes for old-age pensions, health insurance and subsidized essential commodities.<sup>81</sup>

In IORA countries that do not offer universal social security, unless there are sector-specific contributory social insurance programmes, workers in the fisheries do not benefit. If such schemes are available but voluntary in nature and require monetary contributions, worker participation might be restricted. Further, for women, access to sector-specific schemes also depends on formal recognition of their work in the sector.

In countries where government-funded social security entitlements are means-based, the criterion for entitlement determines the extent of coverage. Usually the criterion is wage-linked and it is often linked to a definition of the poverty line. However, the determination of the poverty line varies substantially across IORA countries. In Kenya, for instance, going by the national poverty line for 2015, 17.1 million (36.1 per cent of the population) were below the line, as opposed to 17.6 million (36.8 per cent) using the international poverty line of US\$1.90 (2011 PPP) per capita per day.<sup>82</sup> In the case of Indonesia, 28.1 million (10.6 per cent of the population) fall below the line if the national poverty line for 2017 is used; however, if the international poverty line is used, the number is only 15.1 million (5.6 per cent).<sup>83</sup> Thus, while the national poverty line in Kenya would exclude around 0.5 million of the poor, in Indonesia, the national poverty line would include 13 million more people than would the international poverty line.

Finally, the universal social security coverage that is available to the citizens of Australia, Seychelles and Thailand—as well as the means-tested social security coverage that is available to the citizens of Bangladesh, Mozambique, Singapore and South Africa—would exclude any migrant workers in the fisheries sector.

A major lacuna in fisheries policy addressing social security is the paucity of data specific to the sector. The available data are, for the most part, gender-neutral. As a result, the impacts of available schemes on women are unknown. Given that women's work often does not have formal recognition, the lack of sex-disaggregated data is likely to obscure the fact that women may be excluded from social security coverage.

## Occupational health and safety concerns

Women who find formal employment in the fisheries are disproportionately concentrated in the post-harvest processing sector, which is poorly regulated and associated with occupational health hazards that adversely affect their health. Health issues reported among women shrimp workers in Bangladesh include fungal disease of the hands,<sup>84</sup> and among seafood-processing workers in southern India, contact dermatitis, warts, black spots, blanching of skin and higher immunoglobulin levels related to asthma and chronic bronchitis.<sup>85</sup> Studies on fish- and seafood-processing workplaces in Australia have found significant incidence of urticaria and work-related asthma among seafood workers.<sup>86</sup> In the Western Cape Province of South Africa, skin problems among women workers have been reported while studies on women workers in the West Coast of South Africa have found a substantial risk of inhaling aerosolized fish antigens that lead to occupational asthma.<sup>88</sup>

Occupational health problems are related to the lack of regulations or their enforcement. In Australia, industrial hygiene and medical surveillance programmes in small- and medium-sized enterprises in the post-harvest sector are deficient or missing.<sup>89</sup> In one study conducted among shrimp-processing workers in Bangladesh, 97 per cent of the workers reported violations of meal and rest breaks regulations.<sup>90</sup> Across the fisheries sector, from the industrially developed to the less developed IORA Member States, the lack of regulatory measures to safeguard women's health is a matter of grave concern. The reliance on migrant labour, including child labour, in certain parts of the fishing industry—for example, in the Thai seafood industry—is of further concern as migrant workers would have even lower levels of access to regulatory protection (see **Box 7**).

Further, the poorly regulated work environment of industrial seafood-processing industries may also involve physical and sexual abuse from supervisors and employers.<sup>91</sup>

### BOX 7

#### Child labour in Thailand's shrimp industry

According to a 2015 report by the Asia Foundation and the ILO, the shrimp industry in Thailand employs 700,000 workers, 80 per cent of whom are migrant workers, including children, both boys and girls, primarily from Myanmar. The children working in the shrimp and seafood industries are frequently exposed to occupational hazards. A high proportion of them work with fire, gas or flames. Children also work in wet and dirty environments. Migrant children work longer hours on average than do Thai children, and often above the legally permitted limit. Hazardous conditions also extend to home-based shrimp processing work, especially when children work in the early mornings or late evenings with inadequate lighting of the workplace.

Sources: The Asia Foundation and ILO 2015.

Occupational health and safety concerns of women in the traditional fisheries sector among IORA Member States is a largely neglected area of research. One study conducted in Udipi, India, found a high incidence of health problems, chiefly musculoskeletal disorders, among both women and men in the informal fishing sector, with significantly more women affected than men.<sup>92</sup> Evidence from other parts of the world suggests that near-shore fishing and gleaning, which engage many women in the IORA region, are associated with considerable health risks. One study, which found a high incidence of musculoskeletal disorders, hypertension and arthritis among artisanal fisherwomen and shellfish gatherers, recommended reforms in public health policy to address the health needs of women in the sector. The example of technological innovation in fish processing, the FAO-Thiaroye Process cited earlier, may be relevant in this context. This not only added value but also improved the working conditions of women fish processors by reducing exposure to heat and smoke.

#### Overcoming obstacles to women's leadership and participation in decision-making processes

Women have been systematically excluded from most leadership and decision-making processes within the fisheries sector and fishery organizations. This may, in part, be due to their marginalization in lower-paid and informal positions within the industry but may also be

attributed to patriarchal norms and gender stereotypes that do not support women as leaders.

Nevertheless, many women in fisheries in the IORA region have overcome these obstacles by organizing themselves and creating strong networks. In 2005, in Mumbai, India, women fish vendors organized themselves as the MBKMMVS (Marol Bazar Koli Mahila Mase Vikreta Sanstha) in response to the demolition of the structure that had housed the 150-year-old Marol weekly market where they sell their fish. As a result of their consistent pressure, the Mumbai Municipal Corporation redeveloped the market and the MBKMMVS has taken a real role in the management of the marketplace. Their efforts have made the market a cleaner and safer place for women fish vendors with the installation of lighting, security facilities and women's restrooms.<sup>94</sup> Organizing and networking by women can also increase their political and bargaining strength (see **Box 8**).

Studies also show that when women are included in leadership and management, they help foster community well-being and economic growth, bring attention to violence in the community and domestic sphere and improve bargaining power for women within families, which, in turn, leads to positive outcomes for family well-being.<sup>95</sup>

## BOX 8

### Creating strong networks to advocate for women in fisheries

Some recent studies estimate that more than one fourth of the workforce in the African fisheries and aquaculture sector are women. The great majority of these women are employed in post-harvest work, contributing significantly to food security and household incomes. However, women remain marginalized, especially from decision-making processes. Considering these challenges, the African Union adopted the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa in 2014. One of the seven policy objectives is to guarantee and sustainably strengthen the contribution of artisanal fisheries to poverty alleviation, food security and socioeconomic benefits for fishing communities, particularly fisherwomen. In 2017, the African Network for Women Fish Processors and Traders (AWFISHNET) was created to provide a platform for collaboration and cooperation among women fish processor and trader associations; sharing of best practices, knowledge and technologies; advocacy on issues such as the need for an enabling policy environment; and other initiatives to improve access to markets and marketing opportunities and promote the equitable participation of women fish processor and trader enterprises in the intra-regional African fish trade.

Sources: Lukanga 2018.

Women fishworker organizations, civil society organizations and their regional networks and coalitions, particularly in the IORA region, should be supported to amplify and disseminate their concerns and recommendations and advocate for their integration in policy formulation and implementation. Examples include the “Shared Gender Agenda”,<sup>96</sup> drafted by women fishworker organizations, CSOs, researchers and activists from 18 countries in Mahabalipuram, India, in 2010; and “The Santiago de Compostela Declaration for Equal Opportunities in the Fisheries and Aquaculture Sectors”,<sup>97</sup> issued by the International Conference of Women in Fisheries in Spain in 2018.

## EXTERNAL CHALLENGES

### Modernization of fisheries and aquaculture

#### Modernization of capture fisheries

The experiences of Maldives and South Africa have shown that increasing industrialization and mechanization

of the fishing industry can make women’s labour redundant and force them out of the sector. In Maldives, for example, modernization and mechanization of fishing have not taken into account the roles of women. While men own the boats and catch the fish, women have traditionally been responsible for post-harvest activities. Increased demand for fish due to social development and tourism has spurred the modernization of fish processing, thus phasing out women’s work without support for building alternative livelihoods.<sup>98</sup> Globally, there is evidence that for every new fish factory job, six to eight jobs are lost in informal fish processing.<sup>99</sup> Often, women are forced to abandon their traditional livelihoods and move into less profitable fish value chains, as in the case of the United Republic of Tanzania, where women were displaced from traditional processing of Nile perch after processing industries came to the region.<sup>100</sup>

#### The spread of intensive aquaculture

In addition to fisheries, women are also employed in aquaculture, both marine and inland. Aquaculture

contribution to global fish production rose from 25.7 per cent in 2000 to 46.8 per cent in 2016. Most aquaculture growth is in Asia, with 4 of the IORA countries—Bangladesh, India, Indonesia and Thailand—among the top 10 aquaculture producers. In fact, global aquaculture production of fish for food has overtaken capture fish.<sup>101</sup> However, annual growth rates have declined from 10.8 per cent in the 1980s and 9.5 per cent in the 1990s to 5.2 per cent in 2016.<sup>102</sup>

Traditional aquaculture was home-based and extensive in many countries, such as Bangladesh,<sup>103</sup> India<sup>104</sup> and Thailand.<sup>105</sup> Such extensive aquaculture entails low costs and does not adversely affect the environment. However, with the increasing importance of aquaculture in fish production, its practices are becoming more modernized and intensive. Intensive culture systems require large capital for infrastructure and equipment, technical expertise and commercial inputs, primarily imported feeds and chemicals.<sup>106</sup>

The global leader in aquaculture, China, proposes in its 13th Five Year Plan to move from extensive to intensive aquaculture.<sup>107</sup> Its lead is likely to be followed by the other large aquaculture producers as well. Examples from Indonesia and Malaysia demonstrate that as aquaculture becomes more intensified and commercialized, there is a corresponding decrease in the involvement of women.<sup>108</sup> In Indonesia, there is evidence that as shrimp farms get larger, women's participation shrinks, with men dominating the leadership of large-scale fishing operations.<sup>109</sup> Women's employment tends to be limited to informal, insecure and low-value jobs, such as shrimp sorting and grading, while men assume the better-paid roles of lead operators.<sup>110</sup> In both Indonesia and Malaysia, lack of technical skills and capacity are serious obstacles for women's job growth in intensive aquaculture farms. While men are able to take advantage of government-run programmes for skills development, women's domestic duties hamper such participation.<sup>111</sup>

## Growth of competitive sectors

### Seaports and shipping

The development of ports and harbours and the growth of the shipping industry usually have the effect of centralizing fish landing sites from neighbourhood beaches to relatively distant ports. As seen in India's western coasts, this can greatly reduce women's access to fish and can add additional input costs of transport and time to their post-harvest work.<sup>112</sup>

Gender discriminatory practices coupled with low levels of capital and asset ownership and poor bargaining power make women highly vulnerable to displacement, livelihood alienation and loss of tenure due to development. Along the landing sites of Lake Victoria, for instance, technological innovations, development efforts and increased privatization have displaced many women fish traders and processors.<sup>113</sup> As fish are diverted from the small-scale to the industrial sector, men are also displaced from their traditional occupations. Many men then enter the post-harvest sector, primarily fish trade, competing with women for fish catch and market access.<sup>114</sup> This can also be linked to a restructuring of the sector, with men controlling the high-end value chains and women engaged in less-profitable value chain operations.<sup>115</sup>

### Global fish trade

The globalization of fish trade has fundamentally restructured fish production and supply value chains with profound impacts on the lives of fishers in developing countries.<sup>116</sup> The process of globalization within the fisheries has been associated with intensified export orientation and the spread of joint ventures between rich and poor countries. Fish processing is intensive, geographically concentrated, vertically integrated and linked with global supply chains in European and North American countries—for instance, sending whole frozen fish mainly to China but also to countries such as India, Indonesia and Viet Nam for filleting and packaging and then reimportation.<sup>117</sup>

The expansion of intraregional exports can contribute to regional fish security and also promote the growth of local economies. Stronger local export flows can also act as buffers against fluctuations in international markets, while the diversification of markets can help

less-developed economies to bargain for better terms of trade. Increased fish trade can also serve to stimulate post-harvest work where women play an important role (see **Box 9**).

### **BOX 9**

#### **Intra-regional exports among IORA countries**

Fish exports from Maldives in 2013 reached Thailand (37 per cent), followed by France (13.5 per cent), the Islamic Republic of Iran (6.5 per cent), Germany (6.0 per cent) and Sri Lanka (5.7 per cent). The exports to Thailand and Sri Lanka would probably be destined for industrial fish processing before further export to developed nations. For Bangladesh, the major fish export destinations were the United Kingdom (14.9 per cent), Belgium (13.5 per cent), Germany (12.3 per cent), the Netherlands (11.1 per cent) and China (10 per cent). In the case of both Maldives and Bangladesh, it is likely that fish exports would not have resulted in increased local consumption of fish.<sup>a</sup>

South Africa imports fish from other Southern African Development Community (SADC) countries. This fish, mainly species local to those countries, is primarily consumed by the large migrant population. The fish imports are mainly through informal, cross-border trade by women traders. However, this fish trade faces major challenges due to a lack of harmonized product standards and regulations and the poor implementation of regional trade agreements.<sup>b</sup>

When the Cambodia–Thailand border was closed, the informal but significant cross-border fish trade involved the participation of several different types of actors, with women concentrated in vulnerable roles in small-scale trade because they lacked capital and connections with border officials, among other reasons.<sup>c</sup> The subsequent opening of the border led to women small-scale traders being pushed out of business by large traders; the impact of the reorganization of the cross-border fish trade in recent years calls for more context-informed study and analysis.<sup>d</sup>

Sources:

<sup>a</sup> Export-Import Bank of India 2014; <sup>b</sup> Jimu 2017; <sup>c</sup> Kusakabe et al. 2006; and <sup>d</sup> Kusakabe and Sereyvath 2014.

Export-oriented fisheries directly affect fish processing and fish trade, which constitute the bulk of women's work in fisheries. The effects of global fish trade on women's employment are, however, mixed. For instance, increasing levels of fish exports from South Africa

created new jobs in fish-processing factories, but when the removal of apartheid-related restrictions cleared the path for the country's entry into global markets, these jobs were moved offshore, leading to factory closures and job loss.<sup>118</sup>



Employment in industrial fish processing along the global supply chain is often under conditions of exploitation and poor regulation. Fish-processing factories typically employ a large migrant workforce, including women and children, whose bargaining power is poor. Work in the sector also often reinforces gender stereotypes regarding labour. For instance, married migrant couples from the Lao People's Democratic Republic and Myanmar working in Thai shrimp farms are likely to be paid a couple's wage, ostensibly allowing women latitude for child care but in effect reinforcing the dependence of migrant women on husbands and employers.<sup>119</sup>

There have been some attempts to regulate work in fish processing along global supply chains. For instance, the World Benchmarking Alliance has developed a Seafood Stewardship Index (SSI) for the seafood-processing sector to monitor how the world's leading seafood companies contribute to environmental sustainability and ensure responsible social practices. The index's measures include worker rights and status, gender equality and health and safety.<sup>120</sup>

Global trade in fisheries can also lead to adverse economic and social outcomes when the terms of trade are skewed against less-developed exporting economies. Studies have highlighted the negative impacts of European Union (EU) fisheries agreements with African countries. In response to the criticism, the European Commission renamed them 'Sustainable Fisheries Partnership Agreements' (SFPAs), reflecting a desire to incorporate sustainability and food security goals. However, studies find that the SFPAs do not provide significant benefits to developing economies and continue to reduce fish access for the small-scale sector.

One study that analysed the EU's fishing agreement with Madagascar since 1986 estimated that the latter's treasury income from these agreements decreased by 90 per cent.<sup>121</sup> In Mauritius, estimates show that the Government receives only around EUR 0.15 per kilogram of tuna caught by EU vessels, or around 10 per cent of

the value of the fish in European markets. A coordinated campaign by the Syndicat des Pêcheurs, the Apostleship of the Sea, the General Workers Federation and the Centre for Alternative Research and Studies in Mauritius has advocated for management of fisheries by local communities in place of the trade agreements with the EU.<sup>122</sup> A 2002 study of global fisheries agreements raised several important concerns, including the overcapacity of foreign fishing fleets, with their overfishing leading to depletion in fishing stocks in less developed coastal nations; the very low fees paid by foreign fleets for access to foreign waters and fish stocks; the displacement of local small-scale fishers by the large industrial fleets; and the consequent threat to food security in countries where fish was traditionally an important and cheap protein source.<sup>123</sup>

#### **Disruption of livelihoods due to armed conflict and illegal, unreported and unregulated fishing**

War, conflict and illegal fisheries have severe negative consequences on the small-scale fishing sector, with long-term impacts for women. In Sri Lanka, the civil war left behind around 89,000 widows, including from fishing communities. Many women were displaced from their homes during the war and had no documents to prove ownership of their property on return (see **Box 10**). In Somalia, the civil war in the 1990s destroyed a thriving and well-regulated fisheries sector. The destruction of the indigenous fishery industry during the war years helped illegal fishing operations take root in the Somalia waters off the Horn of Africa region. In 2013, the Government tried to enforce clear regulations for marine fishing, but with local fisheries in disarray and the expansion of illegal fishing, enforcement of regulations remains a huge challenge.<sup>124</sup> In Yemen, the fishery sector has been heavily impacted by the ongoing war, resulting in a near 50 per cent reduction in the number of fishermen,<sup>125</sup> death and injury among fishing populations due to airstrikes, a sharp decline in fish production and the widespread destruction of fishing infrastructure along the Red Sea coasts.<sup>126</sup>

**BOX 10****War widows in Sri Lankan fishing communities**

The war in Sri Lanka had a major impact on the fishing communities of Mannar. Many fisher families were displaced. The situation was compounded by restrictions on fishing hours and fishing grounds. Since the end of the war in 2009, the fisheries have revived, but fishing communities still face major difficulties. Women, in particular, are badly affected. The fishing village of Santhipuram has 450 families of which 75 are headed by women: 60 widows and 15 who have been deserted. Fishery is the main livelihood source in the village. To provide food and income to their households, the widows go to the beach at four in the morning and help in removing fish from nets and cleaning and repairing nets. In return, they are given some small fish. The women keep some of their earned fish for food and process the larger part into dry fish. In the absence of adequate facilities, the dry fish processing is carried out under unhygienic conditions. The livelihoods of the widows and deserted women are fragile. Selling dry fish at the local market is their mainstay. The fishing season is only six months long, and for the rest of the year they live off their savings and from selling dry fish and some homemade food in other villages. They take micro-credit loans from non-governmental organizations (NGOs) for poultry or goat keeping, but these do not provide a viable alternative livelihood. According to the women, the major problems of fishing families after the war were access to land and sea and the loss of their homes and important documents, including land titles, which were destroyed when they fled.

Source: Quist 2015.

Illegal, unreported and unregulated fishing is one of the biggest threats to fishing communities. FAO estimated in 2003 that the value of IUU fishing worldwide was between US\$10 billion and US\$23 billion annually.<sup>127</sup> Analyses for select IORA countries estimated that solving the IUU problem would increase per capita availability from 2.5 kilograms (kg) per year to nearly 3 kg per year in Mozambique; from 5.6 kg per year to 7 kg per year in Kenya; from 2.1 kg per year to 8.4 kg per year in Somalia; and from 57.6 kg per year to 60.1 kg per year in Seychelles.<sup>128</sup> The impact of IUU fishing on a country is well illustrated by the case of Somalia. The decline in Somalian fisheries started with the 1991 civil war, with most fisheries forced to shut down. In that period, large factory-size distant vessels from various countries entered Somalian waters to illegally overexploit the rich fish stocks. There was also dumping of industrial waste, including nuclear waste, off the coast.<sup>129</sup> As noted above, estimates indicate the availability of fish in Somalia could quadruple if IUU fishing were stopped.

The improved availability of fish could positively impact food security and improve the potential for downstream value addition activities for fisherwomen. The potential long-term impact on the poor fishing economy of Somalia could be phenomenal.

**Tourism**

The tourism industry is an important contributor to the economy for most IORA countries. For small island countries such as Madagascar, Maldives, Mauritius and Seychelles, tourism is vital for both economic growth and employment generation. The World Economic Forum in 2017 estimated that tourism contributed to 21 per cent of GDP in Seychelles, 11.6 per cent in Madagascar and 4.8 per cent in Mauritius; while the employment generated was 22 per cent of all employment in Seychelles, 11 per cent in Madagascar and 3.8 per cent in Mauritius. Tourism also contributed to 9.3 per cent of GDP and 6.3 per cent of employment in the much

larger economy of Thailand. The tourism industry in these countries is primarily coastal-based, so it has considerable impact on the fisheries sector, both as a competitor for coastal resources and a generator of alternative employment.<sup>130</sup>

Tourism can thus be identified as a key growth area for the economy and for employment generation within IORA countries. However, women in the region generally occupy non-standard and low-skill clerical and service jobs, earning 10 to 15 per cent less than men employed in the sector. Without a policy focus on women's employment in the industry, the growth of tourism might further exacerbate gender inequalities in employment.<sup>131</sup> In Kenya and Madagascar, tourism, along with urbanization, is leading to a large influx of people in the coastal regions, putting extreme economic and social pressure on fishing communities. In Kenya, the competing use of coral reefs and coastal areas by the tourism sector results in conflict with local communities.<sup>132</sup> Eighty-seven per cent of Maldives' tourism sector consists of men, while women are excluded because of social stigmas associated with young unmarried women staying on resort islands for significant periods of time, the perceived risks of women travelling alone, high costs of transport and limited child-care facilities for resort employees.<sup>133</sup>

The economic development paradigm around tourism needs to be participatory so that local communities are not excluded, even as the economy grows and stricter environmental safeguards are put in place. Debt swaps, such as the debt forgiveness contract carried out by Seychelles with a group of creditor countries whereby 30 per cent of the island area was committed for marine protection with 15 per cent designated as no-take areas,<sup>134</sup> are successful examples of eco-friendly government policy interventions. However, the active participation of local communities, including women, is necessary to ensure that the benefits of such initiatives are not usurped by other stakeholders and that existing livelihood options are safeguarded.

### **Increasing levels of household food insecurity**

The small-scale fisheries sector is a vital contributor to food security, contributing about half of global fish catches and two thirds of fish directed to human consumption.<sup>135</sup> Therefore, policy measures that adversely impact the access to fish of the small-scale fisheries sector can jeopardize the food security of millions of poor consumers dependent on fish as their main source of protein.

The impact of overfishing and climate change has accelerated the reduction of major fish stocks within the Indian Ocean region.<sup>136</sup> Overfishing is often the result of intensive and capital-intensive practices. Reduced fish availability results in less fish for post-harvest activities, including fish processing and trade where women are mainly employed. Reduced fish availability impacts not only economic opportunities for women in the sector but also food security in communities where fish is an important traditional food and source of low-cost protein. Women, being generally responsible for the domestic sphere in fishing communities, are often directly responsible for gleaning fish for household food. When competitive interests take over or pollute inland water bodies, mangroves and intertidal zones, which are the main sources of women's fishing and gleaning activities, the basic nutritional requirements of poor households are threatened. The interests of women are, however, rarely taken into account in policies concerning fish security.<sup>137</sup> In Ngazidja island, Comoros, authorities banned women's gleaning activities as part of a conservation measure, thus jeopardizing their livelihoods and local food security. However, studies have shown that the participation of local fishing communities in co-management solutions could have resulted in more effective and just outcomes.<sup>138</sup>

Local food security, as well as employment and livelihood, are also impacted by global fish trade, although the nature of the impact is not always clear. An expert panel report found that in Kenya, Sri Lanka and Thailand, fish trade had a significant to large negative

impact on fish resources. In terms of local fish consumption, the impact of fish trade in Kenya was determined to be “large negative”, while there was a “large positive” impact in Sri Lanka and a “small positive” impact in Thailand.<sup>139</sup> The report also found that the Nile perch industry had generated high revenues from export to European markets, but these export revenues had not translated into positive outcomes for food security in Kenya. In the case of the Thai seafood industry, even when trade results in increased employment, the nature of the employment may be poor and local populations may not necessarily benefit. Therefore, there is a need for greater coherence among trade, fisheries and food security policies. A gender analysis of the differential impacts of these policies on women and men would also help to improve policy design.

### **Intensification of double work burdens**

Restructuring of the fishing industry and marine and inland water infrastructure has a direct impact on women’s employment opportunities. Restructuring often results in reducing women’s access to fish and markets that were previously available through traditional fishery. Policy measures rarely take into account the differential impacts of fisheries restructuring on women and men. Many women may find it challenging to take on more formal waged employment—or to migrate for work—due to their unpaid and domestic work responsibilities, which may include child care, elderly care or care of a sick or disabled family member. In all countries in the IORA region for which data are available on time use, women perform more hours of unpaid work than men.<sup>140</sup> There is little evidence of child-care facilities at seafood and fish-processing factories, despite the fact that the workforce consists disproportionately of women. Systems and services, such as affordable, accessible and quality child care or health services, that support the redistribution and reduction of care work are needed in order to ensure that women can benefit equally from the restructuring of fisheries. Flexible work schedules and parental leave, including paternity leave, would also support the

redistribution of domestic responsibilities within the household. Women also need support and access to retraining programmes to enable them to compete for jobs in the restructured economy.

## **CLIMATE CHANGE IMPACTS**

The impact of climate change on fish availability and fishing practices is an issue of global concern. The 2014 Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) concluded that marine species redistribution and marine biodiversity reduction in climate-sensitive regions would challenge sustained fishery productivity by the mid-21st century.<sup>141</sup>

The IORA region is highly vulnerable to climate-related events. Bangladesh and India are among the 10 countries most affected by climate change and weather events in the last two decades.<sup>142</sup> These are among the largest fish-producing nations in the region. The contribution of inland non-aquaculture freshwater fishing to capture fisheries is significant in the IORA countries and supports the largest employment in the fisheries sector. In Bangladesh, the proportion is 64 per cent, followed by 30 per cent in India and Thailand, and 22 per cent in Indonesia.<sup>143</sup> Inland fishing strongly contributes to food security and post-harvest activities and has a high level of participation by women fishers.<sup>144</sup> The major perennial rivers in Bangladesh and India are fed by the Himalayan glaciers. The potential impact of global warming on glacier retreat, which affects water availability to rivers and thus food security, is an issue of concern. Glacier melting can also cause sudden changes in river water flow, resulting in flash floods.

The environmental changes over the past few decades for which there is the most evidence include increased sea surface temperature in all regions and rising sea level in most regions.<sup>145</sup> The Western Indian Ocean (WIO) has been warming at a notably faster rate than the other tropical ocean regions. Between 1901 and 2012, while the mean sea surface temperature went up by

0.7 degrees Celsius, the increase in the WIO was 1.2 degrees Celsius. Temperature change can significantly alter marine food availability and diversity. Further, it has also led to greater frequency and intensity of El Niño events: the number of significant events increased from 7 in the first half of the last century to 12 in the second half.<sup>146</sup> Climate change has already had observable impacts on fisheries in the WIO region, with particularly grave prospects for Small Island Developing States (SIDS) such as Comoros, Madagascar, Maldives, Mauritius and Seychelles. Among the adaptive measures suggested for the WIO region are the adoption of fishery-specific adaptive management plans, effective systems of marine protection, the implementation of responsible fisheries—including the SSF Guidelines—and a sustainable, inclusive blue economy approach.<sup>147</sup>

Climate change-related impacts in the IORA region include a decline in coral reefs and mangrove forest cover off Mozambique and the United Republic of Tanzania;<sup>148</sup> a decline in shallow-water species traditionally harvested by small-scale fishers in South Africa;<sup>149</sup> and shifts in the distribution of tuna fish, with associated effects on coral reef fisheries in the WIO.<sup>150</sup> The incidence of cyclonic events was higher in the Bay of Bengal between 1985 and 2009, and these are expected to become more common. In Bangladesh, both an increase in the number of minor cyclones and greater fluctuation in fish production are attributed to climate change.<sup>151</sup> Among climate-related changes, extreme temperatures, erratic rainfall, floods, drought, tropical cyclones, rising sea levels, tidal surges, salinity intrusion and ocean acidification are causing serious negative impacts on the lives and livelihoods of millions of people in Bangladesh and are gradually offsetting the socioeconomic development gained over the past 30 years.<sup>152</sup> Human interventions with long-term climate impacts also have more immediate destructive impacts on the fisheries—for instance, 93 per cent of Indonesia's coral reefs are at risk from unsustainable practices such as coral mining, anchoring in reef areas and destructive fishing methods.<sup>153</sup> The migration of tuna to deeper waters and the coral bleaching affecting the reefs are affecting the livelihoods of people in Maldives.<sup>154</sup> Further,

in the last three decades Indonesia and Sri Lanka have lost 40 to 50 per cent of their mangroves—which are important ecosystems for women gleaning for crabs, molluscs and other species—as a result of aquaculture development.<sup>155</sup>

The decline of shellfish species due to climate change-related ocean acidification affects women's gleaning activities and thus also household food security and incomes.<sup>156</sup> Where fish is an important source of protein, extreme weather events and other climate change-related phenomena leading to fisheries losses may have far-reaching consequences on public health. In Bangladesh, where fish constitutes 58 per cent of the total animal protein consumption, the reduced availability of food in poor households due to climate change impacts is compounded by loss of livelihoods for women who play a key role in aquaculture in activities such as seed preparation, fertilization of ponds and feeding of fish.<sup>157</sup>

In the context of climate change, gendered fisheries practices result in a further loss of access to resources and benefits for women. Women and girls suffer disproportionate health consequences from nutritional deficiencies<sup>158</sup> and an increased burden of unpaid reproductive and care work, particularly in poor households in rural areas, as daily necessities such as drinking water and firewood become scarce and must be fetched over long distances.<sup>159</sup> As fish stocks dwindle, women's access to fish diminishes and their underrepresentation in fisheries decision-making bodies means that there is no one to speak up for and safeguard their economic and other interests. As fish species decrease in Lake Victoria, for example, as a result of climate change, men continue to control and take the decisions concerning the fisheries despite the strong impacts on women's fish trade and fishery conditions. In Mozambique and the United Republic of Tanzania, gendered fisheries management practices have placed a disproportionate level of the burden of climate change adaptation on women through restrictions placed on grounds where they gleaned and fished.<sup>160</sup>

Fishing communities, and in particular coastal fishing communities, are faced with the immediate and growing threat of climate change and disasters. The burden of protecting their livelihood rights, while at the same time standing up against policies and practices that destroy their environment and their livelihood options, falls most directly on these communities. Women, as key agents ensuring the resilience of small-scale fishing communities, and carrying the bulk of the reproductive work, should play a leading role in climate change adaptation, ensuring climate justice and disaster risk management.<sup>161</sup>

Gender should therefore be mainstreamed in all climate-adaptive policies, programmes and strategies, and women should be equally involved in their design,

monitoring and implementation. In Bangladesh, an intervention by the CGIAR Challenge Programme on Water and Food has looked at several innovative strategies using improved water circulation in rice fields and water conservation measures to help women in homestead-based aquaculture to combat negative climate impacts of unseasonal rainfall and extreme climate events.<sup>162</sup> In the southern coastal state of Tamil Nadu in India, women have been trained to collect data and provide leadership in an initiative termed “beach profiling”, which helps fishing communities document the shoreline dynamics and coastal erosion patterns of their coasts and make use of traditional knowledge to address the needs of restoration and preservation of local ecologies.<sup>163</sup>

# 4 GENDER MAINSTREAMING IN POLICY, PROGRAMMES AND PRACTICE

As illustrated in the preceding sections of this report, women contribute substantially to value addition in the fishery economy. Nevertheless, lack of skills, low access to resources and technology, and gender-based occupational segregation and discrimination curtail the efficiency of their contributions, with gender disparities along fish value chains resulting in losses in terms of value and value added.<sup>164</sup>

Women's increased participation in natural resources management has been known to improve community cohesion and lead to better management and conservation outcomes.<sup>165</sup> Studies have shown that when women have greater control over the productive sphere and income, their bargaining power improves within the community and the household, and considerably more income is allocated for the enhancement of household well-being.<sup>166</sup>

Despite their contributions to the national economy and the well-being of their households and communities, the work of women in fisheries is not adequately recognized or enumerated in most countries. Policy measures, programmes and practices in the sector therefore often remain gender blind. The invisibility of women's work and their exclusion from all levels of decision-making are symptomatic of deeply entrenched gender inequalities at all levels in the sector.

In the past few decades, the concept of gender mainstreaming has gained attention as a means to address gender inequality. Gender mainstreaming has been defined as "the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated."<sup>167</sup> It is therefore critical to fisheries management, at all levels of policy and practice, to ensure that women have equal rights, opportunities, remuneration, benefits and voice in the sector.

The SSF Guidelines recommend that gender mainstreaming should be an integral part of all small-scale fisheries development strategies.<sup>168</sup> It is important to keep in mind that this is a process and not a one-time activity. It therefore requires a continuous and iterative assessment of the gender impacts of policy, programmes and practice.<sup>169</sup> The responsibility for this lies with all government agencies and the private sector engaged in the fisheries sector. The main areas for gender mainstreaming where policy attention is required include overall policy development, data and research and specific legislation and policy measures.

## OVERALL POLICY DEVELOPMENT

In the case of the fisheries and aquaculture sectors, gender should be mainstreamed in all appropriate legislation and policy initiatives to promote the creation of more and better employment for women and men; the reduction of occupational segregation and gender wage gaps; the strengthening of women's income security; the reduction of women's unpaid work, including domestic work; the strengthening of women's organizations; and the assessment of the progress of the economic and social rights of women in the sector.<sup>170</sup> These areas of concern are discussed further under the section "Specific legislation and policy measures".

Ensuring policy coherence at all levels is necessary to ensure that women's livelihoods are not undermined by contradictory policy measures. Within the rural sector, for instance, fisheries, agriculture and other natural resource policies should be harmonized to enhance rather than undermine the interrelated livelihoods derived from these sectors. Thus, for instance, regulation of the use of agricultural pesticides would be necessary to prevent the poisoning of water bodies and downstream fish resources. Policy coherence must also take into consideration the contribution of fisherwomen's subsistence activities to the economic and social well-being of poor households and communities by, for example, ensuring that food security is not compromised by trade policies<sup>171</sup> or marine conservation drives.<sup>172</sup>

Adequate budgeting for gender-based interventions is necessary to ensure women's programmes do not become token add-ons to policy as usual. Programme design should be long term and iterative, so that learning from progress evaluation can feed back into the design of future interventions.

In order to achieve these policy goals, a comprehensive gender analysis of the fisheries and aquaculture sector should be conducted, along with the collection, analysis and publication of sex-disaggregated data on women's employment.

## DATA AND RESEARCH

An understanding of the fisheries sector is primarily derived from statistics of fish capture and of aquaculture production, which are rarely sex-disaggregated to reflect the actual activities of women and men in these value chains. Policy initiatives ignore the contributions of pre-harvest and post-harvest activities in the sector, where women are most active.<sup>173</sup> Consequently, women's work and their priorities largely get neglected by policy measures.

FAO points out that even after two decades of highlighting women's roles in fisheries, comprehensive and accurate sex-disaggregated statistics are lacking and that this gap must be filled as the first step in gender mainstreaming at the policy level.<sup>174</sup> An analytical review of more than 100 case studies of small-scale fisheries from across the globe found insufficient attention paid to quantifying women's participation in fishing, reflective of a research bias that overlooked or underestimated women's roles. The review pointed out that when women's roles are underestimated, particular types of fishing—for example, shore-based fishing and gleaning activities, carried out predominantly by women—are overlooked; fish production, in particular, fish used for own consumption, is underestimated; women's activities are not considered in policies; and the significant role of women in promoting sustainable fishing and food security is ignored.<sup>175</sup>

A gender analysis of the fisheries and aquaculture value chains would therefore be beneficial to policymakers to better understand and increase the visibility of women's work and roles in the sector (see **Box 11**). Such an analysis might examine the gender relations between women and men in the sector as well as the gender dynamics within organizations of fishers, fishing communities and families. Greater insight into family, community and work-related gender interactions would help to inform policymaking and address some of the existing inequalities in the economic, social and political spheres.



**BOX 11****Tackling women’s invisibility in South Africa’s fisheries using fishery apps**

*“Before we only worked when it was the snoek run, for two to three months—the rest of the year you sit at home and feel like half a person. The fact that we now work with ABALOBI on a daily basis with fish, you feel as if you have value.” (Rosie, Lamberts Bay, 28 November 2018)*

A group of women and men fisher leaders from several small-scale fishing communities in the Western Cape, South Africa, are working towards the valorization of small-scale artisanal fisheries and promoting the recognition of women’s work along the entire value chain. To do so, they are using custom-designed digital technology to strengthen their position in the marketplace. ABALOBI, a non-profit organization, is supporting these fishers to use mobile apps to log their catches and to sell fully traceable, storied fish catch on the ABALOBI marketplace. Women and men fishers are figuring out what key data elements are needed in the design of these mobile apps to ensure that women’s work will be visible. For example, the FISHER APP uses open source technology to provide a means whereby fishers can log their catches and expenses. Women can now develop an identity as workers and the extent of their work can be captured and reflected in any operation. Their labour as fish cleaners is no longer just lumped under expenses incurred to a male-owned fishing operation. Women are potentially able to use this record to engage with financial institutions and the state as legitimate workers. The development of fully traceable, storied seafood has attracted the attention of leading restaurants and chefs who are prepared to pay a premium for this product. They have begun to buy previously undervalued species and embrace an “eating with the ecosystem” and catch-of-the-day approach. The demand for these undervalued species, which need to be cleaned prior to purchase, has created new livelihood opportunities for women fish cleaners. Further, ABALOBI is able to track information on the app prior to the fishers selling on the ABALOBI digital marketplace. This enables tracking of value-adding.

Source: Dr Jackie Sunde, ABALOBI Board Member and Gender and Learning Advisor (original contribution for this report/ personal communication).

## SPECIFIC LEGISLATION AND POLICY MEASURES

### Aligning and localizing international conventions and commitments

If the Member States of IORA are joined together by regional interests, they are also part of a larger international community bound by universal principles and normative standards. Many IORA Member States are signatories to several internationally negotiated treaties and conventions that address the issue of

gender equality. The conventions and international agreements that are particularly significant in terms of women’s economic empowerment include: the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), two of the eight ILO fundamental conventions—ILO Equal Remuneration Convention, 1951 (No. 100) and Discrimination (Employment and Occupation) Convention, 1958 (No. 111)—and the 2030 Agenda for Sustainable Development, particularly Sustainable Development Goal (SDG) 5 on gender equality and SDG 8 on decent work and economic growth.

CEDAW has been ratified by 20 out of 22 IORA Member States, committing them to condemn discrimination against women in all its forms, including to take all appropriate measures to eliminate discrimination against women in the field of employment. Article 11 highlights the commitments of States Parties to ensure women and men have the same rights to: work; employment opportunities; freely choose their profession; promotion, job security and all benefits and conditions of service; vocational training and retraining; equal remuneration; social security; and protection of health and safety in working conditions. States Parties also commit to take all appropriate measures to prohibit dismissal on the grounds of pregnancy or maternity leave and to introduce maternity leave with pay or comparable benefits, among other measures. Ten IORA countries have also ratified the Optional Protocol to CEDAW and two are signatories.<sup>176</sup>

As far as ILO labour standards are concerned, 20 out of 22 IORA Member States have ratified ILO Equal Remuneration Convention, 1951 (No. 100), committing to ensure equal remuneration for work of equal value for women and men, while 19 have ratified the Discrimination (Employment and Occupation) Convention, 1958 (No. 111), which requires States to promulgate legislation prohibiting discrimination and exclusion of any kind and on any basis in employment—including of race or colour, sex, religion, political opinion, national or social origin—and to repeal legislation that is not based on equal opportunities.

No IORA Member State has ratified ILO's Social Security (Minimum Standards) Convention, 1952 (No. 102). This establishes the minimum standards for nine branches of social security: medical care, sickness benefit, unemployment benefit, old-age benefit, employment injury benefit, family benefit, maternity benefit, invalidity benefit and survivors' benefit. It includes flexibility clauses that allow Member States to gradually attain universal coverage in terms of the number of contingencies covered and persons protected and also allows for flexibility in the type of schemes adopted

(universal, contributory, means-tested, etc.).<sup>177</sup> Under ILO's Maternity Protection Convention, 2000 (No. 183), all employed women are entitled to maternity benefits for a minimum period of 14 weeks. Despite no IORA Member State having ratified this Convention, half of the countries meet these minimum standards.<sup>178</sup>

IORA Member States, as members of the United Nations, are also guided by the 2030 Agenda for Sustainable Development, which provides a blueprint for growth posited around 17 SDGs, including—as noted above—the goal of gender equality. Sixteen of the IORA Member States have signed up for the voluntary national review (VNR) process coordinated by the High-level Political Forum on Sustainable Development.<sup>179</sup> Many countries have localized the SDGs, creating national road maps for their achievement by 2030. Member States are also obligated to align the above-mentioned international conventions with their national and local laws and policies to ensure the implementation of the conventions and their principles.

## Employment

Member States in the IORA region should also develop policies and strategies to both safeguard existing jobs for women and create new, decent jobs. The SSF Guidelines urge States to recognize that increasing competition from other users is a threat to small-scale systems of fish production, and that these systems require special support, including policy measures to ensure that women's work in post-harvest is protected against competitive threats. Legislation to safeguard women's tenure rights is also needed, as are measures of positive discrimination to ensure women have continued access to fish and markets. In Australia, for instance, policy initiatives address women's concerns in natural resource management, including fisheries, as well as the need for equal employment opportunities, anti-discrimination measures and workplace diversity.<sup>180</sup> In Bangladesh, the National Aquaculture Development Strategy and Action Plan 2013–2020 targets aquaculture-based enterprises to generate more rural employment for women and incomes for households.<sup>181</sup>

### Occupational segregation and gender wage gaps

Women's work in fisheries is often deemed secondary to the work of men, and therefore commands lower wages and returns. State agencies, private sector companies, CSOs and fisheries organizations all have a role to play in addressing the patriarchal norms and harmful stereotypes that restrict opportunities for women and devalue their work. Examples of state interventions include the case of Kenya, where the National Gender Equality Commission was established by an Act of Parliament in August 2011 with the mandate of preventing discrimination on the basis of sex, age,

ability and ethnicity and made responsible for ensuring compliance with all anti-discrimination conventions ratified by the country.<sup>182</sup>

State regulation of wages and minimum standards for employment and social security in the fish-processing industry are priorities to ensure women's equal pay and labour protections and benefits. The example from Bangladesh in **Box 12** illustrates how the work of women in aquaculture often gets systematically devalued through confinement to low-paid work along the value chain, with less compensation than men for the same work.

#### BOX 12

#### Employment of women along the shrimp value chain in Bangladesh

The shrimp industry is the second largest foreign export earner after garments in Bangladesh. It employs an estimated one million people across the value chain. A gendered value chain analysis, undertaken by the Greater Access for Trade Expansion team for the United States Agency for International Development (USAID) in 2005, highlighted significant differences in the roles of women and men.

Shrimp and prawn cultivation in Bangladesh is largely done in small ponds with modified traditional methods. There are a number of environmental issues, including salt water intrusion, destruction of mangroves and contamination from run-off of fertilizer and fish feed. Small producers have low bargaining power to get a good price for their produce. As credit access is poor, they are dependent on agents for credit, often tying them to sell their catch to these agents.

Better-paying jobs in pond repair or harvesting of prawn are done mainly by men, while women find employment in lower-paying jobs such as procuring fish feed and feeding fish. Women are paid around 80 per cent of the wages of men for the same jobs. Marketing of fish is done almost exclusively by men, who then control the money from fish sales.

The Department of Fisheries tries to periodically collect data on the shrimp aquaculture sector. However, it lacks the resources and technical skills to undertake more systematic and accurate data collection. Better data sharing among the Department, the Bangladesh Bureau of Statistics, the Ministry of Food, the Ministry of Land and the Ministry of Environment and Forests could help create better policy that ensures better returns from shrimp farming and promotes more equitable roles for women in the sector.

Source: Gammage et al. 2006.

In some countries where gender pay gaps have narrowed, the causal factor has actually been that men's wages have fallen even more sharply than women's.<sup>183</sup> Given that wages for work in the rural sector, which includes fisheries, are among the lowest across all sectors of employment, policy measures are needed to ensure parity of wages for the rural sector with other sectors. Analysis of data in **Table 6** showed that within most IORA countries, both the gender and the sector wage gaps disadvantage women's work in fisheries and aquaculture.

Well-conceived policy initiatives can help to ensure that women are provided with equal opportunities and their contributions to the sector are recognized and equally compensated. However, poorly drafted policies can even run counter to the interests and rights they seek to safeguard (see **Box 13**).

#### **BOX 13**

#### **Poorly drafted policy may exclude women from fishery sector benefits**

The Department of Fisheries and Aquaculture in Sri Lanka is redrafting the fisheries policy to promote sustainable livelihoods among women, especially in war-affected regions such as Trincomalee. While sections 2.5.2 and 2.5.10 of the Draft Bill categorically mention the support to be rendered to women, policy support is restricted to women who are the wives of men registered as fishers with the Fisheries Department. Ironically, the war-affected women without husbands who are registered as fishers, struggling to earn a living in the brackish backwaters in the lagoons, remain invisible and excluded in the Draft Bill.

Source: Lokuge and Arambepola 2018.

#### **Income security**

Employment in the fisheries sector is seasonal in nature and characterized by months without work where women must look for waged income or other sources of livelihood. The lack of official recognition of women's work in fishing and aquaculture disbars them from welfare entitlements that protect men, in certain cases, during lean periods, such as no-take periods in the United Republic of Tanzania and the monsoon fishing bans in India (see **Box 6**). Income security should therefore include access for women to unemployment allowance during such periods. Policy and legislation should ensure that the different occupations of women in harvest and post-harvest are recognized so that they may be covered by adequate social security measures, thus enabling their economic empowerment and reducing their economic dependence on men in the family.

Policy measures should also comprehensively address the healthcare needs of women, as well as income security in old age, through gender-responsive health and pension systems.

In the social and political spheres, women are often excluded from specific employment categories in the fisheries sector because of community barriers and traditional norms. Care and domestic work responsibilities further restrict their ability to exploit work opportunities. Schemes such as child-care support and income support for children's education can substantially improve their economic security. Income-support schemes, however, often do not provide adequate support for the genuine economic empowerment of women, with means-tested and conditional schemes leading to exclusion errors as well as stigma and stereotyping of recipients.<sup>184</sup>

### Unpaid care work

The average amount of time spent on unpaid domestic and care work is more than threefold higher for women than men, and available data indicate that time spent on domestic chores accounts for a large proportion of the gender gap in paid work.<sup>185</sup> The amount and intensity of unpaid care work is highest in poor households, with women from such households in Bangladesh, for instance, placing basic services such as water and electricity at the top of the needs expressed to reduce excessive care work.<sup>186</sup> Greater public spending on infrastructure improvements for fuel, water and sanitation, safe public transport and child-care facilities would free women from the drudgery of domestic work, allowing for greater financial independence and time to improve skill sets, pursue better economic opportunities within the sector or diversify outside the sector. Paid family leave policies also allow both women and men to take time off work to care for a new or sick family member without affecting their job security. Paid maternity and paternity leave policies are also important not only to enable new mothers to recover from childbirth and to take care of infants but also to allow new fathers to bond with their children and to assume some of the care and domestic responsibilities to promote a more equal distribution of unpaid work in the household.

### Access to resources and markets

Unfettered access to resources is a prerequisite for women's economic empowerment. The tenure rights of women to livelihood resources must be protected by effective legislation and policy measures, covering all aspects of the fishery value chain. Resource access includes access to financial resources to enable women to move up the value chain. The SEWA Bank in India, working exclusively with self-employed women in the informal sector, is an example of a successful initiative for credit access. Access should also include availability of new and improved technology that improves the participation of women in the processing and marketing of fish, such as the ABALOBI digital marketplace in South Africa (see **Box 11**).

A gender analysis of the impacts of economic and trade policies on women and men in the fisheries sector and their access to markets would help to inform gender-sensitive policymaking in this area to ensure that women and men benefit equally from trade and access to markets. A recent initiative from Sri Lanka (see **Box 14**) is a good example of collaboration between different stakeholders to improve access to new markets for women in the fisheries sector.

### Women's organizations, collectives and leadership

Governments and the private sector should create initiatives to support women's increased participation in fisheries management and organizations in order to improve the efficiency of decision-making within these bodies and the design of sectoral policies and programmes so that women and men benefit equally from social and economic dividends. Support is also needed for women's cooperatives across the value chain for production and marketing, as well as legislation safeguarding women's right to association and collective bargaining.

Representative organizations, including trade unions and cooperatives, and advocacy networks should also increase their efforts to improve their understanding of the challenges and priorities of women in fisheries to better advocate for their issues within countries and across regional groupings of fisher organizations. The African Union Inter-African Bureau for Animal Resources (AU-IBAR) is a good example of an organization that plays a critical role in advocating for the rights of women fishers in the region. These groups should also develop initiatives to increase women's participation and leadership within the organizations.

### Skills enhancement

This report has discussed a number of factors, such as climate change, industrialization, migration and armed conflict, that are forcing women to adapt their roles within fisheries or to seek alternative livelihoods. Skills development, training and retraining, as well as educational opportunities, are essential for building

women's capacities to advance in the sector as well as improving their access to decent work. Training and leadership skills can also enable women to become better entrepreneurs, to access more skilled and

managerial jobs at work and to assume leadership roles in fisheries organizations to advocate for women's rights in the sector.

#### **BOX 14**

#### **Sri Lanka's first 'eco-recommended' fisheries**

In January 2019, the blue swimming crab fisheries in Palk Bay and the Gulf of Mannar in Sri Lanka became the only blue swimming crab fisheries in South and South East Asia to be officially rated as a "Good Alternative" by the Monterey Bay Aquarium Seafood Watch. The Seafood Watch programme helps consumers and businesses purchase seafood that is fished or farmed in ways that minimize environmental impact. This rating is the result of the collaborative efforts of the seafood industry, the Government and fishery cooperatives within the framework of the blue swimming crab fishery improvement project (FIP) launched in 2013. This rating will open up access to new premium markets in Australia, Europe and North America.

The ILO Local Empowerment through Economic Development (LEED) project, funded by the Government of Australia, contributed to the FIP, particularly on activities to strengthen the administrative, management and purchasing capacity of cooperatives. Activities aimed to enable the women and men from fishery cooperatives to sell their members' catches directly to local seafood-processing companies and avoid the intermediary agents. This provides them with higher prices for their catches. Technical support was also provided to the FIP partners in the local seafood-processing industry, such as Taprobane Seafood Pvt Ltd, which employs more than 1,300 women in its processing centres and factory.

Source: ILO 2019b.

# 5 RECOMMENDATIONS

## LEGISLATION AND POLICY MEASURES

### Aligning and localizing international conventions and commitments

1. IORA and its Member States should integrate gender equality and women's empowerment as a core principle in fisheries policies and strategies at all levels, taking steps to ensure the economic, social and political empowerment of women across the fisheries sector.
2. All IORA Member States should ratify existing international conventions in support of gender equality and women's economic empowerment, including their enabling optional protocols, and support their effective implementation.
3. States should ratify international conventions relevant to the elimination of child labour in fisheries and aquaculture, introduce national legislation and enforce regulation to withdraw children from the worst forms of child labour, and work actively to prevent child labour by addressing poverty and promoting integrated approaches for development and resource and environmental management in fisheries and aquaculture. Further, States should also ensure regulation of employment conditions for children as per ILO guidelines.
4. States, civil society organizations, fish worker organizations and the private sector should ensure that gender is mainstreamed in all small-scale fisheries development strategies and policies.

### Employment and regulation

5. States should take effective measures to protect and enhance existing small-scale systems in fisheries and aquaculture, as the small-scale sector is a more efficient employer than industrial fishing in terms of utilization and efficiency of catch, environmental sustainability, ensuring food security and generating employment for millions of women and men.
6. States should recognize, promote and protect the role of small-scale fisheries and aquaculture, in particular women's vital contributions to the sector, including towards food security in communities where fish is an important low-cost food.
7. States should, in accordance with the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), recognize that competition from other users is increasing within small-scale fisheries areas and that small-scale fishing communities, in particular vulnerable and marginalized groups, are often the weaker party in conflicts with other sectors. Special support should be extended to prevent the undermining of the small-scale sector by the development and activities of other sectors.

8. The growth of sustainable coastal and inland tourism should never be at the expense of the tenure, livelihood and food security of local fishing communities. The tourism sector in coastal areas should be effectively regulated and also provide opportunities for decent work and gender-equitable employment for local communities.
9. IORA could consider supporting trade of commodities such as fish that are a source of women's employment.
10. States should harmonize sectoral policies to ensure policy coherence so that women's livelihoods in fisheries and aquaculture are not undermined by contradictory policy initiatives across sectors.
11. Formal recognition of women's work in fishery harvest and post-harvest activities across informal and formal sectors in fisheries and aquaculture should be ensured to prevent women's exclusion from policy considerations and social benefits.
12. Policy measures should be strengthened to ensure women's reliable access to fish, particularly in low-income countries with low per capita fish availability.
13. States should regulate the traditional fisheries and aquaculture sectors to ensure that women have equal rights and access to:
  - Recognition and valorization of their work in harvest and post-harvest.
  - Security of tenure, including strengthening existing community tenure rights that favour women's work and reforming gender-inequitable customary tenure practices.
  - Improved technologies for better efficiency of post-harvest activities.
  - Credit and markets.
  - Capacity-building in work and representation through appropriate training and support structures.
  - Comprehensive social security.
  - Occupational health and safety measures based on women's felt needs.
14. States should regulate employment in industrial fish processing to ensure women have equal rights and access to:
  - Conditions of decent work, in compliance with ILO norms.
  - Just wages, with wage parity between women and men.
  - Regulated employment for migrant workers, including children.
  - Capacity-building in work and representation through appropriate training and support structures.
  - Comprehensive social security, including reliable child support.
  - Workplace occupational health and safety.
  - Regulatory frameworks that safeguard equal treatment, non-discrimination in the workplace and freedom from sexual and other forms of harassment.



### **Occupational segregation and gender wage gaps**

15. Policy measures should be adopted to reduce the gender wage gaps and sector wage gaps prevalent in most IORA Member States for the fisheries and aquaculture sector. Such measures could include:
  - Minimum wage policies.
  - Quotas to increase women’s representation in skilled or management positions or traditionally male-dominated fields.
  - Policies to reduce and redistribute unpaid care and domestic work to allow women the opportunity to pursue full-time decent jobs within the sector.
  - Flexible work policies and parental leave policies.

### **Social security**

16. States should ensure that all social security measures are universal to prevent the exclusion of women in fisheries and aquaculture. This coverage should also be extended to all migrant workers—including all internal and cross-border women migrant workers—in the sector.

### **Unpaid care work**

17. States should provide improved social infrastructure for fuel, water and sanitation, safe public transport and child-care facilities to reduce the burden of unpaid care and domestic work.

### **Post-conflict recovery and reconstruction**

18. National recovery and reconstruction policies should address the needs of women in the fisheries sector affected by conflicts and natural disasters. Such policies should ensure:
  - The availability of reliable mechanisms for recording the possession of tenure, as well as speedy and just mechanisms for tenure restitution.
  - The rebuilding of housing and livelihoods.
  - Pensions for the disabled.
  - Support for the education of children.

### **Climate change**

19. Mitigation and adaptation efforts should address the gender-specific impacts of climate change in the fisheries and take appropriate measures to safeguard vulnerable populations, particularly women, against the adverse effects of the climate crisis on income and food security as well as on the burden of women’s unpaid care work.
20. IORA could consider adopting a declaration on climate change that addresses the multiple impacts on women’s economic empowerment, particularly in the fisheries sector, and consider developing a flagship programme on this pressing issue for the region.

## DATA AND RESEARCH

21. States, in accordance with good governance norms, should collect and disseminate reliable and consistent sex-disaggregated data on employment in both the informal and formal sectors of fisheries and aquaculture.
22. States should address, and take steps to remedy, the paucity of data, particularly on women's employment pertaining to the inland fisheries sector and post-harvest activities across fisheries and aquaculture.
23. Disaggregated fisheries-specific wage data in the rural sector are needed to enable analysis and policy formulation based on accurate information of returns to workers from the sector. These data should be further disaggregated by sex to enable gender-responsive wage policies.
24. A gender-sensitive value chain analysis should be undertaken to identify women's specific contributions and improve efficiencies of value addition through appropriate support, including measures such as technology upgrades, better market access and skills development.
25. States should conduct periodic occupation and income surveys in the fisheries sector to guide fishery policy, with special attention to women's engagement across the value chain.
26. The implementation of large-scale development projects affecting fishing should involve, as a prerequisite, gender analyses of the social, economic and environmental impacts through impact studies and proceed only in consultation with communities, including women, in accordance with national legislation.
27. Donors should conduct a gender analysis prior to any project inception to ensure that the activities contribute to advancing gender equality rather than increasing inequalities. Donor agencies should also conduct analyses to ensure that funded projects are not environmentally destructive or impose top-down conditionalities on recipient States.
28. States should conduct impact assessments of global trade on the fisheries sector, with particular analysis of the impacts on women's livelihood and food security, taking adequate steps to secure livelihoods and nutritional requirements, wherever these are adversely affected by trade.

## WOMEN'S ORGANIZATIONS, COLLECTIVES AND LEADERSHIP

29. States should provide enabling legislation and regulation to support and strengthen unions, associations, organizations and networks of women within the fisheries and aquaculture sector.
30. CSOs and networks in fisheries and aquaculture should monitor seafood companies to ensure that they adopt environmentally sustainable and socially responsible practices, including fair labour practices, non-discrimination and health and safety norms.
31. CSOs should share information and partner with fishing communities and women's organizations in fisheries to address sectoral complexities, especially those relating to competition from industry, trade and tourism.

32. CSOs should support the advocacy and networking efforts of organizations of women fishworkers.
33. States should consider the resolutions and recommendations of women fishworkers associations, unions and other CSOs to advance gender equality in the fisheries and aquaculture sector when formulating and implementing policy and programmes in the sector.
34. States should also consider the resolutions and recommendations in support of gender equality by regional organizations and networks in the fisheries and aquaculture sector when formulating and implementing policy and programmes in the sector.
35. IORA could consider conducting a mapping of civil society activity and advocacy efforts for women's economic empowerment in the fisheries sector and build a strategy to increase the participation of these groups in IORA high-level dialogue spaces.

## SKILLS ENHANCEMENT

36. States, the private sector and CSOs should ensure capacity development and access to training, retraining and mentorship programmes for women in the fisheries sector and within their own institutions at all levels.
37. Considering the large presence of coastal tourism in the fishing sectors of many IORA countries, targeted skills-building initiatives should support women's engagement in this industry in the region.
38. Women who have lost access to fish as a result of the increase in marine protected areas should be reskilled for employment in this conservation work. However, these women should first be involved in the decision-making, including the decision to conserve and how it will be implemented.



PART TWO  
**COUNTRY PROFILES**



# About this section

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This section contains country profiles of the 22 IORA Member States that collate a wide range of information on fisheries and aquaculture, with a focus on women's engagement in the sector.

Each country profile offers production and consumption data related to fisheries and aquaculture; women's employment figures, based on available official data or on assessments based on qualitative analyses when data are not available; and women's sectoral wage and the gender and sector wage gap in the country; as well as other parameters pertaining to social protection, fisheries legislation and tenure security.

Annex 1 at the end of this section lists the status of ratification of important international conventions and treaties related to women's economic empowerment and gender equality for the 22 IORA Member States.

The information in these country profiles is intended to serve as a ready reckoner for policymakers, fisheries extension officers, researchers, activists and others engaged with issues of gender equality and women's economic empowerment in the fisheries and aquaculture sector in the IORA region.

## AUSTRALIA

### Quick facts

- Australia produces only 0.16 per cent of the fish production among IORA countries; however, it imports roughly 1.07 per cent of the world's total import value of fish and fish products.
- In 2018, Australia ranked 25<sup>th</sup> in the United Nations Development Programme (UNDP) Gender Inequality Index with a female labour force participation rate of 59.7 per cent.<sup>187</sup>

### Fish production (in tonnes)<sup>188</sup>

Capture (marine)	171,457	2016
Capture (inland)	983	2016
Aquaculture	92,162	2016
Total production	264,602	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>189</sup>	13.8 kg/year	2015–2016
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture	AUD 1.74 billion	2016–2017
Aquaculture	AUD 1.35 billion	2016–2017
Total (capture + aquaculture) <sup>190</sup>	AUD 3.06 billion	2016–2017
Australia's GDP <sup>191</sup>	US\$1,104.3 billion	2017
Fisheries contribution to GDP	0.2 per cent	2017

- Australia exports about **23 per cent** of its production of fish in volume terms<sup>192</sup> and around **0.09 per cent** of the GDP.<sup>193</sup>

### Employment

In 2016–2017, an estimated 15,831 people were employed in the commercial fishing and aquaculture industry, with 7,478 employed in fishing enterprises and 8,352 in aquaculture. Of these, 19 per cent were female and 4,013 were engaged in post-harvest activities.<sup>194</sup> Data for 2015–2016 showed 10,985 fishers (full-time and part-time) in the fishing and aquaculture sector, 16 per cent being women.<sup>195</sup> **Going by the latest available official figures, therefore, total employment in the sector is taken as 15,831, with 19 per cent women.** Taking rural employment as a whole (agriculture, forestry and fisheries), employment of women in 2019 was reported to be 28.3 per cent and the projected employment growth was -0.4 per cent.<sup>196</sup>

## Wages

- Australia's full-time gender pay gap is 14.6 per cent.<sup>197</sup>
- In 2016, the average adult hourly female wage was 89 per cent of the average adult hourly male wage for non-managerial employees. This difference has remained relatively steady over the last decade. This measure includes both full-time and part-time employees and also accounts for the differences in hours worked.<sup>198</sup>

## Employment and social protection

<p>Safety at sea</p>	<ul style="list-style-type: none"> <li>• <i>Work Health and Safety (WHS) Act</i> 2011 and Regulations, earlier known as general occupational health and safety regulations.</li> </ul> <p>There are also some state-specific WHS requirements relevant to the fisheries industry, including:</p> <ul style="list-style-type: none"> <li>• Protective clothing such as life jackets</li> <li>• Safety equipment requirements</li> <li>• Manual handling</li> <li>• Safety standards preventing accidents and diseases</li> <li>• Workplace noise management.</li> </ul>
<p>Social security</p>	<ul style="list-style-type: none"> <li>• <i>Australian Hearing Services Act</i>, 1991 - Provides hearing services and acoustic development, conducting education on hearing services</li> <li>• <i>Human Services (Centrelink) Act</i>, 1997</li> <li>• <i>Human Services (Medicare) Act</i>, 1973</li> </ul> <p>Some of the social security measures include:</p> <ul style="list-style-type: none"> <li>• Seniors' healthcare card (a concession card to get cheaper medicines and some discounts if the person is already in the Centrelink system)</li> <li>• Age pension (generally paid to people aged above 65 years and 6 months (the pension age is being gradually increased to 67; the amount paid varies depending on income and assets)</li> <li>• Crisis payment (a one-off payment for those in severe financial hardship and extreme circumstances)</li> <li>• Paternal allowance (a short-term payment to the primary caregiver who is on leave from work to care for a newborn child)</li> <li>• Disability support pension (financial help to those with a permanent physical, intellectual or psychiatric condition that stops them from working)</li> <li>• Widow allowance (paid to women born after 1955, with other eligibility requirements)</li> <li>• Youth allowance (financial help for people who are 24 years or younger and a student or Australian apprentice or 21 or younger and looking for work).<sup>199</sup></li> </ul>
<p>Fisheries sector tenure</p>	<ul style="list-style-type: none"> <li>• <i>Fisheries Administration Act</i>, 1991 provides for the establishment of the Australia Fisheries Management Authority (AFMA), Commissions, Council and Committees.</li> <li>• <i>Fisheries Management Act</i>, 1991 focuses on implementing efficient and cost-effective fisheries management on behalf of the Commonwealth and ensuring exploitation of fisheries resources consistent with the principles of ecologically sustainable development (including the precautionary principle), while maximizing the net economic returns to the Australian community.</li> <li>• <i>Torres Strait Fisheries Act</i>, 1984 acknowledges and protects the traditional way of life and livelihood of traditional inhabitants, including their rights in relation to traditional fishing. This Act is to implement the rights and obligations conferred on Australia by the Torres Strait Treaty.</li> <li>• The Principles Communiqué on Indigenous Fishing, which was endorsed by the Government in August 2005, recognizes customary fishing as a sector in its own right and integrates and protects it within fisheries management frameworks.</li> </ul>

Women's right to property <sup>200</sup>	<ul style="list-style-type: none"> <li>According to the Married Persons (Equality of Status) Act No. 96 of 1996, men and women have equal ownership rights to immovable property and spouses have equal administrative authority over assets during marriage. The Succession Amendment (Intestacy) Act of 2009 grants equal rights to sons and daughters to inherit assets from their parents; and equal rights to inherit assets for female and male surviving spouses.</li> </ul>
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### CEDAW

Convention	Ratified	28 July 1983
Optional Protocol	Ratified	4 December 2008

### Gender mainstreaming initiatives

- The Sex Discrimination Act 1984* is the key legislation for making discrimination against women unlawful. It gives effect to many of Australia's obligations under CEDAW as well as to aspects of ILO conventions, including the Equal Remuneration Convention, 1950 (No. 100); Discrimination (Employment and Occupation) Convention, 1959 (No. 111); Workers with Family Responsibilities Convention, 1981 (No. 156); and Termination of Employment Convention, 1982 (No. 158).
- The Workplace Gender Equality Act 2012* (previously the *Equal Opportunity for Women in the Workplace Act 1999*) was renamed to promote and improve gender equality and outcomes. *The Fair Work Act 2009* delivers pay equity between women and men.
- Australia's new development policy, adopted in 2015, has a strategic framework that specifically mentions gender equality and empowering women and girls in addition to other focus areas of agriculture, fisheries and water. These are clearly mentioned as national interests.<sup>201</sup>

### Fishery organizations/networks<sup>202</sup>

Regional economic organization	Status
Asia-Pacific Economic Cooperation (APEC)	Member
Organisation for Economic Co-operation and Development (OECD)	Member
Regional fisheries management organization	
Asia-Pacific Fisheries Commission (APFIC)	Member
Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR)	Member
Indian Ocean Tuna Commission (IOTC)	Member
Commission for the Conservation of Southern Bluefin Tuna (CCSBT)	Member
Agreement on the Conservation of Albatrosses and Petrels (ACAP)	Member
Forum Fisheries Agency (FFA)	Member
International Whaling Commission (IWC)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member
Secretariat of the Pacific Community (SPC)	Member
South Indian Ocean Fisheries Agreement (SIOFA)	Member
South Pacific Regional Fisheries Management Organisation (SPRFMO)	Member
Western and Central Pacific Fisheries Commission (WCPFC)	Member



## BANGLADESH

### Quick facts

- Bangladesh is a global leader in inland fish production and the fifth largest in terms of both inland capture and aquaculture food fish.<sup>203</sup>
- Bangladesh ranked 50<sup>th</sup> out of 153 countries in the Global Gender Gap Index 2020 but ranked 141<sup>st</sup> for economic participation and opportunity.<sup>204</sup>
- Social protection coverage in the country is 4 per cent, the lowest in the Asian region.<sup>205</sup>
- Women are heavily employed in the shrimp industry in mainly low-status, low-wage, contract-based factory jobs.<sup>206</sup>
- The reported participation of women in fisheries is only around 8 per cent. This low participation might be because Muslim women reportedly do not take part in the fishing or post-harvest sector.<sup>207</sup> It might also be because women's participation, especially in subsistence fishing, is undercounted.
- Whether work involvement in aquaculture has empowered women in the sector is unclear. Some studies point to increased power in minor household decision-making; others to the exacerbation of work burdens<sup>208</sup> and the increased vulnerability to indebtedness and sexual violence.<sup>209</sup>

### Fish production (in tonnes)<sup>210</sup>

Capture (marine)	767,284	2016
Capture (inland)	907,486	2016
Aquaculture	2,203,554	2016
Total production	3,878,324	2016

### Fish consumption (in kg per annum)

Per capita fish consumption	15.4 kg/year	2015
Fish protein as proportion of animal protein <sup>211</sup>	55 per cent	2014
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		2016–2017
Aquaculture		2016–2017
Total (capture + aquaculture) <sup>212</sup>	US\$17.8 million	2014
Bangladesh GDP <sup>213</sup>	US\$580.3 billion	2017
Fisheries contribution to GDP <sup>214</sup>	3.17 per cent	2017 (at current prices)

- Bangladesh exports around **1.855 per cent** of its production of fish in volume terms.<sup>215</sup>
- In value terms, fishery exports are around **0.95 per cent** of GDP.<sup>216</sup>

## Employment

A 2017 study by FAO and ICLARM estimated total employment in the sector as 17.8 million, with women’s participation as 1.4 million (7.8 per cent),<sup>217</sup> which is significantly higher than World Bank estimates of 3.2 million fishers including all sectors, with 5 per cent women.<sup>218</sup> Given that FAO estimates from 2003 from various sources indicated the employment in the sector as 12 million, out of whom 1.4 million rely exclusively on fishery,<sup>219</sup> the FAO and ICLARM estimates appear to be more accurate approximations. **Therefore, total employment may be estimated at 17.8 million, with women’s participation at 1.4 million (7.8 per cent).**

## Wages

- The **GENDER WAGE GAP** in 2015, comparing the average wages of women with that of men in the agriculture, forestry and fisheries sector, was 8 per cent.<sup>220</sup>
- The **SECTOR WAGE GAP** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women’s wages across sectors, was 36 per cent.<sup>221</sup>
- The **AVERAGE WAGE IN PPP TERMS** of women in the sector was US\$229.70 (PPP) per month in 2017.<sup>222</sup>

## Employment and social protection

Fishery-specific schemes	<ul style="list-style-type: none"> <li>• Under the Social Security Policy Support (SSPS) programme: <ul style="list-style-type: none"> <li>- <u>Fishermen ID Card and Fisheries Project</u></li> <li>- <u>Fund for Assistance to the Small Farmer and Poultry Farms</u></li> <li>- <u>Integrated Fisheries &amp; Livestock Development in Flood Controlled Areas &amp; Water Bodies</u></li> <li>- <u>Poverty Reduction &amp; Livelihood Security for the People of Economically Backward Area</u></li> </ul> </li> </ul>
Social security	<ul style="list-style-type: none"> <li>• Under the Social Security Policy Support (SSPS) programme:<sup>223</sup> <ul style="list-style-type: none"> <li>- Maternity Allowance Programme for Poor Lactating Mothers (MAP): Provides rural women above 20 years of age a one-time support of BDT 350 (USD 4.50) per month during their first or second pregnancy for a period of two years.</li> <li>- Minimum Employment Guarantee Scheme: guarantees the right to a minimum number of days of employment, especially in rural areas</li> </ul> </li> </ul>
Fisheries sector tenure	<ul style="list-style-type: none"> <li>• Closed inland fisheries are leased out only to cooperatives via auction.</li> <li>• Cooperatives, however, are often set up by vested interests solely for financing but fishers are used as paid labourers.<sup>224</sup></li> </ul>
Women’s right to property	<ul style="list-style-type: none"> <li>• Matters related to inheritance, marriage and divorce are regulated by personal laws based on religion.</li> <li>• More than 90 per cent of women are subject to Muslim personal law and 9 per cent to Hindu personal law.</li> <li>• While Muslim law grants women limited property rights, Hindu personal law gives women virtually no inheritance rights except in a few extraordinary circumstances.<sup>225</sup></li> </ul>

## CEDAW

Convention	Ratified	6 November 1984
Optional Protocol	Ratified but does not accept inquiry procedure	6 September 2000

### Gender mainstreaming initiatives

- National Women Development Policy 2011.<sup>226</sup>
- There are numerous women’s empowerment projects and programmes by different donors and development agencies.

### Fishery organizations/networks<sup>227</sup>

Organization	Status
Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Cooperation (BIMSTEC)	Member
South Asia Association for Regional Cooperation (SAARC)	Member
Regional fisheries and environmental organization	Status
Asia-Pacific Fishery Commission (APFIC)	Member
Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO)	Member
INFOFISH (Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member
Bay of Bengal Large Marine Ecosystem Project (BOBLME) (2009–2017)	Member
South Asia Cooperative Environmental Programme (SACEP)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member
Secretariat of the Pacific Community (SPC)	Member
South Indian Ocean Fisheries Agreement (SIOFA)	Member
South Pacific Regional Fisheries Management Organisation (SPRFMO)	Member
Western and Central Pacific Fisheries Commission (WCPFC)	Member

## COMOROS

### Quick facts

- The 2019 female Human Development Index (HDI) value for Comoros is 0.504, in contrast with 0.568 for males, resulting in a Gender Development Index value of 0.888, placing it into Group 5.<sup>228</sup> Challenges for gender equality include women being underrepresented at the political level, a need for women in leadership, violence against women and women's healthcare.<sup>229</sup>
- Comoros has nearly 12,000 people as fishers in domestic fishing, with most of them categorized as traditional fishers using wooden canoes.<sup>230</sup>
- Comoros does not have any form of domestic processing of fish or exports. None of the fish caught through the distant water fishing fleet through agreements are landed in the country.
- Women are involved in reef gleaning and harvesting of intertidal zones, and about half the fisheries labour force are women. Fishery is carried out both as a necessity as well as due to the social and cultural importance of partaking in these activities inherited from their grandmothers.<sup>231</sup>

### Fish production (in tonnes)<sup>232</sup>

Capture (marine)	16,407	2016
Capture (inland)		
Aquaculture		
Total production	16,407	2016

### Fish consumption (in kg per annum)<sup>233</sup>

Per capita fish consumption	25.2 kg/year	2011
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Comoros GDP <sup>234</sup>	US\$2 billion	2017
Fisheries contribution to GDP <sup>235</sup>	8 per cent	2013

- Comoros does not export any form of fish or fish products.

### Employment

The country employs an estimated 11,400 fishers;<sup>236</sup> **no gender-disaggregated data are available.**

## Wages

Wage data are not available.

## Employment and social protection

Social security	Information not available.
Fisheries sector tenure	Fisheries management in Comoros is informally shared among State, Island and community governing bodies, the bulk of which tends to be undertaken at a local level by fishermen. Although the State and Island governments have been quite supportive of male fishing associations, fisherwomen remain excluded from participating in all forms of formal and informal fisheries management. <sup>237</sup>
Women's right to property	<ul style="list-style-type: none"> <li>• The Constitution of the Union prohibits all forms of gender-based discrimination.</li> <li>• The National Policy on Gender Equality and Equity, a framework document, proposes guidelines and strategies for reducing gender inequalities.</li> <li>• Although women, according to custom, have rights to inherit land and houses, they do not always have the usufruct rights.<sup>238</sup> Women do not have access to decision-making institutions at the village or community level.</li> </ul>

## CEDAW

Convention	Ratified	31 October 1994
Optional Protocol	Not ratified	

## Gender mainstreaming initiatives

Comoros conducted a 10-year review of its national gender policy, which resulted in the 2017 updated National Gender Equality and Equity Policy.

## Fishery organizations/networks

Regional fisheries organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
South West Indian Ocean Fisheries Commission (SWIOFC)	Member
South Indian Ocean Fisheries Agreement (SIOFA)	Member

## INDIA

### Quick facts

- In 2016, India was the third largest fish-producing country in the world after China and Indonesia, contributing nearly 6.35 per cent of the world's total fish production. Nearly 47 per cent of its fish production comes from freshwater aquaculture, which is mainly consumed domestically.<sup>239</sup>
- India is also the ninth largest exporter in terms of quantity and fifth in terms of value. Fish and fish product exports make up nearly 10 per cent of the total exports of the country.
- The Global Gender Gap Index 2020 ranks India at 112<sup>th</sup> out of 153 countries, but 149<sup>th</sup> for economic participation and opportunity.<sup>240</sup>

### Fish production (in tonnes)<sup>241</sup>

Capture (marine)	3,666,680	2016
Capture (inland)	1,395,070	2016
Aquaculture	5,700,000	2016
Total production	10,761,750	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>242</sup>	0.238 kg/year (rural) and 0.269 kg (urban)	2009–2010
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
GDP <sup>243</sup>	US\$8,722.9 billion	2017
Fisheries contribution to GDP <sup>244</sup>	0.92 per cent	2013–2014

- In 2016, India exported around **9.6 per cent** of its production of fish in volume terms.<sup>245</sup>
- In value terms, fishery exports are roughly **0.06 per cent** of GDP.<sup>246</sup>

### Employment

The 2003 Census data has total fishers as 1.73 million, of whom women constitute 0.27 million.<sup>247</sup> Thus, women constituted 15.6 per cent of total fishers. **The total employment in the sector was 14,485 million, of whom 4,034 million (27 per cent) were women.**

## Wages

- The Minimum Wage for Agriculture, Forestry and Fisheries, covering the occupations of the fisheries, fishing, seafood, fish peeling and canning sectors for the year 2014, was INR 6,604 per month.<sup>248</sup>
- The **average wage in PPP terms** for women in the sector was US\$372.48 (PPP) per month in 2017.

## Employment and social protection

Fishery-specific schemes <sup>249</sup>	<ul style="list-style-type: none"> <li>• The dedicated National Scheme of Welfare of Fishermen provides social security against accidents while fishing, income relief to fishermen during lean fishing season, and a Group Accident Insurance scheme against death and disability.</li> <li>• The scheme provides low-cost houses exclusively for the fisher community through developing model fishing villages, with preference to women.</li> <li>• Different provinces offer specific schemes for women, including allied sector workers, such as group insurance for women, lean season benefits for women, and training and extension facilities for women fishers.</li> </ul>
Social security	<ul style="list-style-type: none"> <li>• The Indira Gandhi National Old Age Pension Scheme (IGNOAPS) covers destitute people having little or no regular means of subsistence from their own sources of income or through financial support from family members or other sources</li> <li>• The Indira Gandhi National Widow Pension Scheme (IGNWPS) provides widows who have income below the national poverty line with a monthly pension.</li> <li>• The Indira Gandhi National Disability Pension Scheme (IGNDPS) gives people with incomes below the poverty line who are between 18 and 59 years and with severe disability a monthly assistance.</li> <li>• The National Family Benefit Scheme (NFBS) benefits the household of a family on the death of a primary wage earner, whether male or female.</li> <li>• The Annapurna Scheme provides food security for senior citizens not covered by the IGNOAPS with 10 kilograms of free food grains per month.</li> <li>• The Indira Gandhi Matritva Sahyog Yojana (IGMSY) Programme is a conditional cash-transfer programme for pregnant and lactating women.</li> <li>• The <i>Unorganized Social Security Act, 2009</i> has provision for unorganized workers.</li> </ul>
Fisheries sector tenure	<p>Article 39 of the Constitution recognizes community ownership and control of material resources. However, the <i>Marine Fishing Regulation Acts</i> of different provinces interpret community rights in terms of the rights of fishermen. There are no legally recognized rights to fisheries resources, except in the case of Protected Areas under the <i>Wildlife (Protection) Act, 1972</i>. The 2017 National Policy on Marine Fisheries recognizes the role of women in pre-harvest, harvest and post-harvest fisheries operations. It recognizes that women constitute more than 66 per cent of the total workforce in post-harvest activities in the fisheries sector, and that besides raising families, women play important roles in retailing fish, fish drying and other value-addition activities through women's self-help groups (SHGs). The policy pledges support to the roles played by women through aiding the establishment of women's cooperatives; women-friendly financial support schemes; good working conditions that would include safety, security, hygiene and transport facilities for retail marketing; encouragement for small-scale fishing and value-addition activities; and facilitating women's active engagement in fisheries management.<sup>250</sup></p>
Women's right to property	<ul style="list-style-type: none"> <li>• The Constitution provides equal rights to both women and men to own property.</li> <li>• However, religious personal laws and customary practices and traditions do not often allow women to claim their inheritance or legal rights.</li> <li>• In certain provinces, such as West Bengal, both husband and wife may be joint title owners.</li> </ul>

CEDAW		
Convention	Ratified	9 July 1993
Optional Protocol	Not ratified	

### Gender mainstreaming initiatives

- The National Policy for Empowerment of Women, 2001 calls for gender mainstreaming initiatives and training initiatives for women in the fisheries sector.
- The Draft National Policy for Women, 2016 calls for the development of an effective framework to enable the process of developing policies, programmes and practices that will ensure equal rights and opportunities for women in the family, community, workplace and in governance. Its objectives include mainstreaming gender throughout development and also to have a holistic and life-cycle approach to women's health, besides focusing on all other sectors including agriculture.
- National fisherwomen training programmes for gender empowerment include self-generating gainful employment ventures in aquaculture and post-harvest activities (drying/processing).<sup>251</sup>
- Some states offer programmes for women, including for fish vending, drying, infrastructure for fish transport, hygienic fish marketing and support to form fisheries cooperatives.<sup>252</sup>
- A number of education and leadership programmes are offered for women in fisheries.<sup>253</sup>

### Fishery organizations/networks<sup>254</sup>

Regional fisheries organization	Status
Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Cooperation (BIMSTEC)	Member
South Asia Association for Regional Cooperation (SAARC)	Member
Brazil, Russia, India, China and South Africa (BRICS)	Member
Organization	Status
Asia-Pacific Fishery Commission (APFIC)	Member
Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO)	Member
INFOFISH (Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member
Indian Ocean Tuna Commission (IOTC)	Member
Convention for the Conservation of the Antarctic Marine Living Resources (CCAMLR)	Member
Bay of Bengal Large Marine Ecosystem Project (BOBLME) (2009–2017)	Member
South Asia Cooperative Environmental Programme (SACEP)	Member



## INDONESIA

### Quick facts

- Indonesia is a leading global exporter of fish. The growth rate in fisheries between 2006 and 2016 was 87.1 per cent and the sector provides employment to millions.
- Women are 1.5 times more represented than men in both processing and marketing, with 61 per cent of total employment in processing and 59 per cent in marketing.
- Women's wages are only 64.7 per cent of the average wage of men in the agriculture, forestry and fisheries sector. This is the lowest among the ratios for women in all categories of employment in the country. Further, average fisheries wages of women are around half the national average of women's wages.

### Fish production (in tonnes)<sup>255</sup>

Capture (marine)	5,987,958	2016
Capture (inland)	413,252	2016
Aquaculture	4,948,000	2016
Total production	11,349,210	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>256</sup>	43.88 kg/year	2017
Fish protein as proportion of animal protein <sup>257</sup>	54.8 per cent	2011
Fish protein as proportion of total protein <sup>258</sup>	15.6 per cent	2011

### Economic contribution of fisheries and aquaculture<sup>259</sup>

Fish capture	US\$9 billion	2015
Aquaculture	US\$9.01 billion	2015
Total (capture + aquaculture)	US\$18.01 billion	2015
Indonesian GDP <sup>260</sup>	US\$2676.5 billion	2015
Fisheries contribution to GDP	2.1 per cent	2015

- Indonesia exports around **3.5 per cent** of its production of fish in volume terms.<sup>261</sup>
- In value terms, fishery exports are around **0.3 per cent** of GDP.<sup>262</sup>

### Employment

Government data show employment in capture and culture fishery as 2.4 million and 3.7 million, respectively, a total of 6.1 million.<sup>263</sup> There are no sex-disaggregated data available. However, with large employers, it is reasonable to assume that women's participation would approximate the global average of 14 per cent, or 0.8 million.<sup>264</sup> Employment in processing and marketing total 6.2 million, with women's participation at 3.7 million (60 per cent). **The total employment for the sector is therefore estimated at 12.3 million, of whom 4.5 million (37 per cent) are women.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector was 44 per cent, the highest among all sectors of employment.<sup>265</sup>
- The **sector wage gap** in 2015, defined as the average fisheries wages of women compared to the average women's wages across sectors, was 61 per cent, with wages in the agriculture, forestry and fisheries sector being the lowest.<sup>266</sup>
- The **average wage in PPP terms** of women in the sector was US\$147.75 (PPP) per month in 2017.

## Employment and social protection

Insurance <sup>267</sup>	The BPAN Insurance Programme, initiated in 2016, covered 409,497 fishermen as beneficiaries for a one-year insurance period.
Safety at sea <sup>268</sup>	The <i>Protection and Empowerment of Fishermen, Fish Farmers and Salt Farmers Act</i> , Law of the Republic of Indonesia No.7/2016, covers the involvement and role of women in fisher households, fish farmer households and salt farmer households.
Social security <sup>269</sup>	Social Security Legislation 1992 covers fishermen and informal sector workers including family labour. Beneficiaries (both women and men) are eligible to an old-age pension from the age of 55 years.
Fisheries sector tenure	Law no. 31 of 2004 (later amended by Law no. 45 of 2009) protects the freedom to livelihood of fishers. Law no. 17 of 2016 confirms the recognition and protection of the livelihoods of small-scale fishers, particularly of "livelihood spaces". This law led to the establishment of a marine spatial plan and is regulated by Law no. 27 of 2007 <i>Coastal Law</i> . It does not recognize the livelihood space and housing areas of small-scale fisheries.
Women's right to property	<ul style="list-style-type: none"> <li>• Equal rights for women under the civil code.</li> <li>• Customary codes may vary by region; some grant and others deny property rights to women.</li> </ul>

## CEDAW

Convention	Ratified	13 September 1984
Optional Protocol	Signatory	28 February 2000

## Gender mainstreaming initiatives

- Gender mainstreaming and gender-responsive budgeting have been part of development and planning since 2000 based on Presidential instructions on gender mainstreaming (INPRES No.9/2000).<sup>270</sup>
- Presidential Instruction No 3/2010 and other ministerial regulations on gender mainstreaming further stipulate efforts on equitable and inclusive development. Emerging non-women-friendly legislation at the local level signifies the importance of enforcing the aforementioned legislative and policy frameworks, coordination among national ministries and all levels of public institutions, and replication of good practices.<sup>271</sup>

## Fishery organizations/networks<sup>272</sup>

Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
Western and Central Pacific Fisheries Commission (WCPFC)	Cooperating Non-member
Asia-Pacific Fishery Commission (APFIC)	Member

Southeast Asian Fisheries Development Center (SEAFDEC)	Member
INFOFISH (Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member
Asia-Pacific Economic Cooperation (APEC)	Member
Association of South East Asian Nations (ASEAN)	Member
Bay of Bengal Large Marine Ecosystem Project (BOBLME) (2009–2017)	Member
Coordinating Body on the Seas of East Asia (COBSEA)	Member
Partnership in Environmental Management for the Seas of East Asia (PEMSEA)	Member
IOC Sub-Commission for Western Pacific (IOC/WESTPAC)	Member

## IRAN (ISLAMIC REPUBLIC OF)

### Quick facts

- Iran is the largest producer of fish among countries in the Middle East. However, fish is not part of the traditional diet in most of the country, except among coastal communities. Per capita consumption of fish was only 1 kilogram per annum in 1980; it had increased to 9.2 kilograms per annum by 2014.
- Traditionally, women do not find employment in the fishing sector. However, they do find representation in skilled jobs, including as technicians in laboratories in the sector.

### Fish production (in tonnes)<sup>273</sup>

Capture (marine)	624,315	2016
Capture (inland)	69,569	2016
Aquaculture	398,129	2016
Total production	1,092,013	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>274</sup>	9.2 kg/year	2014
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
GDP <sup>275</sup>	US\$1,540.7 billion	2017
Fisheries contribution to GDP <sup>276</sup>	US\$4.2 billion	2013

- In 2016, Iran exported around **10 per cent** of its production of fish in volume terms.<sup>277</sup>
- In value terms, fishery exports are around **0.02 per cent** of GDP.<sup>278</sup>

### Employment

In 2015, FAO estimated employment as 173,897 in capture fishing and 69,287 in aquaculture.<sup>279</sup> The fishing sector was highly organized into cooperatives. As fish was not a traditional part of the diet for most residents, the fish trade and processing sectors were not developed, although the Iranian Fisheries Organization had created a fish marketing organization.<sup>280</sup> **The fishing sector employs an estimated 0.25 million men, with no details on participation of women.**

Wages	
Wage data are not available.	
Employment and social protection	
Fishery-specific schemes	The Iranian fisheries development programme focuses on promoting aquaculture development, including cage culture and shrimp farming. <sup>281</sup>
Social security	The State Welfare Organization provides different kinds of assistance for low-income groups. These include daycare centres for children, vocational training centres, rehabilitation of displaced people, pensions for the needy and insurance for the self-employed, including people in the fisheries. <sup>282</sup>
Fisheries sector tenure	Women are not involved in fisheries or aquaculture, either in primary harvest or secondary processing activities.
Women's right to property	The Government has allocated land to rural women's cooperatives to support their productivity as important members of society. <sup>283</sup> Women otherwise have limited access to land, <sup>284</sup> though the Constitution provides for equal rights for both women and men.
CEDAW	
Convention	Not ratified
Optional Protocol	Not ratified
Gender mainstreaming initiatives	
Information not available	
Fishery organizations/networks	
Regional fisheries organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
Regional Commission for Fisheries (RECOFI)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member
INFOFISH (Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region)	Member
Caspian Sea Commission for Aquatic Resources (a commission among five coastal states for collaboration and coordination in fisheries management)	Member

### Quick facts

- Fisheries is an important sector in Kenya, contributing to livelihoods for large numbers of people.<sup>285</sup>
- There has been a focus on freshwater aquaculture development since 2009.
- Women are involved in fish marketing, often buying fish from small-scale fishermen and processing it for local markets.
- Legislative provisions enable women to be members and take part in decision-making processes of Beach Management Units (BMU), an institutionalized fisheries co-management organization.
- The Global Gender Gap Report 2020 ranks Kenya 109<sup>th</sup> out of 153 countries overall, with a ranking of 114<sup>th</sup> in the area of economic participation and opportunity.<sup>286</sup>

### Fish production (in tonnes)<sup>287</sup>

Capture (marine)	16,434	2016
Capture (inland)	154,765	2016
Aquaculture	14,960	2016
Total production	186,159	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>288</sup>	5 kg/year	2014
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein <sup>289</sup>	7.6 per cent	2014

### Economic contribution of fisheries and aquaculture

Fish capture <sup>290</sup>	KES 22.9 billion	2017
Aquaculture		
Total (capture + aquaculture)		
GDP <sup>291</sup>	US\$148.7 billion	2017
Fisheries contribution to GDP <sup>292</sup>	0.4 per cent	2018

- In 2016, Kenya exported around **9.85 per cent** of its production of fish in volume terms.<sup>293</sup>
- In 2016, in value terms, fishery exports were around **0.004 per cent** of GDP.<sup>294</sup>

## Employment

Government sources estimated 80,000 fishers and fish farmers and 2.3 million in processing and trade.<sup>295</sup> FAO estimated employment in fishing and agriculture in 2013 as around 130,000.<sup>296</sup> Given the large proportion of employment in processing and trade, women's overall employment is likely to be high. **The total employment in the sector is estimated to be around 2.4 million, with a significant proportion of women.**

## Wages

Wage data are not available.

## Employment and social protection

Fishery-specific schemes	Under Kenya Vision 2030, there have been measures taken to develop aquaculture systems and promote aquaculture production in Kenya. <sup>297</sup>
Social security <sup>298</sup>	<ul style="list-style-type: none"> <li>• <i>National Social Security Fund Act, 2013.</i></li> <li>• <i>National Hospital Insurance Fund Act.</i></li> <li>• <i>Pensions Act</i>, which provides for private pension schemes.</li> <li>• <i>Retirement Benefits Act.</i></li> <li>• <i>Social Assistance Act.</i></li> <li>• Cash transfer schemes are available for specific vulnerable groups.</li> <li>• Under the free maternity (Linda Mama) scheme, there are 2,400 public health facilities providing services to pregnant women.</li> <li>• The Government enacted the <i>Fisheries Management and Development Act 2016</i>, which established institutions that would strengthen the governance of the fishing industry and aquaculture and enable investments along the fishery value chains for socioeconomic benefits. The institutions established include the Kenya Fisheries Service, Kenya Fish Marketing Authority and the Fish Levy Trust Fund.</li> <li>• Beach Management Units have specific provisions to protect women and youth, as per the 2016 legislation.</li> </ul>
Fisheries sector tenure <sup>299</sup>	<ul style="list-style-type: none"> <li>• The Government enacted the <i>Fisheries Management and Development Act 2016</i>, which established institutions that would strengthen the governance of the fishing industry and aquaculture and enable investments along the fishery value chains for socioeconomic benefits. The institutions established include the Kenya Fisheries Service, Kenya Fish Marketing Authority and the Fish Levy Trust Fund.</li> <li>• Beach Management Units have specific provisions to protect women and youth, as per the 2016 legislation.<sup>300</sup></li> </ul>
Women's right to property <sup>301</sup>	<ul style="list-style-type: none"> <li>• The Constitution and three laws adopted in 2012 (<i>The National Land Commission Act, the Land Act and the Land Registration Act</i>) provide women with rights with respect to land tenure. Despite the introduction of gender equality requirements into property and inheritance laws, there is still a significant gender gap in access to land.</li> <li>• Customary practices: Earlier, women were not allowed to own land or be part of any decision-making process; however, since the USAID Landesa project, spousal consent is now part of indigenous community practices.<sup>302</sup></li> </ul>

## CEDAW

Convention	Ratified	9 March 1984
Optional Protocol	Not ratified	

## Gender mainstreaming initiatives

- Since May 2013, after the establishment of the Directorate of Gender, gender mainstreaming is now part of all ministries at all levels.<sup>393</sup>
- The Draft Gender Policy Framework 2011 was developed to update the National Policy on Gender and Development of 2000. The policy framework was developed with an overall goal of mainstreaming.
- Kenya's Vision 2030 specifically mentions gender mainstreaming in all sectors, including collecting gender-disaggregated data.

## Fishery organizations/networks

Organization	Status
Lake Victoria Fisheries Organization (LVFO)	Member
Indian Ocean Tuna Commission (IOTC)	Member
South West Indian Ocean Fisheries Commission (SWIOFC)	Member
Indian Ocean Commission	Member



## MADAGASCAR

### Quick facts

- Marine fishery and aquaculture play an important role in the national economy, especially in maintaining trade balance. Shrimp and other fish products account for more than 11 per cent of the total exports from the free trade zones. More than 80 per cent of the exports of fish and fish products are crustaceans, especially shrimp.
- Women are actively involved in octopus fishery and account for well over half of octopus fishers regionally.<sup>304</sup>

### Fish production (in tonnes)<sup>305</sup>

Capture (marine)	110,537	2016
Capture (inland)	30,461	2016
Aquaculture	8,539	2016
Total production	149,537	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>306</sup>	6.9 kg/year	2008–2009
Fish protein as proportion of animal protein <sup>307</sup>	20 per cent	
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
GDP <sup>308</sup>	US\$36.3 billion	2017
Fisheries contribution to GDP <sup>309</sup>	7 per cent	2015

- In 2016, Madagascar exported around **13.4 per cent** of its production of fish in volume terms.<sup>310</sup>
- In 2016, in value terms, fishery exports were around **0.37 per cent** of GDP.<sup>311</sup>

### Employment

A 2014 baseline report on the fisheries sector by SmartFish estimated 100,000 full-time fishers and 1 million part-time in the marine sector and 18,000 in inland fishing.<sup>312</sup> Women were employed only in processing and marketing. **The total employment in the sector may be estimated at around 1.2 million, with low participation of women.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 46 per cent.
- The **sector wage gap** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women's wages across sectors, was 63 per cent.
- The **average wage in PPP terms** of women in the sector was US\$47.35 (PPP) per month in 2017.

## Employment and social protection

Fishery-specific schemes	<ul style="list-style-type: none"> <li>• Projects have been initiated by different regional and international organizations including the African Development Bank (AfDB), World Bank and UNDP and NGOs such as Blue Ventures, which have benefited women mainly through seaweed farming, octopus fishing and sea cucumber culture.</li> <li>• Blue Ventures has initiated measures to conserve marine resources through setting up locally managed marine areas (LMMAs) where community institutions manage the resources, including through closures for octopus fishery. Women traditionally played an important role in octopus harvesting in the country. Once the commercial market was established, however, there was a noticeable growth in the numbers of male octopus harvesters entering the fishery, and at the same time women quickly saw an increase in their ability to earn money. Although today both women and men harvest octopus in the Velondriake LMMA, the fishery is still dominated by women.<sup>313</sup></li> <li>• Through the World Bank's South West Indian Ocean Fisheries Governance and Shared Growth Project, measures have been taken to involve women in community-based fisheries management as well as credit-based programmes.<sup>314</sup></li> <li>• AfDB has also been involved in octopus fishery management, where women have benefited from the Tulear fishery project.<sup>315</sup></li> </ul>
Social security	<ul style="list-style-type: none"> <li>• Through a World Bank project (2015–2020), measures are being undertaken to develop social protection programmes for the poorest families, including through cash transfer mechanisms. The Ministry of Population, Social Protection and the Promotion of Women is developing the country's social protection policy.<sup>316</sup></li> <li>• There is a National Community Health Policy and a National Policy for Comprehensive Medical and Psychosocial Care of Persons in Madagascar Living with HIV/AIDS.<sup>317</sup></li> <li>• The Committee on Elimination of Discrimination against Women, in its concluding observations, highlighted its concern at the precarious situation of the high number of women in the informal sector, where they have limited access to land and lack job security and access to social security benefits.<sup>318</sup></li> </ul>
Fisheries sector tenure	<ul style="list-style-type: none"> <li>• Many coastal communities are engaged in major efforts to implement community management tools for their marine areas such as LMMAs, though these are not legally recognized. In 2018, small-scale fishing communities put forth a demand for setting aside exclusive fishing zones for small-scale fishers.<sup>319</sup> Women have been part of LMMAs, though not involved in the decision-making process as they do not form a major part of the committees. The legal framework is not very well implemented, including the no-trawl zone.<sup>320</sup></li> </ul>
Women's right to property <sup>321</sup>	<ul style="list-style-type: none"> <li>• Land reforms instituted in 2005 seek to provide a link between civil law and customary practices. Under the former, women and men have equal rights to inheritance. However, under the latter, it is often men who have rights to land. The Committee on the Elimination of Discrimination against Women, in its last concluding observations in 2015, asked the Government to repeal discriminatory provisions in Law No. 68-012 (1968) and amend Law No. 2007-037 to eliminate all forms of discrimination against women with respect to land ownership and administration, property and inheritance and to facilitate women's acquisition and retention of land and natural resources.<sup>322</sup></li> </ul>

CEDAW		
Convention	Ratified	17 March 1989
Optional Protocol	Signatory	7 September 2000
Gender mainstreaming initiatives		
<p>The Ministry of Population, Social Protection and Promotion of Women has undertaken initiatives such as developing the National Gender and Development Action Plan in an attempt to coordinate projects carried out by various actors, including from civil society and public and private institutions<sup>323</sup></p>		
Fishery organizations/networks		
Organization	Status	
South West Indian Ocean Fisheries Commission (SWIOFC)	Member	
Indian Ocean Tuna Commission (IOTC)	Member	

## MALAYSIA

### Quick facts

- Malaysia ranked 104<sup>th</sup> out of 153 countries in the Global Gender Gap Report 2020 and 97<sup>th</sup> in the area of economic participation and opportunity.<sup>324</sup>
- According to the Economic Census 2016, the fisheries subsector recorded an annual growth rate of 10.2 per cent in the previous five-year period.
- Women are 10 per cent of the total aquaculture workforce, mainly in freshwater aquaculture and hatchery operations.

### Fish production (in tonnes)<sup>325</sup>

Capture (marine)	1,563,080	2016
Capture (inland)	5,848	2016
Aquaculture	201,344	2016
Total production	1,770,272	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>326</sup>	56.8 kg/year	2015
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture	US\$2.52 million	2016
Aquaculture	US\$0.68 million	2016
Total (capture + aquaculture)	US\$3.2 million	2016
GDP <sup>327</sup>	US\$848.3 billion	2017
Fisheries contribution to GDP <sup>328</sup>	1.1 per cent	2015

- Malaysia exports around **14.1 per cent** of its production of fish in volume terms.<sup>329</sup>
- In value terms, fishery exports are around **0.07 per cent** of GDP.<sup>330</sup>

### Employment

In 2015, Malaysia was reported to have around 146,000 fishers in capture fishing and 24,450 in full-time aquaculture.<sup>331</sup> The employment figure for aquaculture includes only owners of fish farms, who could be employing others.<sup>332</sup> FAO also found that many women worked along with their husbands as unpaid support in the fishing sector. There are no data available for fish processing and trade. *The employment in fishing and aquaculture may be estimated at around 0.2 million, with significant participation of women.*

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 29 per cent.<sup>333</sup>
- The **sector wage gap** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women's wages across sectors, was 58 per cent.<sup>334</sup>
- The **average wage in PPP terms** of women in the sector was US\$697.93 (PPP) per month in 2017.

## Employment and social protection

Fishery-specific schemes	<ul style="list-style-type: none"> <li>• There are no specific schemes that address women, though there are training programmes for women in the aquaculture sector.<sup>335</sup></li> </ul>
Social security <sup>336</sup>	<ul style="list-style-type: none"> <li>• The Akhiri Zaman Miskin (iAZAM) programme aims at empowering low-income households and reducing poverty as part of the Government's efforts to achieve high-income economy status by 2020. The programme provides cash transfers for those most in need; job placement, training services and entrepreneurial support services; assistance in setting up small agricultural businesses through the provision of seeds, equipment and machinery; support to the setting up of small service-oriented businesses through the provision of loans, training and counselling, particularly for women entrepreneurs; and insurance services and housing facilities for low-income households.</li> <li>• As per the <i>Employment Act, 1955</i>, an employee under a contract of service and earning a monthly wage less than MYR 2,000 must register compulsorily with the social security organization (SOCSO) regarding whether the employment status is permanent, temporary or casual in nature. Social insurance includes medical and cash benefits and social protection coverage to the families of beneficiaries.</li> </ul>
Fisheries sector tenure <sup>337</sup>	<ul style="list-style-type: none"> <li>• The <i>Fisheries Act 1985</i> and the regulations made under the Act provide the legal framework for the management of fishery resources and aquaculture. For the purpose of regulating fishing activities, the marine waters are divided into four fishing zones: Zone A (from the shoreline to 5 nautical (n) miles); Zone B (5–12 n miles); Zone C 1 (12–30 n miles) and Zone C 2 (beyond 30 n miles). Under the National Agriculture Policy 2011–2020, aquaculture has been recognized as a new growth area and is a high priority of the Government.</li> <li>• All fishing activities in Malaysian waters need to have a valid licence issued by the Department of Fisheries. All policies and procedures pertaining to licensing are based on the Fisheries Act 1985 (Part IV) and Vessel Registration Policy and Procedure Handbook. Licences issued are subject to availability of resources, categories of vessels and profile of ownership.</li> </ul>
Women's right to property <sup>338</sup>	<ul style="list-style-type: none"> <li>• <i>National Land Code Act 56, 1965</i>, amended in 2001, and the <i>Land (Group Settlement Areas) Act 1960</i> (Revised 1994), which was amended in 2002, provide wives of settlers a joint stake in the land awarded to their husbands. Before that, only husbands were recognized as sole owners of the settlement.</li> <li>• Customary practices follow religious rules and often deny women property rights.</li> <li>• The Federal Land Development Authority (FELDA) has established community support for rural women who work outside the home by encouraging the establishment of home-based day care.</li> <li>• In matriarchal communities in certain districts, customary adat law is in use where property vests with the female members of the tribe.</li> </ul>

## CEDAW

Convention	Ratified	5 July 1995
Optional Protocol	Not ratified	

## Gender mainstreaming initiatives

The Ministry of Women, Family and Community Development is the focal ministry for gender mainstreaming and gender budgeting.<sup>339</sup> Gender mainstreaming initiatives have been undertaken as part of the Five-year Development Plan.<sup>340</sup> Under the Tenth Malaysia Plan (2011–2015), a micro-development plan for women included the initiative of empowering women to enhance their economic contribution.

## Fishery organizations/networks<sup>241</sup>

Organization	Status
INFOFISH (Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region)	Member
Asia-Pacific Fisheries Commission (APFIC)	Member
Indian Ocean Tuna Commission (IOTC)	Member
Southeast Asian Fisheries Development Center (SEAFDEC)	Member

## MALDIVES

### Quick facts

- The fisheries sector provides employment to almost 11 per cent of the population.
- Nearly 50 per cent of the total catch is consumed domestically. Women have been actively involved in fish processing for domestic consumption; however, they are being slowly replaced or removed from the sector.<sup>342</sup>
- When compared to other South Asian countries, Maldives fares better in terms of gender equality. However, there is still a need to reform policies, especially related to education and employment issues for women.<sup>343</sup>
- The Committee on the Elimination of Discrimination against Women called on the State to adopt long-term policies to increase rural women's access to income-generating opportunities, including through credit and loans, and to develop their entrepreneurial skills, especially in agriculture and in the fishing industry.<sup>344</sup>

### Fish production (in tonnes)<sup>345</sup>

Capture (marine)	129,191	2016
Capture (inland)	n/a	2016
Aquaculture	n/a	2016
Total production	129,191	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>346</sup>	144.1 kg/year	
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
GDP <sup>347</sup>	US\$6.6 billion	2017
Fisheries contribution to GDP <sup>348</sup>	4 per cent	2016

- Maldives exports around **37.5 per cent** of its production of fish in volume terms.<sup>349</sup>
- In value terms, fishery exports are around **2.1 per cent** of GDP.<sup>350</sup>

## Employment

Maldives is reported to have around 21,000 fishers, around half (9,581) engaged in deep-sea fishing and the other half (10,504) being own-use fishers. Deep-sea fishers included children (estimated 123). Own-use fishers include women and men. Only 270 were reported to be full-time fishers. However, women were engaged in part-time own-use fishing. While women spent an estimated average 7 hours each week on fishing, men spent 12 hours per week. Fisheries families had the second highest incidence of poverty among all employment categories.<sup>351</sup> **According to the World Bank, declining fish catch has resulted in a decline in employment in direct fishing activities. A significant reduction in women's employment in fisheries is attributed to the increased mechanization of fish processing activities.**<sup>352</sup>

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was -21 per cent.<sup>353</sup>
- The **sector wage gap** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women's wages across sectors, was -18 per cent.<sup>354</sup>
- The **average wage in PPP terms** of women in the sector was US\$1,119.46 (PPP) per month in 2017.

**Note:** The gender wage gap is negative, that is, the reported average wage is higher for women than for men in fisheries. The sector wage gap is also negative, that is, women in the sector earn more than women in other sectors. These findings contradict the general trend in the gender and sector wage gap among IORA Member States. A possible explanation could be that few women are included in the enumeration, and these might be women in formal employment with better wages.

## Employment and social protection

Fishery-specific schemes <sup>355</sup>	<ul style="list-style-type: none"> <li>• Training programmes are conducted for women to enhance their social and economic skills, including through fish processing.</li> </ul>
Social security <sup>356</sup>	<ul style="list-style-type: none"> <li>• Health insurance, single parent allowance, foster parent allowance, emergency medical welfare, disability allowance and food subsidy were provided by the Government in 2016.<sup>357</sup></li> <li>• <i>The Maldives Pension Act</i>, enacted in 2009, has two schemes: the Maldives Old-Age Basic Pension and the Maldives Retirement Pension Scheme. The pension is available to everyone above 65 years.</li> </ul>
Fisheries sector tenure <sup>358</sup>	<ul style="list-style-type: none"> <li>• The <i>Fisheries Act of Maldives 1987</i> Law No. 5/87 was passed to establish and administer regulations for sustainable utilization and conservation of fisheries stocks and living marine resources, including protecting threatened species and establishing conservation areas. It also regulates: fishing in lagoons; prohibitions in fishing; banned fishing gear and methods; protected marine life; protection of certain species from harvest; prior permission required for non-traditional gear; reporting violations of the Fisheries Act and regulations; reporting of all fish catch; issuing of licences to fish in the exclusive economic zone (EEZ); licence issuance by the Ministry of Trade and Industries; and requirements for the vessels licensed to fish in the EEZ.</li> </ul>
Women's right to property <sup>359</sup>	<ul style="list-style-type: none"> <li>• The Constitution guarantees equal access for women and men to the rights and freedoms provided by it, and the Government is tasked with ensuring constitutional equality.</li> <li>• Women can own property and have equal rights in inheritance laws, as defined by the civil law.</li> </ul>

## CEDAW

Convention	Ratified	1 July 1993
Optional Protocol	Ratified	13 March 2006



## Gender mainstreaming initiatives

- In 2009, a National Gender Equality Policy was established. It instructs all agencies of government “to address women’s issues ... recognizing that women and men have different needs and priorities”.<sup>360</sup> Most policies in the public spheres of health, education, employment and political participation specifically outlaw discrimination on the basis of sex.<sup>361</sup> Laws are relatively gender equitable on matters in the public sphere such as employment, education and health.<sup>362</sup>
- The *Gender Equality Act* was passed in 2016.<sup>363</sup>

## Fishery organizations/networks<sup>364</sup>

Economic group	Status
South Asian Association for Regional Cooperation (SAARC)	Member
Organisation for Islamic Cooperation (OIC)	Member
South West Indian Ocean Fisheries Commission (SWIOFC)	Member
Indian Ocean Tuna Commission (IOTC)	Member
Bay of Bengal Large Marine Ecosystem Project (BOBLME) (2009–2017)	Member

## MAURITIUS

### Quick facts

- According to the Global Gender Gap report of 2020, Mauritius ranks 115<sup>th</sup> out of 153 countries evaluated.<sup>365</sup>
- The Ministry of Gender Equality and Family Welfare has a Gender Unit that serves as the National Gender Machinery (NGM) and lead agency responsible for the oversight, coordination, monitoring and evaluation of gender mainstreaming policies, strategies and programmes at the national level.
- Fisheries provide employment to around 2 per cent of the active population.<sup>366</sup>
- Mauritius is a large importer of fish used for industrial processing and exports. The export processing zones employ large numbers of migrant workers, including women.<sup>367</sup>

### Fish production (in tonnes)<sup>368</sup>

Capture (marine)	18,062	2016
Capture (inland)		
Aquaculture	1,021.32	2016
Total production	19,083.32	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>369</sup>	40 kg/year	2013
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Mauritius GDP <sup>370</sup>	US\$25.7 billion	2017
Fisheries contribution to GDP	1.5 per cent	2015

- Mauritius exports around **346 per cent** of its production of fish in volume terms; this is due to large amounts of imports into the seafood-processing hub exclusively for exports.<sup>371</sup>
- In value terms, fishery exports are around **1 per cent** of GDP.<sup>372</sup>

## Employment

Various government sources estimated around 4,000 employed as full-time fishers, with a total of 12,000 full- and part-time fishers. Around 1,500 women (40 per cent) were employed as full-time fishers.<sup>373</sup> Around 2,000 were employed in canning factories. **The total employment in the sector is estimated as 14,000 with significant to high participation of women.**

## Wages<sup>374</sup>

- The **gender wage gap** in 2017, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 49 per cent.
- The **sector wage gap** in 2017, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women's wages across sectors, was 68 per cent.
- The **average wage in PPP terms** of women in the sector was US\$352.50 (PPP) per month in 2017.

## Employment and social protection

Social security <sup>375</sup>	<p>The Fishermen's Welfare Fund provides the following assistance:</p> <ul style="list-style-type: none"> <li>• Assistance for children's education</li> <li>• Assistance for fishermen's family lost at sea or in distress</li> <li>• Assistance for accidentally damaged boats and engines</li> <li>• Sickness allowance for fishers who are sick for more than 14 days continuously</li> <li>• Winter allowance to fishers, which also has a self-contribution component</li> <li>• Maternity allowance: a one-time payment</li> <li>• Funeral grant: payment made to assist families of deceased fishers</li> <li>• Financial assistance for building of basket traps</li> </ul>
Fisheries sector tenure	<ul style="list-style-type: none"> <li>• The <i>Fisheries and Marine Resources Act 1998 (FMRA)</i> provides the necessary legal framework for fisheries and marine living resources management. It makes provision for registration of fishers, collection of fisheries information, setting up of marine protected areas (fishing reserves and marine parks and reserves) and fish farming.<sup>376</sup></li> <li>• As part of the increase in the ocean economy, there are plans to expand aquaculture.<sup>377</sup></li> </ul>
Women's right to property	<ul style="list-style-type: none"> <li>• The <i>Code Civil Mauricien</i> provides for the same rights for women and men regarding accession and inheritance of land and property. Women can hold titles to land and have the right to buy, own and sell land at par with men. Inheritance follows the forced heirship rules, whereby both women and men have equal rights. The laws that oversee land in the country are also gender-neutral. These include the <i>State Land Act</i> enacted in 1945, the <i>Morcellement Act</i> enacted in 1990 and the <i>Town and Country Planning Act</i> enacted in 1954.<sup>378</sup></li> </ul>

## CEDAW

Convention	Ratified	9 July 1984
Optional Protocol	Ratified	31 October 2008

## Gender mainstreaming initiatives<sup>379</sup>

- Various agencies are involved in implementing the provisions of CEDAW, including the Ministry of Gender Equality, Child Development and Family Welfare, in collaboration with the National Mechanism for Reporting and Follow-up (NMRF) and other government agencies, such as the National Women's Council and the National Women Entrepreneur Council, and National Human Rights Institutions, such as the National Human Rights Commission, Equal Opportunities Commission, Office of the Ombudsman and Ombudsperson for Children.
- The *Equal Opportunities Act* was amended in 2011 to enable the establishment of an Equal Opportunity Commission (EOC) in 2012 to eliminate discrimination in all sectors, as well as to promote good relations between people of different status. The EOC safeguards and protects the rights of all citizens, including women and girls.<sup>380</sup>
- Since 2010, a National Steering Committee on Gender Mainstreaming was set up to provide a platform for Gender Focal Points of all Ministries to dialogue on the gender implications in their respective sectors.
- Gender-responsive budgeting initiatives were introduced in the Budget Speech of 2016/2017 on a pilot basis in five ministries: Youth and Sports; Civil Service and Administrative Reforms; Health and Quality of Life; Education and Human Resources, Tertiary Education and Scientific Research; and the Environment and Sustainable Development Division of the Ministry of Social Security, National Solidarity, and Environment and Sustainable Development.
- In the Budget Speech of 2018/2019, a decision was announced to introduce gender considerations at all levels of policymaking and implementation, including a chapter on gender mainstreaming in the three-year Rolling Strategic Plan. A draft Gender Equality Bill was pending adoption in 2019.<sup>381</sup>

## Fishery organizations/networks<sup>382</sup>

Organization	Status
Common Market for Eastern and Southern Africa (COMESA)	Member
Southern African Development Community (SADC)	Member
African Union	Member
Indian Ocean Tuna Commission (IOTC)	Member
Committee on Inland Fisheries and Aquaculture in Africa (CIFAA)	Member
South Indian Ocean Fisheries Agreement (SIOFA)	Member
Southwest Indian Ocean Fisheries Commission (SWIOFC)	Member

## MOZAMBIQUE

### Quick facts

- Mozambique ranks 56<sup>th</sup> out of 153 countries in the 2020 Global Gender Gap Report and ranks 93<sup>rd</sup> in the area of economic participation and opportunity.<sup>383</sup>
- The Ministry of Gender, Children and Social Action has the overall responsibility for gender issues.
- Women and children form a large part of the collectors or gleaners in the artisanal sector and often fish without a boat. In the central and northern regions, women work as collectors and fish traders. In the southern region, some women are involved in commercial fishing and also work in the markets.<sup>384</sup>
- Mozambique is one of the few countries to have a gender strategy specifically for fisheries.<sup>385</sup>

### Fish production (in tonnes)<sup>386</sup>

Capture (marine)	203,449	2016
Capture (inland)	96,142	2016
Aquaculture	1,180	2016
Total production	300,771	2016

### Fish consumption (in kg per annum)<sup>387</sup>

Per capita fish consumption	9 kg/year	2016
Fish protein as proportion of animal protein	40 per cent	2016
Fish protein as proportion of total protein	5 per cent	2016

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Mozambique GDP <sup>388</sup>	US\$33.7 billion	2017
Fisheries contribution to GDP <sup>389</sup>	10.7 per cent	2017

- Mozambique exports around **3.33 per cent** of its production of fish in volume terms.<sup>390</sup>
- In value terms, fishery exports are around **0.13 per cent** of GDP.<sup>391</sup>

## Employment

Around 850,000 families (20 per cent of the population) are dependent on fishing.<sup>392</sup> WorldFish estimated 95,000 fish farmers, 90 per cent of whom were artisanal.<sup>393</sup> Women and children form a significant proportion of gleaners in the artisanal fishing sector. While men dominate employment in capture fishing, women form the majority in aquaculture and trading.<sup>394</sup> However, the World Bank estimated total employment in the sector to be 265,000, including post-harvest, with women forming only 4 per cent of those employed.<sup>395</sup> **The sector may be estimated as employing nearly 1 million fishers, with a significant presence of women in both harvest and post-harvest sectors.**

## Wages

- Wage data are not available.

## Employment and social protection

Social security <sup>396</sup>	<ul style="list-style-type: none"> <li>• Maternity cash benefit</li> <li>• Old-age pension</li> <li>• Disability grant</li> <li>• Child-care benefits</li> <li>• Productive Social Action Programme: provides an income transfer to extremely poor households that have at least one adult member able to work. Support to beneficiaries in rural and urban areas is provided in return for their participation in labour-intensive public works subprojects.</li> <li>• Social Welfare Services Programme (SWSP): preventive and protective welfare services provided at the community level in response to social risks.</li> </ul>
Fisheries sector tenure	Women are underrepresented in local fisheries management committees and credit and savings groups. This largely constrains their access to fish preservation equipment (e.g. cool boxes). The lack of such equipment makes it difficult to distribute fish to remote rural areas. <sup>397</sup>
Women's right to property <sup>398</sup>	<ul style="list-style-type: none"> <li>• The <i>Land Law, 1997</i> gives equal rights to both women and men to own land and property.</li> <li>• In matrilineal indigenous communities, women's right to property is secured under customary law but they do not have any rights in the decision-making process.</li> </ul>

## CEDAW

Convention	Ratified	21 April 1997
Optional Protocol	Ratified	4 November 2008

## Gender mainstreaming initiatives

- The integration of gender and development-related guidelines by the Ministry of Planning and Development in the economic and social plans and government budget, including decentralized planning, opens a space for every sector and public institutions at all levels to address gender issues.<sup>399</sup>
- The Ministry of Sea, Inland Waters and Fisheries has a gender strategy. A recent assessment found that women are underrepresented in local fisheries management groups and have less access to credit compared to men. The Ministry of Fisheries recently developed a gender strategy to help ensure that women have equal rights and opportunities within the fisheries sector.<sup>400</sup>
- The World Bank, through the South West Indian Ocean Fisheries Governance and Shared Growth Project, is providing finance to fishing associations and helping fishers, particularly women, save their earnings, borrow money and grow their businesses.<sup>401</sup>

Fishery organizations/networks	
Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
South West Indian Ocean Fisheries Commission (SIOFA)	Member
Committee on Inland Fisheries and Aquaculture in Africa (CIFAA)	Member
Southern African Development Community (SADC)	Member
SADC Protocol on Fisheries	Member
African Union	Member

### Quick facts

- Oman ranks 144<sup>th</sup> out of 153 countries in the Global Gender Gap Report 2020.<sup>402</sup>
- Fish is the second most important commodity in Oman, after oil, in terms of exports and earning foreign exchange.<sup>403</sup>
- Women are actively involved throughout the country in collecting underexploited invertebrate resources. They gather gastropods and bivalves, glean sea cucumbers and spearfish cephalopods and crustacean.<sup>404</sup>
- Women are also actively involved in marketing and processing. However, there are increasingly more migrants involved in these sectors.

### Fish production (in tonnes)<sup>405</sup>

Capture (marine)	279,606	2016
Capture (inland)		
Aquaculture	103	2016
Total production	279,709	2016

### Fish consumption (in kg per annum)<sup>406</sup>

Per capita fish consumption	26.9 kg/year	2011
Fish protein as proportion of animal protein	17 per cent	2011
Fish protein as proportion of total protein	8.2 per cent	2011

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture) <sup>407</sup>	OMR 204 million	2016
Oman GDP <sup>408</sup>	US\$174.2 billion	2017
Fisheries contribution to GDP <sup>409</sup>	0.8 per cent	2016

- In 2016, Oman exported around **43.8 per cent** of its production of fish in volume terms.<sup>410</sup>
- In value terms, fishery exports were around **0.66 per cent** of GDP.<sup>411</sup>

### Employment

UN estimates put the employment figures for Oman at 41,569 full-time fishers, adding up to 96 per cent of the total fishing population.<sup>412</sup> FAO estimated there were 30,718 fishers: 26,944 in the artisanal sector and 3,148 ancillary workers in fish processing, of whom 76 per cent were migrants.<sup>413</sup> Studies of the sector indicated that traditionally women from fishing communities participated in fishing and related activities, but with the oil boom and economic opportunities for locals, they were being replaced by migrants.

***In this context, the total employment in the sector is estimated to be around 45,000, with a low (approximately 10 per cent) employment of mainly migrant women in post-harvest employment.***



## Wages

- Wage data are not available.

## Employment and social protection

Insurance	There is a self-insurance system under the Public Authority for Social Insurance since 2013, as per the Social Insurance System for Self-employed Omanis, where a certain amount is paid as premium based on the income of the self-employed person, which is then matched by payment from the Government. <sup>414</sup>
Safety at sea	FAO has been working with the Government to develop guidelines for safety at sea and to provide good conditions of work aboard fishing vessels.
Social security	The Public Authority for Social Insurance (PASI) has two schemes: short-term benefits for employment injury where the degree of disability is less than 30 per cent; and long-term pensions for permanent disability. <sup>415</sup>
Women's right to property	Since 2008, based on the Sultan's Royal Decree, women and men have equal rights over property, irrespective of their social and financial status. <sup>416</sup>

## CEDAW

Convention	Ratified	7 February 2006
Optional Protocol	Not ratified	

## Gender mainstreaming initiatives<sup>417</sup>

- The *Labour Law*, 2003 contains both initiatives to promote gender equality and gender discriminatory provisions: Article 80 affirms non-discrimination between the sexes in respect of the same work. However, article 81 prohibits the employment of women between 21:00 and 06:00. Article 82 also prohibits employment of women in jobs that are detrimental to health and in hard labour and other jobs specified by decree of the Minister for Manpower. Article 84 prohibits an employer from dismissing a female worker for absences due to pregnancy, as substantiated by a medical certificate. Under the same article, an employer must allow such a worker to return to her job, provided her total absence does not exceed six months. Article 86 requires an employer who employs one or more female workers to place a copy of the Regulations on the Employment of Women in the workplace.
- The Ministry of Social Development has developed a number of sectoral strategies to look into special requirements for women, children and vulnerable groups that focus on gender mainstreaming, gender budgeting and gender-responsive indicators.
- The National Strategy for Women, entitled “Enhancing the Quality of Life”, was completed in 2014 and a committee formed to review and implement the strategy.
- Since 2015, there have been demands to revive projects for coastal women to increase their participation in the fisheries sector.

## Fishery organizations/networks

Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
Regional Commission for Fisheries (RECOFI)	Member
International Whaling Commission (IWC)	Member

## SEYCHELLES

### Quick facts

- Seychelles has a Gender Secretariat, which is the main institution focusing on gender mainstreaming and implementation of the National Strategy on Domestic Violence.<sup>418</sup>
- Fisheries are the second-most important sector after tourism, contributing 20 per cent to GDP and employing 17 per cent of the population. Seychelles is also a major seafood-processing hub. In 2014, the export of consumable fish and fish products made up 96 per cent of the total value of domestic exports.
- Women also participate in skilled occupations in the fisheries sector. The Seychelles Institute of Maritime Studies offers courses on navigation and fisheries for women.<sup>419</sup>

### Fish production (in tonnes)<sup>420</sup>

Capture (marine)	126,688	2016
Capture (inland)	0	2016
Aquaculture	0	2016
Total production	126,688	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>421</sup>	65 kg/year	2013
Fish protein as proportion of animal protein <sup>422</sup>	50 per cent	2017
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Seychelles GDP <sup>423</sup>	US\$2.5 billion	2017
Fisheries contribution to GDP <sup>424</sup>	20 per cent	2017

- Seychelles exports around **125 per cent** of its production of fish in volume terms.<sup>425</sup>
- In value terms, fishery exports are around **18.9 per cent** of GDP.<sup>426</sup>

## Employment

Government sources estimate fisheries sector employment as around 5,000 to 6,000, representing 10 per cent of total formal employment in the country.<sup>427</sup> Another report on the potential of the fisheries sector in Seychelles estimated employment as full-time fishermen at 1,750 (about 5 per cent of formal employment); and 3,930 in fish processing (10 per cent of formal employment), including around 2,500 in the country's largest employer, the Indian Ocean Tuna Factory, and 330 in aquaculture.<sup>428</sup> Given the large proportion of employment in processing in the sector, women's participation is expected to be significant. **The total employment in the sector is estimated at around 10,000, with significant women's participation.**

## Wages

- Wage data are not available.

## Employment and social protection

Social security <sup>429</sup>	<ul style="list-style-type: none"> <li>• The <i>Employment Act</i> safeguards the rights of all workers, including migrant workers, to enjoy the same terms and conditions of employment for similar work. The Committee on Employment of Non-Seychellois, which includes representatives from all the stakeholders, ensures implementation of the Act.</li> <li>• The <i>Agriculture and Fisheries Incentives Act</i> provides for the grant of incentives to persons engaged in agriculture, fisheries and related activities. Incentives include fuel concessions for fishermen, trades tax exemptions, employment of foreign labour permission and enhanced social security benefits.</li> <li>• According to the <i>Social Security Act</i>, a person who is a citizen of Seychelles, and is resident, is entitled to apply for benefits. Women are major recipients of the social welfare allowance and sickness benefit.</li> <li>• Maternity benefits are provided to both employed and self-employed people.</li> <li>• Benefits for permanent and temporary disability are available to all workers.</li> <li>• Survivor benefits are given to both women and men on the death of their spouse.</li> <li>• Dependant benefits are given to children under the age of 15 who are maintained by a beneficiary.</li> <li>• Orphan/abandoned child benefits are available for all children under the age of 18 who have lost both parents. Semi-orphan benefits are provided for children who have lost one parent.</li> <li>• All persons above 63 years are eligible for a pension, with specific conditions.</li> <li>• Day-care benefits are given to families where the child is younger than 4 years and both parents are employed.</li> </ul>
Fisheries sector tenure	Women are generally not involved in fish harvest but are actively involved in post-harvest and processing.
Women's right to property	Under civil law, women have equal rights to own property. <sup>430</sup>

## CEDAW

Convention	Ratified	5 May 1992
Optional Protocol	Ratified	1 March 2011

## Gender mainstreaming initiatives

- The National Gender Machinery, housed within the Social Development Policy Division of the Minister for Social Affairs, Community Development and Sports, is currently the Gender Secretariat and holds the portfolio responsibility for gender. The role of the unit is to act as the permanent Lead Agency to facilitate gender mainstreaming in all policies, programmes and activities of the Government, the private sector and civil society.<sup>431</sup>
- A World Bank Seychelles Blue Bonds project 2017 seeks to help in “Improving the management of fisheries and marine resources ... to achieving the Blue Economy strategy of the Seychelles”.<sup>432</sup> The project intends to devote specific attention to the role of women and youth in the fisheries sector, seafood value chains and the broader blue economy. It will support an assessment within the sector to improve the understanding of gender imbalances and propose implementation measures to close any gender gap.

## Fishery organizations/networks<sup>202</sup>

Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
South Indian Ocean Fisheries Agreement (SIOFA)	Member
Southwest Indian Ocean Fisheries Commission (SWIOFC)	Member

## SINGAPORE

### Quick facts

- Singapore ranks 54<sup>th</sup> out of 153 countries in the Global Gender Gap Report 2020; however, it ranks 20<sup>th</sup> in the area of economic participation and opportunity.<sup>433</sup>
- The fisheries sector does not contribute significantly to the economy or to employment. The country has recently been giving importance to promoting the growth of aquaculture.

### Fish production (in tonnes)<sup>434</sup>

Capture (marine)	1,234	2016
Capture (inland)	0	2016
Aquaculture	5,581	2016
Total production	6,815	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>435</sup>	15 kg/year	2016
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Singapore GDP <sup>436</sup>		
Fisheries contribution to GDP	US\$492.5 billion	

- Singapore exports around **532 per cent** of its production of fish in volume terms.<sup>437</sup>
- In value terms, fishery exports are around **0.07 per cent** of GDP.<sup>438</sup>

### Employment

SEAFDEC estimated 36 full-time fishers and 598 employed in culture, processing and marketing. The Singapore Year Book of Statistics classified fisheries as not important to the economy while listing 114 fish farmers and employment of 145 persons in fish processing. **The total employment estimated in the sector is 650, with no sex-disaggregated data.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 27 per cent.<sup>439</sup>
- The **sector wage gap** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women's wages across sectors, was 9 per cent.<sup>440</sup>
- The **average wage in PPP terms** of women in the sector was US\$4,305.88 (PPP) per month in 2017.

## Employment and social protection

Social security	<ul style="list-style-type: none"> <li>• The main institution is the Central Provident Fund 1953 (CPF), which operates a contributory scheme based on joint contributions between employers and employees. The CPF has evolved into a comprehensive social security system for retirement, healthcare, home ownership, family protection and asset purchase.<sup>441</sup></li> <li>• Other employment regulation and safety measures are provided under the <i>Employment of Foreign Manpower Act (1990)</i>, <i>Workplace Safety and Health Act (2006)</i>, <i>Employment Agencies Act (1958)</i> and <i>Work Injury Compensation Act (2008)</i>.<sup>442</sup></li> </ul>
Fisheries sector tenure	Women are involved in the aquaculture sector.
Women's right to property	The Constitution provides equal rights to property for both women and men. The Women's Charter gives women in Singapore ownership rights and access to property other than land. Section 51 of the Women's Charter enables a married woman to acquire, hold and dispose of any property, contract debt or obligation; be capable of suing and being sued in her own name; and be subject to bankruptcy laws and enforcement of judgments and orders in all respects as if she were a single female. <sup>443</sup>

## CEDAW

Convention	Ratified	5 October 1995
Optional Protocol	Not ratified	

## Gender mainstreaming initiatives

- Singapore has a Women's Charter, amended in 2011, that focuses on equal rights for women and girl children.
- The Office for Women Development focuses on gender policy and gender mainstreaming as well as coordinating between different Ministries.<sup>444</sup>

## Fishery organizations/networks<sup>445</sup>

Organization	Status
Southeast Asian Fisheries Development Center (SEAFDEC)	Member
Asia-Pacific Economic Cooperation (APEC)	Member
Association of Southeast Asian Nations (ASEAN)	Member
Coordinating Body on the Seas of East Asia (COBSEA)	Member
Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)	Member

## SOMALIA

### Quick facts

- Somalia is a country ravaged by a long civil war in the 1990s and since then by illegal fishing by fleets of foreign nations and dumping of waste in its seas, significantly impacting a once-thriving fishing sector.

### Fish production (in tonnes)<sup>446</sup>

Capture (marine)	30,000	2016
Capture (inland)		2016
Aquaculture		2016
Total production	30,000	2016

### Fish consumption (in kg per annum)<sup>447</sup>

Per capita fish consumption	3.05 kg/year	2009
Fish protein as proportion of animal protein	3.1 per cent	2009
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Somalia GDP <sup>448</sup>	US\$5.8 billion	2010
Fisheries contribution to GDP <sup>449</sup>	1 to 2 per cent	2004–2010

- Somalia exports around **9.62 per cent** of its production of fish in volume terms.<sup>450</sup>
- In value terms, fishery exports are around **0.079 per cent** of GDP.<sup>451</sup>

### Employment

According to one source, employment in the fisheries in Somalia is estimated to be around 65,144 full-time fishers, and 99 per cent of the fish catch is estimated to be landed by artisanal fishers.<sup>452</sup> Fifty-nine per cent of the fishers were organized into cooperatives. Other studies have estimated 10,000 full-time fishers and between 30,000 and 60,000 employed in fish processing and trade.<sup>453</sup> There are no sex-disaggregated data. However, given the significant proportion of employment in processing and trade, we can expect a significant proportion of women in the sector. ***In this context, the estimated employment in the sector is around 115,000, with a significant proportion of women employed in fish processing.***

## Wages

- Wage data are not available.

## Employment and social protection

### Women's right to property<sup>454</sup>

Customary and clan leaders allocate land to individuals, and women are often not part of the decision-making process. Even under civil law, women's right to property is not upheld as property is often in the name of the male relative. The position of women with regards to land and property ownership has been weakened by both conflicts and the ensuing reconstruction process. Breakdowns in social stability and in law and order have compromised traditional and customary laws for women, their social support systems and their access to land and property. After the husband dies, women are not allowed to inherit land if they do not have children. Children are given land rights only after they attain 14 years; till then the rights are vested with a male relative.

## CEDAW

Convention

Not ratified

Optional Protocol

Not ratified

## Gender mainstreaming initiatives<sup>455</sup>

- A National Gender Policy has been adopted. There is a draft National Gender Plan, and Gender-Budgeting Guidelines are available, but these are not being implemented.
- There are projects under FAO's Blue Growth that provide training for women to build fishing boats; women from the community are also involved in stitching life jackets to be distributed to the fishermen.<sup>456</sup> Somali women under FAO projects are also working.

## Fishery organizations/networks

Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
Southwest Indian Ocean Fisheries Commission (SWIOFC)	Member



## SOUTH AFRICA

### Quick facts

- South Africa is an early adopter of a small-scale fisheries policy that specifically recognizes the rights of fishing communities, including women. One of the objectives of the policy is to provide equitable access to resources for all, across race, gender and disability differences.
- South Africa ranked 17<sup>th</sup> in the Global Gender Gap Report 2020 but 92<sup>nd</sup> in the area of economic participation and opportunity.<sup>457</sup>
- It is one of the 11 countries in the world to have signed the ILO's Work in Fishing Convention (No. 188).
- The national development programme, Operation Phakisa, launched in 2014, dedicates one of its focus areas to the ocean economy, including marine transport and manufacturing, offshore oil and gas, aquaculture, marine protection services and ocean governance, small harbours and coastline development, coastal and marine tourism, skills development and capacity-building, and research, technology and innovation. Up to 2016, 1,806 jobs were created in aquaculture under Operation Phakisa projects, of which 29 per cent went to women.<sup>458</sup>
- Based on a survey in 2000, there were 30,000 subsistence fishers in the country.<sup>459</sup> These numbers are currently being reviewed through a process to identify fishers, initiated by the Government after the adoption of the small-scale fisheries policy.

### Fish production (in tonnes)<sup>460</sup>

Capture (marine)	611,290	2016
Capture (inland)	900	2016
Aquaculture	10,988	2016
Total production	623,178	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>461</sup>	5.7 kg/year	2013
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)	US\$423 million or ZAR 6 billion	2016
South Africa GDP <sup>462</sup>	US\$697.3 billion	2017
Fisheries contribution to GDP <sup>463</sup>	0.1 per cent	2017

- South Africa exports around **19.6 per cent** of its production of fish in volume terms.<sup>464</sup>
- In value terms, fishery exports are around **0.07 per cent** of GDP.<sup>465</sup>

## Employment

FAO estimates employment in fish capture and aquaculture in South Africa as 168,000.<sup>466</sup> Government estimates are substantially lower, with total fisheries employment estimated as 631 owners of fishing activity, 10,000 full-time fishers and 4,565 part-time fishers, including 99 owners, 2,298 full-time and 1,888 part-time fishers who are women, around 28 per cent.<sup>467</sup> Another report estimated 354 women out of a total 1,607 (22 per cent) to be engaged in aquaculture.<sup>468</sup> The South Africa Year Book 2016 estimated employment in the country's fisheries as 16,000, and in fish processing and marketing as 11,000.<sup>469</sup> **Based on FAO estimates, total employment in fisheries is estimated to be around 0.17 million and the proportion of women in the sector around 25 per cent.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 11 per cent.<sup>470</sup>
- The **sector wage gap** in 2015, defined as the average fisheries wages of women compared to the average women's wages across sectors, was 17 per cent.<sup>471</sup>
- The **average wage in PPP terms** of women in the sector was US\$411.18 (PPP) per month in 2017.

## Employment and social protection

Insurance	The small-scale fisheries policy has a special section on social security, disaster relief and assistance during emergencies. <sup>472</sup>
Safety at sea	<ul style="list-style-type: none"> <li>• The same policy specifically mentions the need to look at the working conditions of women fishworkers, in addition to providing assistance to fishers who have been injured at sea or die during fishing.</li> <li>• The South African Maritime Safety Authority (SAMSA) is responsible for safety at sea measures, including vessel inspection and training fishers.</li> </ul>
Social security	<ul style="list-style-type: none"> <li>• There is legislation for universal maternity coverage that includes domestic workers and seasonal workers, as well as an unemployment protection scheme.<sup>473</sup></li> <li>• Social security provisions include child grants, disability grants, social relief in distress and old people's grants.<sup>474</sup> The <i>Social Assistance Act</i> provides for a non-contributory old-age grant that is available to persons aged 60 years and above who pass a means test.<sup>475</sup> The small-scale fisheries policy has a section on social security, especially highlighting the need to cover fishers in case of natural emergencies.</li> </ul>
Fisheries sector tenure	The <i>Marine Living Resource Act</i> is the main legislation for providing fishing rights and it does not discriminate on the basis of gender. Fishing quotas are issued to women and men.
Women's right to property	<ul style="list-style-type: none"> <li>• The Commission for Gender Equality believes that the land ownership pattern is reflective of the conditions that prevailed during the pre-democratic era. The Commission highlights not only inequitable land ownership but also the existence of discriminatory gender practices and policies that continue to be powerful barriers that marginalize most women.<sup>476</sup></li> <li>• The Government has sought to advance women's empowerment through the mainstreaming of gender in the implementation of the <i>Land Reform (Labour Tenants) Act, 1996 (Act 3 of 1996)</i>; <i>Housing Act, 1997 (Act 107 of 1997)</i>; <i>Water Services Act, 1997 (Act 108 of 1997)</i>; <i>Land Bank Amendment Act, 1998 (Act 21 of 1998)</i>; and the Integrated Sustainable Development Programme.<sup>477</sup></li> </ul>

## CEDAW

Convention	Ratified	15 December 1995
Optional Protocol	Ratified	18 October 2005

## Gender mainstreaming initiatives

- The Office on the Empowerment of Women within the President's office is mandated to translate government objectives of gender equality into meaningful government programmes. The National Policy Framework for Women's Empowerment and Gender Equality, referred to as the Gender Policy Framework (GPF), outlines the goals of "equality of opportunity" and "equality of treatment" as the means to achieve the broader goal of gender equality.<sup>478</sup>
- The newly adopted fisheries policy is an important step forward for gender mainstreaming in the fisheries sector, as it recognizes the important role of women in fisheries and outlines gender-specific measures such as promoting the economic empowerment of women and reducing inequalities in access to marine resources.<sup>479</sup>
- South Africa was one of the first countries to start gender budgeting, beginning in 1995.<sup>480</sup>

## Fishery organizations/networks

Organization	Status
Agreement on the Conservation of Albatrosses and Petrels (ACAP)	Member
Brazil, Russia, India, China and South Africa (BRICS)	Member
Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)	Member
Commission for the Conservation of Southern Bluefin Tuna (CCSBT)	Member
Indian Ocean Tuna Commission (IOTC)	Member
International Commission for the Conservation of Atlantic Tunas (ICCAT)	Member
International Whaling Commission (IWC)	Member
South East Atlantic Fisheries Organisation (SEAFO)	Member
Southwest Indian Ocean Fisheries Commission (SWIOFC)	Member

## SRI LANKA

### Quick facts

- Sri Lanka ranks 102<sup>nd</sup> out of 153 countries in the Global Gender Gap Report 2020.<sup>481</sup>
- Women in fisheries are involved in pre-harvest activities such as mending nets and carrying nets to the landing sites; in post-harvest they are involved in marketing, cleaning, salting and drying. They engage in gleaning, hand fishing and beach seining. Women are active in mangrove areas and lagoons. They also work in seafood-processing plants and aquaculture farms, especially those in seaweed farming and crab fattening.<sup>482</sup>

### Fish production (in tonnes)<sup>483</sup>

Capture (marine)	444,652	2016
Capture (inland)	73,930	2016
Aquaculture	30,713	2016
Total production	549,295	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>484</sup>	46.7 kg/year	2016
Fish protein as proportion of animal protein	60 per cent	2016
Fish protein as proportion of total protein <sup>485</sup>	1.3 per cent	2016

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Sri Lanka's GDP <sup>486</sup>	US\$251 billion	2017
Fisheries contribution to GDP <sup>487</sup>	1.3 per cent	2016

- Sri Lanka exports around **3 per cent** of its production of fish in volume terms.<sup>488</sup>
- In value terms, fishery exports are around **0.07 per cent** of GDP.<sup>489</sup>

### Employment

Government data provided estimates of 188,685 marine households and 218,830 marine fishers (women and men); 49,450 inland fisher households; and a population of around 2 million dependent for their livelihood on fishing.<sup>490</sup> Another government source estimated 560,000 fishers in the sector and 2.7 million dependent on fishing as a source of livelihood.<sup>491</sup> Other studies have indicated that while participation of women in fishing was rare among Buddhist households, it was high among Christians and Muslims, as well as in fish handling, grading and marketing. However, census data indicated women's participation in active fishing as minimal, with some women involved in fish collection, net mending and fish marketing.<sup>492</sup> **The employment in the sector is estimated at around 0.6 million, with no estimates for participation of women.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 37 per cent.<sup>493</sup>
- The **sector wage gap** in 2015, defined as the average fisheries wages of women compared to the average women's wages across sectors, was 55 per cent.<sup>494</sup>
- The **average wage in PPP terms** of women in the sector was US\$183.27 (PPP) per month in 2017.

## Employment and social protection

Insurance	A Fisheries Insurance Scheme has been introduced for fishers and fishing boats to cover fishing and financial risks. <sup>495</sup>
Social security	The <i>Fishermen's Pension and Social Security Benefit Scheme Act</i> of 1990 is applicable to both fishers and fish farmers. <sup>496</sup> Fishermen who join the Scheme are entitled to the following benefits: <ul style="list-style-type: none"> <li>• A periodical pension of a prescribed amount.</li> <li>• In case of permanent partial disablement, a lump sum gratuity or a pension when it becomes due.</li> <li>• In case of permanent total disablement, a lump sum gratuity or periodical allowance of a prescribed amount.</li> <li>• A death gratuity.</li> </ul>
Land tenure <sup>497</sup>	Although the Constitution recognizes the principle of gender equality, since matrimonial, property and inheritance rights of Kandyan Sinhalese, Tamils and Muslims are governed by their own systems, inequalities to access and disposition of property persist. In the South, in some communities, customary laws allow women to own assets; however, they are not allowed to make any decisions on managing the assets. The male relatives are in charge of the decision-making process.
Fisheries sector tenure <sup>498</sup>	There are no equal rights for women in the traditional fishing industry. Their work in the sector has no formal recognition. They have no formal tenure rights. Thus, for instance, in the North-Western Province, although an estimated 98 per cent of fisherwomen spend 3 hours per day supporting their families in various activities, including sorting out fish and repairing fishing gear, their work does not get formally recognized.

## CEDAW

Convention	Ratified	5 October 1981
Optional Protocol	Ratified	15 October 2002

## Gender mainstreaming initiatives

- The Government has focused on developing policies and action plans that include addressing such issues as violence against women, female-headed households, women's entrepreneurship development and institutionalizing gender mainstreaming; these plans have been approved by the Cabinet. A chapter on women's rights was included in the National Human Rights Action Plan (2017–2021) to address issues such as law reforms, war-affected women, employment and enhancing institutional mechanisms.<sup>499</sup>
- The National Framework for Women-headed Households (2017–2019) was introduced especially to improve the socioeconomic situation of women affected by conflict. Programmes are in place to support the economic empowerment of rural women and encourage girls to enter technological fields to improve employment opportunities.<sup>500</sup> Gender mainstreaming committees have been set up in line ministries for collection of sex-disaggregated data, introducing gender budgeting and adopting equity and equality principles in policy formulation and awareness building.

Fishery organizations/networks <sup>501</sup>	
Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO)	Member
Asia Pacific Fisheries Commission (APFIC)	Member
South Asia Cooperative Environment Programme (SACEP)	Member
Bay of Bengal Large Marine Ecosystem Project (BOBLME) (2009–2017)	Member
INFOFISH (Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member

## THAILAND

### Quick facts

- Thailand is the world's fourth largest exporter of fish in terms of value and fifth largest in terms of quantity. It also imports a large quantity of fish for value addition and re-exports.
- Women play an important role in fisheries and aquaculture in both fishing and post-harvest activities. According to the SEAFDEC country profile, women have also assumed a leading role in the rapid growth of aquaculture, with a much higher participation along the aquaculture value chain (production, transforming and marketing) than in capture fisheries.<sup>502</sup>
- The Thai fish-processing industry employs a large number of migrant workers.

### Fish production (in tonnes)<sup>503</sup>

Capture (marine)	1,279,264	2016
Capture (inland)	187,300	2016
Aquaculture	958,095	2016
Total production	2,424,659	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>504</sup>	33.73 kg/year	2016
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein <sup>505</sup>	11.7 per cent	2011

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)	US\$4.483 billion	2014–2015
Thailand GDP <sup>506</sup>	US\$1,127 billion	2017
Fisheries contribution to GDP <sup>507</sup>	0.76 per cent	2015

- Thailand exports around **55.83 per cent** of its production of fish in volume terms.<sup>508</sup>
- In value terms, fishery exports are around **0.5 per cent** of GDP.<sup>509</sup>

## Employment

Thailand employs around 800,000 fish workers in capture fishing<sup>510</sup> and 650,000 in the aquaculture sector. Around 41,000 fish workers are migrants from Cambodia, the Lao People's Democratic Republic and Myanmar.<sup>511</sup> Women constitute around a third of the workforce in aquaculture.<sup>512</sup> The country also has a large fish-processing industry. Work in the fishery sector is divided along gendered lines, with most of the fishing done by men and boys, while women and girls are engaged in shore-based processing and packaging.<sup>513</sup> The processing sector employs an estimated 200,000 workers in tuna processing, of whom 60 per cent are migrants from Myanmar; and 700,000 shrimp processors, of whom 80 per cent are migrants from Myanmar. No credible data on fish trading were available. **It is estimated that employment in the Thai fishing sector is around 2.35 million, of whom around 1.1 million (47 per cent) are women.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 17 per cent.<sup>514</sup>
- The **sector wage gap** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women's wages across sectors, was 64 per cent.<sup>515</sup>
- The **average wage in PPP terms** of women in the sector was US\$403.91 (PPP) per month in 2017.

## Employment and social protection

Social security <sup>516</sup>	<ul style="list-style-type: none"> <li>• The Universal Pension Scheme comprises several contributory schemes for public-sector officials, private-sector employees and informal-economy workers, reaching about a quarter of the population above 60 years of age.</li> <li>• Additionally, a non-contributory old-age allowance provides some protection to people without access to regular pension payments. The monthly benefit is tiered and varies between THB 600 and THB 1,000 (equivalent to US\$18 to US\$30), which is less than half the poverty line. It serves as the only form of pension for many workers in the informal economy.</li> <li>• Thailand implemented its Universal Coverage Scheme (UCS) in 2001, consolidating several health insurance schemes and reaching a large number of people previously not covered, particularly in the informal sector. This tax-financed scheme provides universal and free healthcare at the point of service.</li> <li>• There is a Child Support Grant, a non-contributory means-tested monetary transfer to families with children up to 3 years of age.</li> <li>• A new voluntary social security system for informal economy workers was initiated in 2011. The scheme is based on contributions from workers and the Government to finance old-age, disability, survivors', sickness and maternity benefits.</li> </ul>
Fisheries sector tenure <sup>517</sup>	<ul style="list-style-type: none"> <li>• The <i>Fisheries Act</i> 2015 has introduced measures to facilitate access to marine resources and markets for small-scale local fishermen. Provisions include zoning between commercial and artisanal fishing vessels, and the promotion of development of tools for local coastal fisheries. According to the Government, "this will assist small-scale local fishermen to stay in the business and in harmony with the sea".<sup>518</sup></li> <li>• Decentralization has made provisions for communities to participate in natural resource management. The <i>Tambon Administrative Organization (TAO) Act</i> of 1994 empowers local communities, at subdistrict level, to manage and conserve natural resources and the environment in their localities. These powers enable local communities to regulate any activities in their areas.</li> <li>• The <i>Provincial Administrative Organization Act (1997)</i> empowers the Provincial Administrative Organization to formulate provincial development plans, coordinate and cooperate with Tambon Administrative Organizations (TAOs), allocate budgets to TAOs and protect and conserve natural resources and the environment in their territories. This has given the power to communities to have rights over their territories and to manage their resources.</li> <li>• However, women are not often recognized in these community-based structures and only men participate in these meetings. Women have preferential rights only over sedentary species for harvest that are of low economic value.<sup>519</sup></li> </ul>



Women's right to property <sup>520</sup>	<ul style="list-style-type: none"> <li>Article 27 of the Constitution stipulates against discrimination on various grounds including gender. It guarantees equal rights for women and men and stresses that persons are equal before the law and shall enjoy equal protection under the law.</li> <li>The <i>Gender Equality Act</i> (2015) aims to promote gender equality in various aspects including social, economic and political rights. However, implementation of these at the local Tambon level is still a challenge as cultural practices do not allow women to jointly own property and often land is not registered in their names.</li> </ul>
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## CEDAW

Convention	Ratified	9 August 1995
Optional Protocol	Ratified	14 June 2000

## Gender mainstreaming initiatives<sup>521</sup>

- Thailand has a Women Development Strategy for the period 2017–2021 that includes gender mainstreaming and gender budgeting.
- Gender-responsive budgeting (GRB) is considered an important instrument in terms of administration and management of budget preparation.
- The Department of Fisheries provides training for women to be involved in marketing, as well as in other activities, and to form women's groups.<sup>522</sup>

## Fishery organizations/networks

Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
Network of Aquaculture Centres in Asia-Pacific (NACA)	Member
Southeast Asian Fisheries Development Center (SEAFDEC)	Member
Asia-Pacific Fisheries Commission (APFIC)	Member
Mekong River Commission	Member
Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)	Member
Bay of Bengal Large Marine Ecosystem Project (BOBLME) (2009–2017)	Member

## UNITED ARAB EMIRATES

### Quick facts

- The United Arab Emirates (UAE) is a major fish importer among the Gulf countries, with fish imported in large quantities from India, Oman and Thailand. Its fisheries are important, providing a supply of fish to local communities and urban areas that comes entirely from small-scale fishing. Trawling was banned in the 1990s.<sup>523</sup>
- Women do not play a significant role in fisheries or aquaculture in the United Arab Emirates.

### Fish production (in tonnes)<sup>524</sup>

Capture (marine)	73,000	2016
Capture (inland)		2016
Aquaculture	1,162	2016
Total production	74,162	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>526</sup>	24.5 kg/year	2015
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
UAE GDP <sup>526</sup>	US\$632.6 billion	2017
Fisheries contribution to GDP		
Agriculture, forestry and fishing, value added to GDP <sup>527</sup>	0.76 per cent	2017

- The United Arab Emirates exports around **52.1 per cent** of its production of fish in volume terms.<sup>528</sup>
- In value terms, fishery exports are around **0.01 per cent** of GDP.<sup>529</sup>

### Employment

In 2011, FAO estimated 24,800 fishers in marine fishing and only 144 in aquaculture.<sup>530</sup> In a previous estimate for 2001, FAO estimated 18,000 in fisheries, and the processing sector employing 14,000.<sup>531</sup> There were no sex-disaggregated data; however, given the employment pattern in the region, women's employment could be expected to be low. **The total employment can be estimated to be around 40,000 including fish processing in the sector, with no estimates for participation of women.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was -35 per cent.<sup>532</sup>
- The **sector wage gap** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to the average women's wages across sectors, was -31 per cent.<sup>533</sup>
- The **average wage in PPP terms** of women in the sector was US\$3,590.10 (PPP) per month in 2017.

**Note:** The gender wage gap is negative, that is, the reported average wage is higher for women than for men in fisheries. The sector wage gap is also negative, that is, women in the sector earn more than women in other sectors. These findings contradict the general trend in gender and sector wage gaps among IORA Member States. A possible explanation could be that few women are included in the enumeration and these might be women in formal employment, with better wages.

## Employment and social protection

Social security <sup>534</sup>	According to Federal Law No. 2 of 2001, monthly assistance is provided to the following categories of UAE nationals residing within the United Arab Emirates: widows, abandoned women and UAE national women married to expatriate men who cannot earn a living for reasons beyond their control. The National Strategy for Empowerment of Emirati Women aims at providing healthcare services to women in order to enhance their physical and psychological health. The strategy provided mechanisms to achieve this goal.
Land tenure	Women in the United Arab Emirates have equal rights to economic resources, as well as access to ownership and control over land and other forms of property, inheritance and natural resources, in accordance with national laws.
Fisheries sector tenure	N/A
Women's right to property	The Sheikh Zayed Housing Programme provides housing for single Emirati women.

## CEDAW

Convention	Ratified	6 October 2004
Optional Protocol	Not ratified	

## Gender mainstreaming initiatives<sup>535</sup>

- In May 2015, the Government established the UAE Gender Balance Council to ensure that Emirati women continue to play a leading role in the country's development. The Council is mandated to oversee the implementation of best practices and processes to ensure federal institutions achieve their gender-balance targets, which will support the UAE's vision to become one of the world's top 25 countries for gender equality by 2021. The Council carries out several functions, including reviewing legislation, policies and programmes to achieve gender balance in the workplace.
- The National Strategy for Empowerment of Emirati Women was adopted in 2015 for 2015–2021. The strategy provides a framework for government, private sector and civil society organizations to establish work plans to promote women's empowerment.

## Fishery organizations/networks

Organization	Status
Regional Committee for Fisheries	Member
Indian Ocean Tuna Commission (IOTC)	Observer

## UNITED REPUBLIC OF TANZANIA

### Quick facts

- The United Republic of Tanzania ranks 68<sup>th</sup> out of 153 countries in the Global Gender Gap Report 2020.<sup>536</sup>
- The Strategy for Growth and Reduction of Poverty (for both Tanzania Mainland and Zanzibar) identifies gender equality and women's empowerment as among the major development issues that require multisectoral approaches.
- Women are increasingly involved in fisheries and aquaculture, including in fish trade, seaweed farming and octopus fishing among others. Studies show women seeking employment in the fisheries sector due to lack of other alternate sources and the need to supplement household income.<sup>537</sup>

### Fish production (in tonnes)<sup>538</sup>

Capture (marine)	57,964	2016
Capture (inland)	312,039	2016
Aquaculture	5,047.4	2016
Total production	375,050.4	2016

### Fish consumption (in kg per annum)

Per capita fish consumption <sup>539</sup>	5.5 kg/year	2016
Fish protein as proportion of animal protein	21.8 per cent	2016
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture		
Aquaculture		
Total (capture + aquaculture)		
Tanzania GDP <sup>540</sup>	US\$149.1 billion	2017
Fisheries contribution to GDP <sup>541</sup>	2 per cent	2016

- The United Republic of Tanzania exports around **8.8 per cent** of its production of fish in volume terms.<sup>542</sup>
- In value terms, fishery exports are around **0.09 per cent** of GDP.<sup>543</sup>

### Employment

A 2013 paper on the fisheries sector estimated 183,223 fishers in capture fishing, 19,223 fish farmers and around 4 million involved in fish processing, trade and other ancillary activities. The paper also estimated 29,285 boys engaged in fishing and fish processing. A large proportion of women could be expected in fish processing and trade.<sup>544</sup> **Total employment is estimated to be around 4.2 million involved in fishing and downstream activities, with a significant proportion of women.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 12 per cent.<sup>545</sup>
- The **sector wage gap** in 2015, defined as the average wages of women in the agriculture, forestry and fisheries sector compared to average women's wages across sectors, was 66 per cent.<sup>546</sup>
- The **average wage in PPP terms** of women in the sector was US\$125.21 (PPP) per month in 2017.

## Employment and social protection

Social security <sup>547</sup>	<ul style="list-style-type: none"> <li>• The United Republic of Tanzania provides maternity protection coverage through non-contributory social assistance programmes. The Social Action Fund provides cash transfers to pregnant women equivalent to US\$6, disbursed every two months on condition that they attend at least four antenatal medical exams or health and nutrition sessions every two months and present their children for regular medical checks.<sup>548</sup></li> <li>• In 2016, Zanzibar (United Republic of Tanzania) became the first territory in East Africa to implement a social pension fully financed by the Government. The Universal Pension Scheme provides all residents over the age of 70 a monthly pension of TZS 20,000 (US\$9). In May 2016, 21,750 people, or 86 per cent of the eligible population, received the universal pension.<sup>549</sup></li> </ul>
Land tenure <sup>550</sup>	The <i>Land Act</i> and the <i>Village Land Act</i> of 1999, both came into effect in 2001 and contain provisions for every woman to acquire, hold, use and deal with land under the same rules as men. Additionally, the Acts provide that land must be registered under the names of all spouses. Co-occupied land therefore cannot be disposed of by one occupant without first obtaining the consent of his or her co-occupiers.
Women's right to property <sup>551</sup>	Under civil law, women and men have equal property rights. However, most property is regulated under various clan rules and regulations. It is difficult for women to own land within the community.

## CEDAW

Convention	Ratified	20 August 1985
Optional Protocol	Ratified	12 January 2006

## Gender mainstreaming initiatives

- The final Draft Gender Operational Plan 2016–2018 is an updated version of the 2010–2012 Gender Operational Plan leading to the establishment of the Ministry of Community Development, Gender and Children (Tanzania Mainland) and the Zanzibar Ministry of Empowerment, Social Welfare, Youth, Women and Children. These are the principal public offices for the coordination, implementation and supervising of all affairs concerning women's empowerment.
- Gender Mainstreaming Macro Working Groups have been established since 2008 with the aim of advocating for gender mainstreaming in policies, programmes, plans and budgets of sectoral Ministries and NGOs.
- The United Republic of Tanzania has gender-responsive budgeting led by the Ministry of Finance.

## Fishery organizations/networks

Organization	Status
Indian Ocean Tuna Commission (IOTC)	Member
Southwest Indian Ocean Fisheries Commission (SWIOFC)	Member
Committee for Inland Fisheries and Aquaculture of Africa (CIFFA)	Member
Lake Victoria Fisheries Organization (LVFO)	Member
Lake Tanganyika Authority (LTA)	Member

## YEMEN

### Quick facts

- Fisheries, regarded as the Yemeni economy's third sector in order of economic importance, contribute 3 per cent to the country's GDP and are the major source of employment, income and food security throughout the coastal areas. After oil, fisheries constitute the main source of export earnings and account for 1.5 per cent of the national labour force, supporting the livelihoods of 3.2 per cent of the national population. Fisheries are mainly artisanal in nature. Women work in organized fish-processing industries such as tuna canning that operate in the coastal areas.<sup>552</sup>

### Fish production (in tonnes)<sup>553</sup>

Capture (marine)	154,423	2016
Capture (inland)		2016
Aquaculture		2016
Total production	154,423	2016

### Fish consumption (in kg per annum)

Per capita fish consumption	5 kg/year	2005
Fish protein as proportion of animal protein		
Fish protein as proportion of total protein		

### Economic contribution of fisheries and aquaculture

Fish capture <sup>554</sup>	US\$213 million	2010
Aquaculture		
Total (capture + aquaculture)	US\$213 million	2010
Yemen GDP <sup>555</sup>	US\$66.9 billion	2017
Fisheries contribution to GDP <sup>556</sup>	3 per cent	2012

- Yemen exports around **34.5 per cent** of its production of fish in volume terms.<sup>557</sup>
- In value terms, fishery exports are around **0.28 per cent** of GDP.<sup>558</sup>

### Employment

FAO studies estimated around 70,000 fishers in the artisanal sector and negligible participation of women in artisanal fishing and fish processing and trade.<sup>559</sup> Government sources estimated 75,000 fishers with negligible participation of women, while the organized processing sector employed around 2,000 persons, with 45 per cent women.<sup>560</sup> Some other reports have estimated employment in the sector as around 83,000, with a very small aquaculture sector.<sup>561</sup> **The total employment in the sector is estimated to be around 77,000, with low participation of women, mainly in organized processing.**

## Wages

- The **gender wage gap** in 2015, comparing the average wage of women with that of men in the agriculture, forestry and fisheries sector, was 39 per cent.<sup>562</sup>
- The **sector wage gap** in 2015, defined as average wages of women in the agriculture, forestry and fisheries sector compared to average women's wages across sectors, was 54 per cent.<sup>563</sup>
- The **average wage data in PPP terms** of women in the sector were not available.

## Employment and social protection

Land tenure <sup>564</sup>	Property rights are expressed both in custom and statute. Both are informed by <i>Shari'a</i> (Islamic law), under which daughters receive only half the share of sons. Disadvantaged ethnic groups do not have access to land.
Fisheries sector tenure <sup>565</sup>	Currently, there are about 44 women's associations involved in traditional fish processing and crafts making. There is a disorganized cooperative union that lacks both institutional and organizational structures and a national representative body. At the community level, in some regions (near Al-Kowkha), women are involved in catching small fish for local markets using small ring/swing nets near the coastal beach line. In some regions (Al-Khowbha), they are involved in smoking, drying and salting of the fish for local markets. In other regions (Abyan), women help fishermen during the post-harvest operations of handling and sorting fish. Women are largely excluded from participation in community-level natural resource management initiatives, relations with external agencies and political representation.

## CEDAW

Convention	Ratified	30 May 1984
Optional Protocol	Not ratified	

## Gender mainstreaming initiatives<sup>566</sup>

The National Strategy for Women Development (2006–2015) included a strategic vision for the goals and measures required to improve women's status and allow them to enjoy basic human rights and freedom to practise their role in development and participate effectively in all aspects of life. While there are legal provisions, the lack of implementation of these provisions has led to discrimination. The Women's National Committee (WNC) has worked on gender mainstreaming the components of the strategy into the General Development and Poverty Eradication Plan (2006–2010) to be translated into general development projects and programmes. This has encouraged the WNC to start presenting gender sectoral budgets (gender budgeting).<sup>567</sup>

## Fishery organizations/networks

Organization	Status
Southwest Indian Ocean Fisheries Commission (SWIOFC)	Member

## ANNEX

### ANNEX 1

#### Status of ratification of international conventions and treaties related to gender equality and women's economic empowerment

Country Name	ILO Equal Remuneration Convention, 1959 (No. 100)	ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111)	ILO Work in Fishing Convention, 2007 (No. 188)	ILO Maternity Protection Convention, 2000 (No. 183)	ILO Social Security (Minimum Standards) Convention, 1952 (No. 102)	United Nations Convention on the Law of the Sea (UNCLOS)	United Nations Fish Stocks Agreement (UNFSA)	Convention on Biological Diversity (CBD)	International Convention on Elimination of All forms of Racial Discrimination (ICERD)	International Covenant on Civil and Political Rights (ICCPR)	International Covenant on Economic, Social and Cultural Rights (ICESCR)	Convention on the Rights of Persons with Disabilities (CRPD)	Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)	CEDAW Optional Protocol	CEDAW Optional Protocol acceptance of inquiry procedure
Australia	10-Dec-74	15-Jun-73		-	-	10-May-94	23-Dec-99	18-Jun-93	28-May-05	2-Jun-05	28-May-05	30-Jun-05	28-Jul-83	4-Dec-08	4-Dec-08
Bangladesh	28-Jan-98	22-Jun-72		-	-	27-Jul-01	11-May-12	5-Mar-94	1-Jun-05	22-Jun-05	20-Jun-05	29-Jun-05	6-Nov-84	6-Sep-00	
Comoros	23-Oct-78	17-Mar-04		-	-	21-Jun-94		29-Sep-94	26-Jun-05			8-Jul-05	31-Oct-94		
India	25-Sep-58	3-Jun-60		-	-	29-Jun-95	19-Aug-03 (A)	18-Feb-94	21-May-05	1-Jun-05	1-Jun-05	29-Jun-05	9-Jul-93		
Indonesia	11-Aug-58	7-Jun-99		-	-	2-Mar-86	28-Sep-09	23-Aug-93	21-Jun-05	28-Jun-05	28-Jun-05	3-Jul-05	13-Sep-84	28-Feb-00 (S)	
Iran (Islamic Rep. of)	10-Jun-72	30-Jun-64		-	-	12-Oct-82	17-Apr-98 (A)	8-Jun-96	21-May-05	28-May-05	28-May-05	1-Jul-05			
Kenya	7-May-01	7-May-01		-	-	3-Feb-89	13-Jul-04 (A)	26-Jul-94	23-Jun-05	25-May-05	25-May-05	30-Jun-05	9-Mar-84		
Madagascar	10-Aug-62	11-Aug-61		-	-	22-Aug-01		3-Apr-96	22-May-05	24-May-05	24-May-05	7-Jul-05	17-Mar-89	7-Sept-00 (S)	
Malaysia	9-Sep-97	-		-	-	14-Oct-96		24-Jun-94				2-Jul-05	5-Jul-95		
Maldives	4-Jan-13	4-Jan-13		-	-								1-Jul-93	13-Mar-06	13-Mar-06
Mauritius	18-Dec-02	18-Dec-02		-	-	11-Apr-94	25-Mar-97 (A)	9-Apr-92	25-May-05	26-May-05	26-May-05	2-Jul-05	9-Jul-84	31-Oct-08	31-Oct-08
Mozambique	6-Jun-77	6-Jun-77		-	-	13-Mar-97	10-Dec-08 (A)	25-Aug-95	5-Jun-05	15-Jun-05		4-Jul-05	21-Apr-97	4-Nov-08	4-Nov-08
Oman				-	-	17-Aug-89	14-May-08 (A)	2-Aug-95	25-Jun-05			1-Jul-05	7-Feb-06		
Seychelles	23-Nov-99	23-Nov-99		-	-	16-Sep-91	29-Mar-98	22-Sep-92	31-May-05	14-Jun-05	14-Jun-05	1-Jul-05	5-May-92	1-Mar-11	1-Mar-11
Singapore	30-May-02			-	-	17-Nov-94		21-Dec-95	9-Jul-05			5-Jul-05	5-Oct-95		
Somalia		8-Dec-61		-	-	24-Jul-89		9-Nov-09	28-May-05	12-Jun-05	12-Jun-05				
South Africa	30-Mar-00	5-Mar-97	20-Jun-13	-	-	23-Dec-87	14-Aug-03 (A)	22-Nov-95	20-Jun-05	20-Jun-05	7-Jul-05	29-Jun-05	15-Dec-95	18-Oct-05	18-Oct-05
Sri Lanka	1-Apr-93	27-Nov-98		-	-	19-Jul-94	24-Oct-96	23-Mar-94	4-Jun-05	2-Jun-05	2-Jun-05	8-Jul-05	5-Oct-81	15-Oct-02	15-Oct-02
Thailand	8-Feb-99	13-Jun-17	30-Jan-19	-	-	15-May-11	28-Apr-17 (A)	31-Oct-03	25-Jun-05	18-Jun-05	21-Jun-05	30-Jun-05	9-Aug-85	14-Jun-00	14-Jun-00
United Arab Emirates	24-Feb-97	28-Jun-01		-	-			2-Oct-00	27-May-05			2-Jul-05	6-Oct-04		
United Republic of Tanzania	26-Feb-02	26-Feb-02		-	-	30-Sep-85		3-Aug-96	25-May-05	29-May-05	29-May-05	1-Jul-05	20-Aug-85	12-Jan-06	12-Jan-06
Yemen	29-Jul-76	22-Aug-69		-	-	21-Jul-87		21-Feb-96	25-May-05	6-Jun-05	6-Jun-05	1-Jul-05	30-May-84		

Sources:

ILO Conventions: Information System on International Labour Standards: <https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:1:0::NO>

CEDAW, ICESCR, CRPD, ICERD, ICCPR: Office of the High Commissioner for Human Rights, United Nations: <https://www.ohchr.org/EN/pages/home.aspx>

UNFSA, UNCLOS: Division for Ocean Affairs and the Law of the Sea, United Nations. <https://www.un.org/depts/los/>

CBD: [www.cbd.int](http://www.cbd.int)

Notes:

(A) Accession to the agreement

(S) Signatory



# ENDNOTES

1. The term “blue economy” emerged from the UN Conference on Sustainable Development (Rio+20) held in 2012, where Member States pledged to “protect and restore the health, productivity and resilience of oceans and marine ecosystems to maintain their diversity, enabling their conservation and sustainable use for present and future”. This became the basis of Sustainable Development Goal (SDG) 14 dedicated specifically to “conserve and sustainably use the oceans, seas and marine resources for sustainable development”.
2. HLPE 2014.
3. IORA 2017a.
4. IORA 2017b.
5. IORA 2017c.
6. IORA 2018.
7. CEA 2018.
8. FAO 2015a.
9. FAO 2004.
10. Teh and Pauly 2018.
11. Biswas 2017.
12. Department of Fisheries 2017.
13. Huguet 2014.
14. USAID 2017a.
15. FAO 2018a.
16. Teh and Pauly 2018.
17. FAO 2015b.
18. FAO 2018a.
19. In this report, the terms “IORA countries” and “IORA Member States” are used interchangeably.
20. The weighted average per capita income for the IORA countries for 2017 is calculated by multiplying the per capita GNI PPP\$ by the population for each country, summing these figures, then dividing the sum by the total IORA population.
21. ILO 2018a.
22. FAO compiles direct fishery employment statistics only for the large fish-producing countries, so these data are only available for the 11 largest fish producers in the IORA region.
23. FAO 2018a.
24. Harper et al. 2017.
25. Ibid.; Lentisco and Lee 2015.
26. ILO 2007.
27. Biswas 2017.
28. Matsue et al. 2014.
29. FAO 2018a.
30. Biswas 2018.
31. FAO 2005a.
32. FAO 2018a.
33. FAO and WorldFish 2017.
34. Dey de Pryck 2013.
35. Note that in the case of India, the statutory minimum wage is the same for women and men, and therefore the gender gap for India is zero. In all likelihood, however, the average wage for women in the sector would be lower than for men as women are likely to be compensated at a rate lower than the minimum wage and are also likely to be underemployed.
36. Chacko 2017.
37. FAO 2016a.
38. FAO 2012a.
39. FAO 2015b.
40. Hauzer et al. 2013.
41. Kesatuan Nelayan Tradisional Indonesia 2016; KIARA 2012.
42. CISP 2018.
43. FAO 2015b.
44. Al-Rashdi and Mclean 2014.
45. Harper et al. 2013.
46. CISP 2018.
47. Peke 2016.
48. FAO 2018a.
49. Hanoomanjee 2017.
50. FAO 2015b.
51. Biswas 2017.
52. Karmakar et al. 2009.
53. Matthews et al. 2012.
54. Tietze and Villareal 2003.
55. Biswas 2017.
56. ICSF 2010a.
57. Aggarwal 2008.
58. Das and Sundarajan 2003.
59. Frocklin et al. 2013.
60. Nayak and Vijayan 2006.
61. Karmakar et al. 2009.
62. Nuruzzaman 2013.
63. Dey de Pryck 2013.
64. Jeebhay et al. 2000.
65. Huguet 2014.
66. FAO 2012b.
67. Rumley et al. 2009.
68. U.S. Department of State 2016.
69. Al Rashdi and McLean 2014.
70. Dey de Pryck 2013.
71. Quist and Frangoudes 2005.
72. Ibid.
73. ILO undated.
74. SSA and ISSA 2017a.
75. SSA and ISSA 2017b.
76. SSA and ISSA 2017a.
77. Ibid.
78. SSA and ISSA 2017b.
79. SSA and ISSA 2017a.
80. SSA and ISSA 2017b.
81. SHSRCK undated.
82. World Bank 2018.
83. World Bank 2020a.
84. Islam 2008.
85. Thirumoorthy et al. 2016.
86. Lopata and Jeebhay 2004.
87. Jeebhay et al. 2000.
88. Jeebhay and Lopata 2006.
89. Lopata and Jeebhay 2004.
90. Solidarity Centre and SAFE 2012.
91. UN General Assembly 2019.
92. Tripathi et al. 2017.
93. Müller et al. 2016.
94. Biswas 2017.
95. Lentisco and Lee 2015.
96. ICSF 2010b.
97. International Conference of Women in Fisheries 2018.

98. El-Horr and Pande 2016.
99. Dey de Pryck 2013.
100. United Republic of Tanzania 2016.
101. FAO 2018b.
102. Ibid.
103. Gammage et al. 2006.
104. Charles et al. 1997.
105. Ibid.
106. Ibid.
107. FAO 2018a.
108. Siason et al. 2002.
109. Williams et al. 2018.
110. FAO and WorldFish 2017.
111. Williams et al. 2002.
112. Salagrama 2012.
113. Waldorff 2017.
114. Tietze et al. 2007.
115. Kizito 2017.
116. Neis et al. 2005.
117. FAO 2016a.
118. Biswas 2017.
119. Resurrección and Sajó 2010.
120. World Benchmarking Alliance 2019.
121. Le Manach et al. 2012.
122. Mills et al. 2017.
123. Ahmed 2006.
124. CISP 2018.
125. Mohamed et al. 2017.
126. Ammar 2018.
127. FAO 2015c.
128. BOBLME 2015.
129. Diaz and Dubner 2010.
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