

SMALL-SCALE FISHERIES AND AQUACULTURE IN ASIA

Complementing the interview with Nicole Franz, we reproduce (below) excerpts from a photostory book that was published last year to commemorate the International Year of Artisanal Fisheries and Aquaculture 2022 (IYAFA 2022). This joint FAO and INFOFISH publication is cited as: *FAO and INFOFISH. 2022. The small-scale fisheries and aquaculture sector in Asia – Small in scale, big in value. Bangkok, FAO. <https://doi.org/10.4060/cc0026en>*



Ibu Amsu is the oldest seaweed production worker in Pagarbatu village, Sumenep Regency, on the Madura Island of Indonesia. She started growing seaweed in 1990 and was one of the pioneers of this industry in her community. Being already eighty years old, Amsu still actively works on seaweed production, which made her able to send her children and grandchildren to school and universities. She is a member of a cooperative.

©SMART-Fish Indonesia/Ray Chandra Purnama

SMALL IN SCALE, BIG IN VALUE

Small-scale fisheries employ more than 90 percent of the world's capture fishers and provide the primary source of animal protein for 17 percent of the world's population. Meanwhile, some 20 million people are directly engaged in aquaculture worldwide (FAO, 2020).¹ This increases to up to 50 million if indirectly engaged people are also considered. FAO also estimates that about 62 percent of food fish will come from aquaculture by 2030.

Despite their obvious importance as a source of food security, nutrition, and livelihoods, fisheries and aquaculture are consistently undervalued and overlooked in planning and development policies.

¹ FAO. 2020. *The State of World Fisheries and Aquaculture 2020. Sustainability in action*. Rome.

Mainstreaming the needs of small-scale fishers and fish farmers into food-security related policies, as well as broader economic and social development strategies, will enhance resilience and sustainability within the sector.

THE SSF GUIDELINES

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) recognize the need for responsible and sustainable use of aquatic biodiversity and natural resources in line with its Guiding Principles which include human rights and dignity; equity and equality; economic, social and environmental sustainability; holistic and integrated approaches; and social responsibility.

Small-scale fisheries are generally portrayed as being sustainable due to their relatively low impact on the environment as compared to the industrial sector. However, the incidence of small-scale fishers using poisons and explosives as well as highly destructive fishing gears and small-meshed nets to harvest ever-declining resources is also well-documented.

The majority of small-scale farmers in Asia are involved in freshwater aquaculture which is predominantly centred around ponds and cages managed by households or communities; or integrated into local traditions and activities such as rice-fish farming. Consequently, small-scale aquaculture activities meet many of the aims contained in the SSF Guidelines such as economic, social and environmental sustainability. Diseases wiping out entire stocks, poor water quality, and low-quality feeds are some of the challenges.

Realization of SDG14b, which calls for improved access to markets by small-scale fisheries, is still a long way off in every region of the world. In part, this is due to the structure of prevailing value chains where the power to set prices and negotiate with buyers is firmly in the hands of traders or trade organizations, as well as market structures themselves which are contrary to the nature of small-scale fisheries. Even at landing sites, village markets and roadside stalls, the fishery products may already have been traded at least once from the point of harvest. Access to international markets brings extra levels of difficulty; for example, the inability to fulfil traceability criteria.

And yet, time and again, the small-scale sector has proven itself to be adaptable and resilient, given the necessary tools. Most recently, informal reports have related how in the face of closed market channels due to the COVID-19 pandemic, there were incidences of small-scale fishers who took their first steps into e-commerce using websites and social media. In this regard, the International Year of Artisanal Fisheries and Aquaculture 2022 (IYAFA 2022) serves as a timely reminder that the SSF Guidelines call for increased focus on capacity building within the sector, and an enabling environment in which to thrive.

CAPTURE AND CULTURE

Asia is home to the majority of the world's fisheries and aquaculture producers. Small-scale fisheries and aquaculture play complementary roles in contributing to food security, poverty alleviation and employment opportunities. Owing to the expansion in aquaculture, the fisheries sector increasingly contributes to the volume and value of trade in export markets, representing an important source of foreign exchange.

With regard to culture, FAO fishery statistics indicate that Asia is the largest aquaculture producer in the world, accounting for 92 percent of the live-weight volume of animals and seaweeds in 2017. By far the main producer is China, with India, Viet Nam and Bangladesh making rapid strides.

In comparison to the capture sector, women in Asia are more visible in the farming of aquatic species. In 2018, the proportion of women fish farmers as primary producers in Asia was about 19 percent, while that in fisheries was about 10 percent. As more women work in the post-harvest stage such as processing, their actual contribution to the aquaculture sector is higher than reported (FAO 2020).

Capture fisheries

One of the challenges faced by the small-scale sector is competition from bigger, more mechanized vessels owned by the industrial sector. The SSF Guidelines addresses this, stressing that small-scale fishing communities must have equitable access to the resources that form the basis for their social and cultural well-being, their livelihoods and their sustainable development.

Culture of aquatic species

Fish farming is dominated by Asia, which has produced 89 percent of the global total in volume terms in the last 20 years. Over the same period, the shares of Africa and the Americas have increased, while those of Europe and Oceania have decreased slightly. Outside China, several major producing countries (Bangladesh, Chile, Egypt, India, Indonesia, Norway

and Viet Nam) have consolidated their shares in world aquaculture production to varying degrees over the past two decades. China has produced more farmed aquatic food than the rest of the world combined since 1991.



Freshwater shrimp farm, Myanmar.

FROM HARVEST TO TABLE

With the global population expected to reach 9.8 billion by 2050, harvesting responsibly; reducing post-harvest losses; adding value to small-scale fisheries and aquaculture production; ensuring proper transport and storage conditions; and facilitating sustainable trade and equitable market access build upon each other to form a value chain. Initiatives to strengthen each link in the chain are highlighted as priorities in the SSF Guidelines and the 2030 Agenda for Sustainable Development.



Talaad Thai in Pathum Thani Province is the largest wholesale food market in Southeast Asia. Snakeskin gourami and a wide variety of live, fresh/chilled freshwater fish (wholesale/retail), fresh/chilled seafood and dried fish products are sold in this retail outlet.

Central to guaranteeing the contributions of small-scale fisheries and aquaculture to sustainable nutritional security is addressing post-harvest food losses/food waste (FLW), and the first step is to understand why and where food loss and waste happen. In fact, by its very nature, small-scale fisheries and aquaculture are more aligned with sustainability goals than commercial initiatives; and yet, significant post-harvest losses occur in these sectors. So crucial is this issue that the FAO has set up a specific website specifically for FLW (<https://>

www.fao.org/flw-in-fish-value-chains/en) covering capture fisheries, aquaculture, processing and storage, wholesale, transport, retail, and consumption. Reducing FLW will contribute to the objectives of at least six United Nations Sustainable Development Goals (SDGs).



Dried fish snacks, Talad Talay Thai (seafood wholesale market) in Samut Sakhon Province, Thailand.

CELEBRATING THE DIVERSITY OF SMALL-SCALE FISHERIES IN ASIA

In 2018, an estimated 50.38 million people were directly engaged in fisheries and aquaculture in Asia, representing 85 percent of the global total. The SSF Guidelines describes small-scale fisheries as encompassing these wide-ranging activities undertaken throughout the value chain by both men and women in inland and marine fisheries, including harvesting from boats and on foot, along with pre- and post-harvest labour that occurs on land.

Women in fisheries

An estimated 59.51 million people were engaged (on a full-time, part-time or occasional basis) in the primary sector of capture fisheries (39.0 million people) and aquaculture (20.5 million people) in 2018, a slight increase from 2016. Women accounted for 14 percent of the total, with shares of 19 percent in aquaculture and 12 percent in capture fisheries. Of all those engaged in primary production, most are in developing countries, and the vast majority are artisanal fishers and aquaculture workers. The highest numbers of workers are in Asia (85 percent), followed by Africa (9 percent), the Americas (4 percent), and Europe and Oceania (1 percent each). When post-harvest operations data are included, it is estimated that one in two workers in the sector is a woman. When women are given the support that they need and they become successful, the balance of power within their family and social environment shifts.

Apart from gleaning and casting nets from the shoreline, women are rarely the ones doing the actual fishing. Instead, they constitute the main bulk of the labour force in the processing and small retail sub-sectors. Nevertheless, their contribution to the landed value globally is around USD 5.6 billion.



Small scale processing of fish sausages (lekor), Mersing, Johor state, Malaysia. This is a traditional Malay fish snack originating from the state of Terengganu, Malaysia, made from fish (bream or herring) and sago flour, and seasoned with salt and sugar. The word lekor is said to be derived from a Terengganu Malay word meaning “to roll”.

A SHARED REGIONAL VISION

States have their own national frameworks set up to manage their fisheries and aquaculture industry, including at the small-scale level. However, there are issues which are transboundary in nature and have an impact well beyond national borders. These include monitoring, control and surveillance regarding the exploitation of regional fishery resources, as well as biosecurity threats such as the whitespot syndrome virus (WSSV) which had ravaged shrimp farms in Asia in the 1990s.

Such issues of regional and global concern are referenced in many documents and plans of action, including FAO’s groundbreaking 1995 publication “The Code of Conduct for Responsible Fisheries (CCRF)” which sets out principles and international standards of behaviour for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources. States are called upon to cooperate at sub-regional, regional and global levels through fisheries management organizations, international agreements or other arrangements to promote conservation and management, ensure responsible fishing as well as effective conservation and protection of living aquatic resources, within their respective competences and in accordance with international law.