DRAFT

Food and Agriculture Organization of the United Nations

Developing and Implementing a National Plan of Action for Small-Scale Fisheries (NPOA-SSF)

PROFILE OF SMALL-SCALE FISHERIES IN SRI LANKA

WORKING DOCUMENT

Food and Agriculture Organization of the United Nations (FAO)
Bay of Bengal Programme Inter-Governmental Organization (BOBP-IGO)
2025

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SMALL-SCALE FISHERIES IN SRI LANKA

This SSF profile, developed in support of the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), informs the initiation of an NPOA-SSF and will be reviewed and further developed as part of the NPOA-SSF development.

Food and Agriculture Organization of the United Nations (FAO)
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Preface

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) is an international instrument focusing on the needs of small-scale fisheries. The SSF Guidelines provide an all-inclusive framework for guiding small-scale fisheries governance and development. They advocate the development of a comprehensive implementation plan in the format of a National Plan of Action for the implementation of the SSF Guidelines (NPOA-SSF), that identifies strategies and priority actions to be taken at the country level.

This SSF profile informs the initiation of an NPOA-SSF. It is expected that this will be reviewed and further developed as part of the NPOA-SSF development.

The first draft of the country profile for Sri Lanka was prepared by the BOBP IGO team using the template given in **Developing and implementing a National Plan of Action for Small-Scale Fisheries (NPOA-SSF) SSF profile** (1-2 template)[1]. The section headers are maintained largely as given in this document, except that the numbering of tables is different with the addition of tables and figures.

The document was revised based on the critical inputs received from the subject matter experts from FAO and national experts. The revised draft was discussed during the FAO Regional Capacity Development Workshop on Development of National Plan of Action for Small Scale Fisheries (NPOA-SSF) held in Chennai from 17-19 September 2025, and the feedback obtained from the country's official nominees to the Workshop were incorporated.
The DRAFT Final version was then circulated to the Government of Sri Lanka and all the experts and community representatives involved in the process for review and the document was further revised and improved based on the comments received.

This version of the SSF Country Profile for Sri Lanka will serve as a working document for the National Task Force members and as reference material for outreach and communication, during the development of the NPOA-SSF for Sri Lanka and will be subject to revision and adaptation based on continuous feedback and inputs.

(Dr. P. Krishnan)
Director, BOBP-IGO

[1] https://www.fao.org/fishery/services/storage/fs/fishery/data/npoassfprocess/1-2_SSF_profile_template_en.pdf

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1. Definition of small-scale fisheries in Sri Lanka

No legal definition available is available for small scale fisheries. But Artisanal fisheries are listed as those using FRP 18' - 23' Boats (OBM) boats, traditional craft and beach seine[2].

In the Sri Lankan context, a range of small- and large-scale fishing can be identified based on characteristics such as the size of the catch and the type of species caught, the technology – type of craft and equipment used, the amount of capital (human and physical) invested, and the returns to the producer. Apart from those who engage in capture fishing, there are culture fish producers – both small- and large-scale – and a complex web of men and women who engage in fishing-related activities along the value chain.

In the Sri Lankan context, there is a general understanding that *small scale fisheries comprise fishing carried out using artisanal crafts and small boats with OBM in near shore waters and in inland water bodies, engaged in one day fishing trips, targeting home consumption and local market by fishers, supported by women folk who are engaged in a number of ancillary activities, and live in highly cohesive communities, with deeply rooted culture, values, beliefs and principles*.

The operational definition of SSF above is for use in the context of the implementation of the National Plan of Action for Small-scale Fisheries (NPOA-SSF).

> ***TIPS:***
>
> *Commonly used terms for small-scale fisheries' fishers, associated groups and the legal standing of these groups (that is, are they mentioned and recognized in national laws?).*
>
> *Propose a working definition of small-scale fisheries, noting that the objective is for stakeholder inclusion and to cover the whole supply chain.*
>
> *If there is uncertainty or disagreement over the inclusion of certain fisheries within the working definition of small-scale fisheries, the FAO characterization matrix could be used to compare fisheries. This matrix provides a semi-quantitative approach to enable fisheries to be compared against various scale criteria.*

[2] Peter Flewwelling and Gilles Hosch, Sri Lanka. In De Young, C. (ed.) Review of the state of world marine capture fisheries management: Indian Ocean. FAO Fisheries Technical Paper. No. 488. Rome, FAO. 2006. 458p.

2. Small scale fisheries

The table below provides some general information and metrics that help to characterize the small-scale fisheries subsector in Sri Lanka.

Table 2.1: Characteristics of small-scale fisheries in Sri Lanka

<table>
<tr><th colspan="2">Small-scale fisheries in numbers</th><th>A small-scale fishery is defined as…
Not defined. Probable definitions:</th></tr>
<tr><td>National population 22037000 (2024)</td><td>Fishing household Population[3] = 805440+323370 =1128810
Percent of national population = 5%</td><td rowspan="10">Fishing activities typically involve individual fishers or family groups using small boats, non-motorized or small motorized boats, characterized by being labour-intensive and low in capital investment, engaged in 1 day fishing trips in shallow waters, producing fish mainly for home consumption and domestic markets.

All marine small-scale fishers are involved in 1 day fishing trips and fishing activities are confined only to the area between the shore line and the Contiguous Zone (up to 24 nautical miles), which is roughly about 17% of the EEC.

Fishers using smaller vessels, less capital, operating in shallower waters, conducting shorter fishing trips, mainly targeting local and domestic markets, and home consumption.</td></tr>
<tr><td>Marine fishers (men and women)</td><td>223270</td></tr>
<tr><td>Inland fishers (men and women)</td><td>94750</td></tr>
<tr><td>Inland water area (km^2)</td><td>260,000 ha (2600 km^2)</td></tr>
<tr><td>Marine area (historic waters + continental shelf + EEZ) (km2)</td><td>568,500 (Territorial Sea: 21500km^2; Continental shelf area: 30,000km^2; EEZ 517,000km^2)</td></tr>
<tr><td>Lagoons, estuaries, mangroves, mud flats, salt marshes (km2)</td><td>158000</td></tr>
<tr><td>Inland (freshwater) (km2)</td><td>260000</td></tr>
<tr><td>Average production (MT)</td><td>410,760 MT (308,430 marine + 102,330 inland & aquaculture)[3]</td></tr>
<tr><td>Contribution to National output (percent)</td><td>0.9 to national GDP (2024) (Marine 0.8 & Inland 0.1)</td><td></td></tr>
<tr><td>Key small-scale fisheries</td><td colspan="2">Name of species and fisheries – production in Metric tonnes
Marine | 2022 | Inland | 2022</td></tr>
</table>

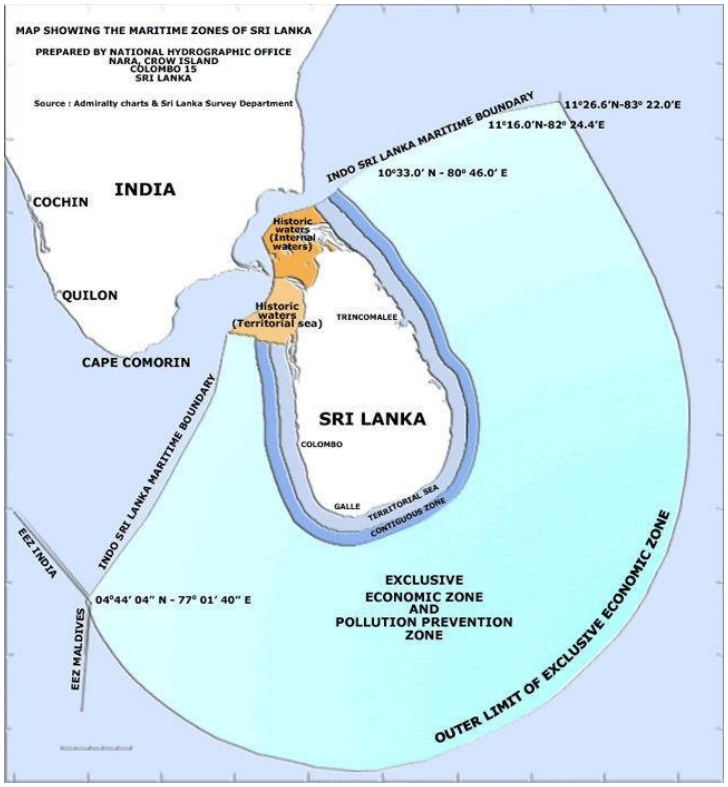
[3] Fisheries Statistics 2024. https://www.fisheries.gov.lk/web/images/statistics/annual_report/Fisheries_Statistics_-2024_compressed.pdf

Seer	3675	Tilapia	57,710
Trevally	9,810	Carps/ Mrigal	9,530
Skipjack tuna	46,120	Catla/ Rohu	14,180
Other tuna like species	29,890	Labeo	990
All Billfish	8,120	Lula (Murrel)	2,920
Sharks/Skates	6,105	Cultured shrimp	14,080
Rock fish	12,470	Freshwater prawn	680
Small fishes	1,03,585	Cultured milkfish & seabass	880
Shrimps	7,280	Other wildfish	15,590
Lobsters	160		
Crabs	6,890		
Other marine	16,995		
Total Marine	**2,80,610**	**Total Inland**	**1,16,620**

2.1. Geographical scope and location

Coastal waters generally extend up to the continental shelf, which is quite narrow, with an average width of 20 km. Sri Lanka ranked 51st in size of its exclusive economic zone (EEZ) with a total extent of 530,945 km2 plus 32,074 km2 of shelf area and 31,230 km2 of inshore fishing area. Sri Lanka's EEZ is bordered to the north and west by India in the Gulf of Mannar and Bay of Bengal, as well as in the west by the Maldives in Laccadive Sea[4].

[4] https://www.seaaroundus.org/data/#/eez



Map 2.1: Map of Sri Lanka's EEZ[5]

Inland fisheries production is almost entirely from the multitude of reservoirs in the country.

Fresh water bodies (Inland water): Total area = 260, 000 ha

- Perennial reservoirs = 155,000 ha
- Seasonal reservoirs = 100,000 ha
- Flood – plain lakes = 5,000 ha (which are the only natural lakes exist & scattered all over the country)

Aquaculture- Shrimp farms in operation :1505 ha

Lagoons & Estuaries – 158,000 ha.

- 85 brackish water lagoons & estuaries

Major fisheries resource areas in the country are,

- Coastal fishing areas around the island employing traditional crafts, non-mechanized and mechanized say-boats
- Offshore and deep-sea fishing beyond the coastal areas carried out by semi-industrialized multiday boats

[5] Dalpathadu, Kausn & Haputhantri, Sujeewa & Balawardhana, Thejani. (2018). Reviewing effectiveness of conservation and management measures on sharks in Sri Lanka over past five years.

- Lagoon and estuarine fishing by traditional fishing activities
- Inland fishing in reservoirs by non-mechanized boats
- Ornamental marine fish collection from the wild (Negombo lagoon, Bar reef, Southern coast and Trincomalee) is also a significant fishing activity (carried out by skin divers and SCUBA divers)

2.2. Main species and Ecosystems

The main species caught, associated ecosystems and the fishing methods used to catch them are given in the table.

Table 2.2: Species, ecosystems and fishing methods

Species	Type	Seasonality	Associated Ecosystem(s)	Fishing Method(s)
Sardinella spp. (sardines)	Marine – Small Pelagic	Year-round; peak varies by coast	Coastal waters, reefs	Beach seines, gillnets
Rastrelliger kanagurta (Indian mackerel)	Marine – Small Pelagic	Post-monsoon, inter-monsoonal peaks	Coastal waters	Drift gillnets, beach seines
Katsuwonus pelamis (skipjack tuna)	Marine – Large Pelagic	Year-round; offshore peaks	Offshore pelagic waters	Longlines, trolling, handlines
Lutjanus spp. (snappers)	Marine – Demersal	Year-round; locally seasonal	Coral reefs, rocky substrates	Handlines, bottom-set gillnets
Decapterus russelli (Indian scad), *Elegatis bipinnulata* (Rainbow runner) and *Canthidermis maculata* (Trigger fish).	Marine - Pelagic	Year round; mainly restricted to southern province of the country	Offshore pelagic fisheries,	Flotsam-associated encircling fishing
Oreochromis spp. (tilapia)	Inland – Freshwater	Year-round	Reservoirs, inland tanks	Gillnets, cast nets, traps
Labeo dussumieri (Common labeo; Malabar labeo)	Inland – Freshwater	Peak after rainfall/flood	Reservoirs, inland tanks, Streams, floodplains	Gillnets, cast nets

Species	Type	Seasonality	Associated Ecosystem(s)	Fishing Method(s)
Channa spp. (snakeheads)	Inland – Freshwater	Peak after rainfall/flood	Streams, ponds, floodplains	Handlines, cast nets, traps
Labeo rohita (Rohu)	Inland – Freshwater	Year-round	Reservoirs, inland tanks	Gillnets
Cirrhinus mrigala (Mrigal)				
Catla catla (Catla)				
Chinese carps and common carp				
Macrobrachium rosenbergii (Giant freshwater prawn)	Inland – Freshwater	Year-round	Reservoirs, inland tanks, Streams, floodplains	Gillnets, traps
Amblypharyngodon spp., Dawkinsia sinhala, Puntius dorsalis, Rasbora daniconius (Small indigenous species)	Inland – Freshwater	Year-round	Some reservoirs, inland tanks	Gillnets (small mesh; 18 – 37 mm)

2.3. Scale of the small –scale fisheries sector

There are 320,470 fishers (men and women) in the country, with a household population of 1,031,160. Fish related livelihoods amount to 2.7 million. Assuming that offshore crafts employ a crew of about 5, the total number of fishers in the offshore sector would roughly amount to 28,745. Thus, it could be safely assumed that the total SSF population in Sri Lanka is, about 291,725, which is approximately 3.5% of the total labour force in Sri Lanka. Fishing is generally a male dominant activity but women in Catholic and Tamil communities play an important role in marketing and other beach-based activities. Fish processing, especially making of dried fish is undertaken by all women around the country. Very few women (less than 10%) are involved in direct harvesting of fish.

There are innumerable number of persons involved throughout the value chain; pre-harvest, harvest and post-harvest activities until the final product reaches the consumer.

Table 2.3: Fisher Population

Marine fishing households	186,500
Inland fishing households	83,690
Marine fishers	223,490
Inland fishers	92,056

Marine fishing household population	804,340
Inland fishing household population	323,120
Direct and indirect employment (marine and inland)	586,000
Fishing and related households	2.7 Million

From the Sri Lanka country Presentation made at the NPOA-SSF Workshop 17-19th September 2025

2.3.1. Type of vessels and Techniques of fishing technology and techniques of fishing

SSF Craft types: The figure shows the major fishing crafts used in Sri Lanka, except the 3.5 ton craft, which is used in offshore fisheries. The SSF crafts of Sri Lanka are: Outrigger Canoe (*Oruwa*), Planked Beach Seine Craft or *paru*; the Outrigger Canoe or *oruwa*; the Log Raft or *teppam* / *kattamaran* and the *vallam (see figure)*.

The outrigger canoe is more popular among fishers in the south, where as the Vallam and kattamaram are more popular in the North, East and the West. Outrigger canoe is a dug out, the kattamaram a log raft and others made of planks and fibre glass. Fishers also used another log raft which is similar to kattamaram but the centre log is longer than the others.

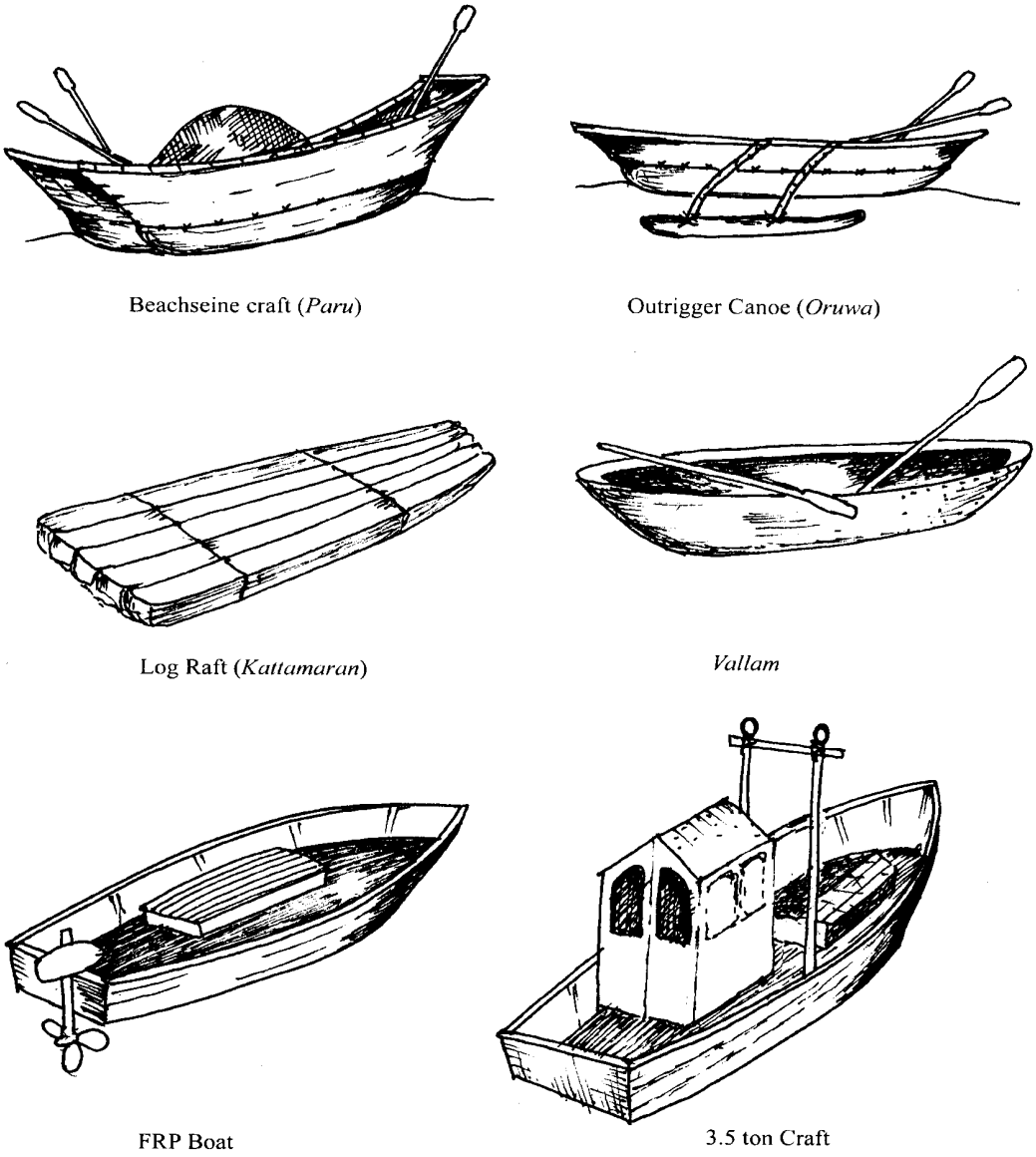
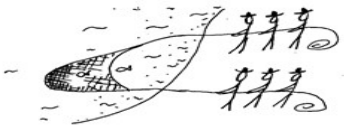


Figure 2.1: Small Scale Fishing Crafts of Sri Lanka[6]

2.3.2. Techniques of Fishing

The figure below shows the diverse craft gear combinations used by small scale fishers in the country. The most popular fishing techniques used in SSF are, beach seining, hook and line or handlining (and rod and line), gill netting, cast netting and long lining. Beaching seining brought in nearly 90% of the marine fish catches during the pre-independent era, while nylon gill-netting became quite popular after the 1960's. Hook and line is still practiced by many artisanal fishers, while the cast net is popularly used in lagoons.

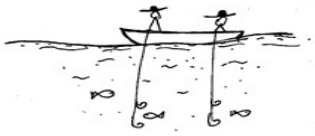
[6] Amarasinghe O. (2005); "Modernization and Living Standards of fishermen", in O. Amarasinghe (editor), Modernization and Change in marine small-scale fisheries of Southern Sri Lanka, Navamaga Printers, Colombo, pp. 315- 358



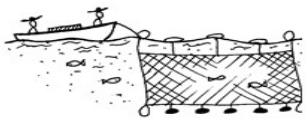
Type of technique: *BEACHSEINING*
Type of craft: *beachseine craft (paru)*
Type of resource: *coastal*
Type of fish: *shore seine varieties*

Type of technique: *ROD AND LINE*
Type of craft: *small outrigger canoe*
Type of resource: *coastal*
Type of fish: *groper(parawa), sear(thora), rock fish, etc*
Type of bait: *live bait (squid)*

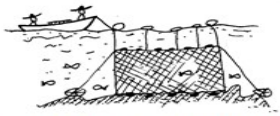
Type of technique: *SMALL-MESHED GILL NETTING (bible net)*
Type of craft: *both mechanised (small) and Non-mechanised crafts*
Type of resource: *coastal*
Type of fish: *herring, Bolla, anchovies, karalla*
Type of bait: *nil*



Type of technique: *HAND LINING*
Type of craft: *both small-mechanised traditional crafts*
Type of resource: *coastal & offshore*
Type of fish: *parawa, rockfish, mullet, sear,et etc.*
Type of bait: *herring, bolla, lagga, imbura, etc.*

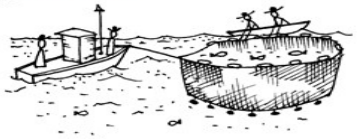


Type of Technique: *LARGE-MESHED GILL NETTING*
Type of craft: *large and small mechanised crafts*
Type of resource: *coastal, off-shore and deep sea*
Type of fish: *skipjack (balaya), Yellow fin tuna (kelawalla), shark, marlene (koppara), etc.*

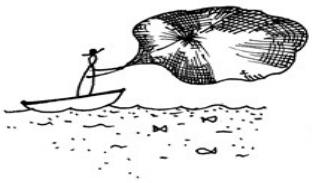


Type of technique: *BOTTOM SET NETS*
Type of craft: *mechanised crafts*
Type of resource: *coastal and off-shore*
Type of fish: *parawa, mullet, rock fish, etc.*
Type of bait: *nil*

Type of Technique: *LONG LINING FOR YELLOW FIN (MARUWEL PANNAYA)*
Type of craft: *mechanised crafts*
Type of resource: *off-shore & deep sea*
Type of fish: *yellow fin tuna, shark, marlene, spear fish, sail fish*
Type of bait: *herring, bolla, etc.*



Type of technique: *PURSE SEINE*
Type of craft: *mechanised crafts*
Type of resource: *coastal & offshore*
Type of fish: *frigade mackerel, bolla, karalla, anguluwa, etc.herring,etc.*
Type of bait: *nil*



Type of technique: *CAST NET*
Type of craft: *traditional craft & from shore*
Type of resource: *coastal, lagoon and inland*
Type of fish: *herring, lagga, udassa, parati, godaya,*
Type of bait: *nil*

Figure 2.2: Craft-Gear Combinations used by small-scale fisheries
(Amarasinghe, 2005)

Fishers using small mechanized crafts often use long lines and, sometimes, trolling (single hook or multi-hook), where they run the boats with hooked lines.

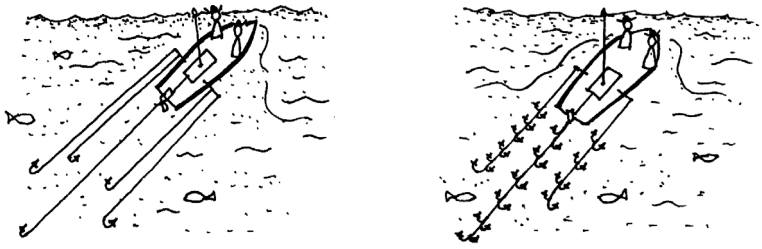


Figure 2.3: Trolling lines

2.3.3. Fishing Fleet

The fishing fleet of Sri Lanka is around 59,000 craft. The breakdown of different craft categories are given in the table.

Table 2.4: Fishing Crafts of Sri Lanka

Area	Type of Craft	Number	Offshore (commercial) & Small Scale	Degree of Mechanisation
Offshore	Multiday Boats (High seas)	1,708	6145 (10.3 %) (off-shore; commercial)	Mechanised sector (includes motorized craft) (55.2%)
	Multiday Boats (EEZ)	3,569		
	Day-Boats with inboard Engine	868		
Coastal	Fibreglass Boats with OBM	24,389	43,522 (89.7%) (small-scale)	
	Motorised traditional Craft	2,398		
	Traditional Craft	15,695		Non-Mechanised sector (44.8%)
	Beach-seine Boats	1070		
Total Marine		49,697		
Inland	Inland Crafts (all small scale)	9,940		
Grand Total		59637		

From the Sri Lanka country Presentation made at the NPOA-SSF Workshop 17-19th September 2025

2.4. Social and economic significance of SSF

In a predominantly Buddhist society in Sri Lanka, fish is the most preferred animal protein source of Sri Lankans, compared to many other animal protein sources such as beef, poultry, pork and mutton etc. The contribution of fish to annual animal protein intake is 50% (2023). This is mainly because killing of animals is a sin according to Buddhist doctrine. Therefore, demand for fish is high. Although it is strange to note, fishing is the only widespread activity of animal slaughter that is adopted by the Buddhists in the country, while other slaughter trades are less acceptable to them. This fact is also reflected in their food habits. In the Sri Lankan diet, fish forms the most important source of animal protein. In respect of low-income populations in the country, most of the fish consumed are small fish varieties coming from coastal waters, caught by small scale fishers. This is because fish caught by small scale fishers, especially small pelagics living in coastal waters are relatively cheap.

2.4.1. Social Relations

Fishing villages of Sri Lanka constitute ribbon-like settlements. A typical fishing village appears like a conglomeration of all sorts of small houses; built with clay and thatched with coconut frond, or with brick walls and tiled roofs. The latter type of houses are more common where there has been a high rate of adoption of mechanised fishing. Usually, each house is surrounded by a tiny compound (home garden) revealing the high value placed on privacy by the people. A special feature of the fishing village is its 'village identity'. Each village is separated from the other in relation to productive activities, and its links to the interior agricultural villages are few. The social distance maintained between villages has been able to serve the important function of controlling the entry into open access fisheries. The access to the waters bordering a certain village is limited to the inhabitants of the village and outsiders are not even allowed to anchor their crafts. Such a social control of the entry seems to have evolved out of the particular danger of over-fishing that could have resulted in an unregulated or open-access fishery.

Sri Lanka is a multi-ethnic and multi-religious society, in which each ethnic group represents predominantly one religious group. The majority of the Sinhalese are Buddhists, Tamils are Hindus and, Moors and Malays are Muslims. Nearly half of the fishers fall in the age group of 35-54 years, and about 40 percent of the fisher population have completed their primary school education, revealing that Sri Lanka's fishermen are energetic and literate.[7]

About half of the active fisher population is concentrated in the North and East of the country (Batticaloa, Trincomallee, Jaffna and Mannar. Trincomallee possess the highest active fisher population in the country, equal to the active fishing population of whole of the southern province (Galle, Matara and Tangalle districts). Other fisheries districts of importance are Kalmunai, Tangalle, Matara, Galle, Negombo, Puttlam and Chilaw.

Fishers along the coastal zone of Sri Lanka belong mostly to Karva (in Sinhalese aeas) and Karaiyar (in Tamil areas); both castes sharing a common origin of seafaring, trade and warfare. All ethnic groups are found among fishers, but are generally separated geographically; Sinhalese in the west and south, Tamils in the north and east, and Muslims in the East and south. However, in areas such as Trincomalee all 3 ethnic groups fish together in harmony, while in Galle, Hambantota and Kaluthara districts, the Sinhalese and Muslim fishers fish together.

Fishing communities are closely knit communities where the social relations among fellow community members remain quite strong, unlike in the modern self-centered

societies, where even the community feeling does not exist (Amarasinghe, 2015[8]). Relationship with kin, friends and neighbours are quite strong because, they form a source of help at distress, assistance in fishing operations (beach seining, towing crafts), cash and labour in kind when hit by storms, moral support, source of credit and insurance, etc. Strong relations exist with merchants not only because they market the catches, but because they perform the functions of patrons, providing diverse livelihood assistance. However, Strong relationship exist with money lenders because, in the absence of strong collateral, personal trust among agents acts as collateral. The relationship with the Department of Fisheries too is a strong one. This is because of fishers' close interaction with the Department, in registering their crafts, obtaining operational licenses, and accessing help extended to fishers by the government.

2.4.2. Economic Contribution

Small scale fisheries are important due to their contribution to nutrition, income generation, strengthening the economy, poverty alleviation and improving the wellbeing of the fishing community. The nutritional importance is quite evident in low-income groups (rural communities and estate workers), who consume the highest amount of small fish varieties compared to other income groups.

2.4.3. Fish Production

Total fish production in the county in 2024, by sector is given in the table.

Table 2.5: Fish Production in Sri Lanka

Sector	Production (MT)
Marine	308,430
Offshore	143,390
Coastal (**SSF**)	165,340
Inland (**SSF**) (capture)	87,210
Aquaculture	7,800
Shrimp farms	7320
Grand Total	410,760
Total SSF Production	252,550

Source: Ministry of Fisheries, Annual Statistical Bulletin, 2024.

[8] Amarasinghe O. (2005); "Modernization and Living Standards of fishermen", in O. Amarasinghe (editor), Modernization and Change in marine small-scale fisheries of Southern Sri Lanka, Navamaga Printers, Colombo, pp. 315- 358

[8] Amarasinghe O. (2015). Tangled in their own (safety) – Nets; Resilience, Adaptability and Transformability of fishing communities in the face of the world fisheries crisis.Case Study, Sri Lanka, Universiuty of Sussex, UK and University of Ruhuna, Matara. Final Report.119 p.

Of the total fish production of 410,760 MT, 252,239 MT comes from SSF, which is 61.4 percent of the total fish production having inland and aquaculture production is only 1/3 of the marine fish production, showing the importance of marine fisheries in the country).

Contribution to gross domestic product (GDP), employment 0.9 % to Sri Lanka's GDP at current market prices, with the marine component accounting for about o.8 % and inland fishing about 0.1 %. Employs 320,470 active fishers, direct and indirect employment of 586,000 along the value chain, amounting to about one million in total**.** The total Fishing related livelihoods have been estimated as 2.7 million**.** They also provide for dietary needs, especially by contributing more than 50% of animal protein intake, thus playing a crucial role in the livelihoods and food security in the country.

Contribution to gross domestic product (GDP), employment 0.9 % to Sri Lanka's GDP at current market prices, with the marine component accounting for about 0.8 % and inland fishing about 0.1 %. The sector employs 320,470 active fishers, direct and indirect employment of 586,000 along the value chain, amounting to about one million in total**.**

3. Small scale fisheries structure

3.1. Small-scale fisheries fisher groups

Fishers can be grouped according to the gear they employ to catch fish, the crafts they use or by 'craft-gear combination'.

The following is an account of fisher groups by type of gear (gear groups).

Table 3.1: Fisher Groups in small-scale fisheries of Sri Lanka

Fisher Group (by gear type)	Description	Coverage of SSF sub-sector	Specific to SSF or includes large-scale
Gillnet Fishers	Use small-mesh gillnets from traditional crafts or small FRP boats	Widespread in all coastal districts	Primarily SSF, but some overlap with larger FRP and OBM boats in mechanized gillnetting
Beach Seine Operators	Operate communal shore-seine nets; highly regulated[9]	Limited due to declining practice	Specific to SSF and community-managed; Local ecological knowledge of fishers

[9] Deepananda, K.H.M.A., U.S. Amarasinghe and U.K. Jayasinghe-Mudalige (2015). Indigenous knowledge in the beach seine fisheries in Sri Lanka: An indispensable factor in community-based fisheries management. Marine Policy 57: 69-77. DOI: 10.1016/j.msrpol.2015.03.028

Fisher Group (by gear type)	Description	Coverage of SSF sub-sector	Specific to SSF or includes large-scale
			is applied for resource management[10]
Hand liners & Long liners (near shore)	Small-scale boats targeting reef or pelagic species	Common in southern, eastern, and northern coasts	Mostly SSF; large-scale long liners are separate (offshore/multi-day)
Purse Seiners (Laila Nets)	Operated by small mechanized boats in coastal waters	Only in parts (e.g., Negombo, Kalpitiya); not dominant	Overlap with semi-industrial segment; not purely SSF
Trap & Cast Net Fishers	Operate in lagoons and estuaries	Specific to lagoon and brackish fisheries (Negombo, Batticaloa, etc.)	Specific to SSF
Pole and Line Fishers	Used for live bait-based tuna fishing	Extremely limited	Mostly SSF, but also linked to export tuna value chains
Spear fishers / Skin Divers	Especially in coral reef areas (e.g., Trincomalee)	Fragmented and informal	Entirely SSF
Mussel/Clam Collectors, Crab Fishers (estuarine)	Operate in lagoons (e.g., Puttalam, Batticaloa)	Present but often outside formal groupings	Specific to SSF and women in post-harvest chain
Skin divers for sea cucumber collection	Operate in lagoons (e.g., Puttalam, Jaffna)	Fragmented and informal	Entirely SSF
Shoreline Fishers (e.g., hook & line)	Includes elderly, women, children in artisanal sectors	Often excluded from formal fisher groups	Fully SSF, usually informal
Stilt fishers	Use hook-and-line fishing specifically made for this fishery; Operate from a wooden stick driven in to bedrock in shallow waters; Targets mainly two species	Restricted to Southern Coast of Sri Lanka	Fully SSF and community-managed; Local ecological knowledge of fishers is applied for resource

[10] Deepananda, K.H.M.A., U.S. Amarasinghe and U.K. Jayasinghe-Mudalige (2016). Neither bust nor boom: Institutional robustness in the beach seine fishery of southern Sri Lanka. Ocean and Coastal Management 128: 61-73. doi: 10.1016/j.ocecoaman.2016.04.020

Fisher Group (by gear type)	Description	Coverage of SSF sub-sector	Specific to SSF or includes large-scale
	[bluestripe herring (*Herklotsichthys quadrimaculatus*) and bigeye scad (*Selar crumenophthal-mus*)][11].		
Stake net fishing	Traditional fishing method mainly targeting shrimps in Negombo lagoon; Similar methods are practiced in lagoons of Northern Sri Lanka; Fyke net type fishing gear is fixed in lagoon mouth at the onset of low tide to trap shrimp and fish moving with tidal current.[12]	Centuries-old traditional fishing practice in Negombo lagoon. In Northern part of the country, stake-net fishing is rather unmanaged.	Fully SSF and community-managed; Local ecological knowledge of fishers is applied for resource management in Negombo lagoon.
Brush Park fishing	In brush park fisheries, mangrove twigs and branches are placed in Negombo lagoon to attract fish, which are subsequently (after >30 days) encircled by a fishing net to catch attracted fish using a scoop net.[13]	Negombo lagoon, and minor scale in other lagoons. Significant contribution to fish production in Negombo lagoon.	Specific to SSF. Some brush park fishers cultivate mangroves on mudflats of the lagoon to extract mangrove branches to construct brush parks.
Culture-based fisheries[14]	In small village tanks, minor, medium and	Present but often outside formal groupings	Specific to SSF; Community-based management with

[11] Deepananda, K.H.M.A., U.S. Amarasinghe, U.K. Jayasinghe-Mudalige and F. Berkes (2016). Stilt fisher knowledge in southern Sri Lanka as an expert system: a strategy towards co-management. Fisheries Research 174: 288-297. DOI: 10.1016/j.fishres.2015.10.028

[12] Amarasinghe, U.S., W.U. Chandrasekara and H.M.P. Kithsiri (1997). Traditional practices for resource sharing in an artisanal fishery of a Sri Lankan estuary. Asian Fisheries Science, 9: 311-323. https://doi.org/10.33997/j.afs.1997.9.4.009

[13] Amarasinghe, U.S., M.D. Amarasinghe and C. Nissanka (2002). Investigation of the Negombo estuary (Sri Lanka) brush park fishery, with an emphasis on community-based management. Fisheries Management and Ecology 9: 41-56. https://doi.org/10.1046/j.1365-2400.2002.00250.x

[14] Amarasinghe, U.S. and T.T.T. Nguyen (2010). Enhancing rural farmer income through fish production: Secondary use of water resources in Sri Lanka and elsewhere. In: S.S. De Silva and F.B. Davy (eds) Success Stories in Asian Aquaculture. pp. 103-130. Springer Science, Netherlands.

Fisher Group (by gear type)	Description	Coverage of SSF sub-sector	Specific to SSF or includes large-scale
	major irrigation reservoirs		government support.

3.2. Fish Supply Chain

In the following figure, the supply chain of SSF is given on the left side of the figure. ish supply chain of SSF is fairly short and simple. Pre-harvest activities are quite limited in artisanal fisheries but fuel and engine-related services are involved in the case of motorised fishing (small boats with outboard motor. In harvesting activities almost all involved belong to the same fishing community and they often have kinship ties. A number of stakeholders are engaged throughout the supply chain of small-scale fisheries.

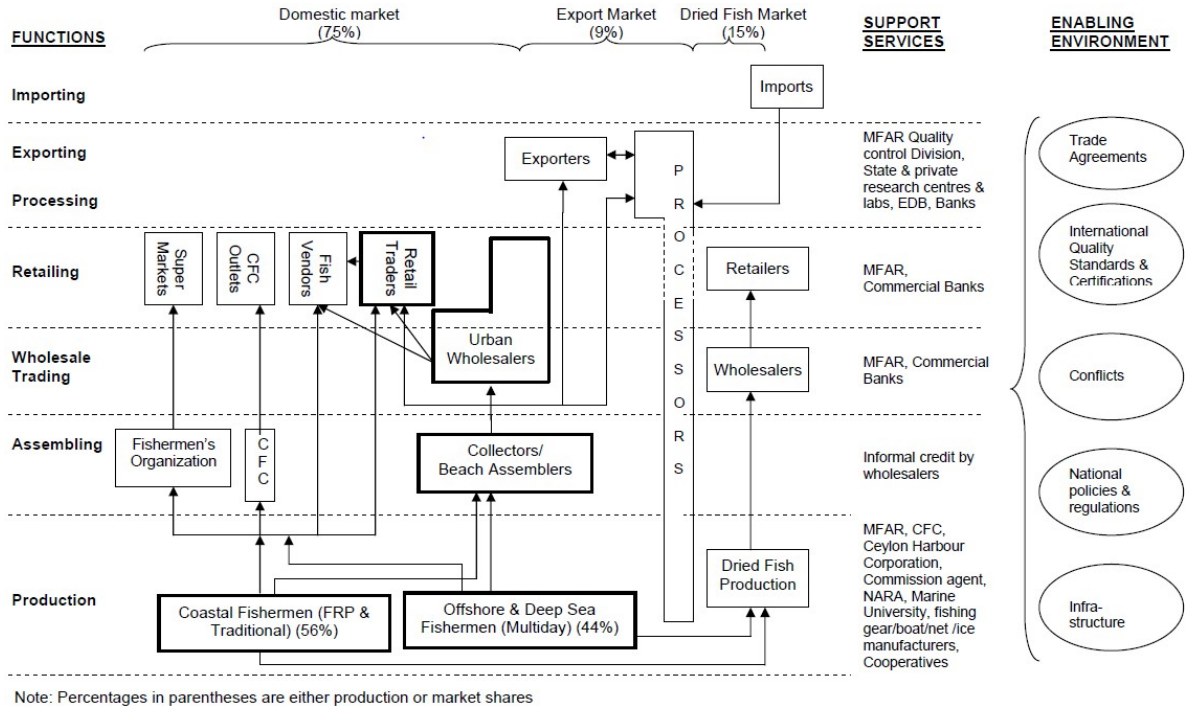


Figure 3.1: Supply Chain in Fisheries of Sri Lanka

Source: Institute of Policy Studies (IPS) (2017)[15]

Once the catches are ashore, one has to remove fish from nets. Which might take time. Sometimes other community members including young children are involved in removing fish from nets. Even women are involved in this activity in non-Buddhist societies.

[15] Institute of Policy Studies (IPS) (2017). Introduction to Value Chain Analysis: Concepts, Methodologies and its Application in Sri Lanka, IPS, Colombo, Sri Lanka.

Auctions, direct selling and handing over the catches to merchants are the major channels of fish marketing. Auctions are generally held for large fish varieties and prices received by the fishers are considered 'good'. Direct selling is for small fish varieties (e.g. Anchovies), where fish is kept in baskets and the merchants move around bidding. When the seller fisher is satisfied with price quoted, he will sell the fish to that merchant. Even in this case the producer prices are considered as 'fair'. The other method of marketing is direct handing over to the fish merchant. This is due to the seller fisher's indebtedness to the merchant and merchants provide credit on the condition that the borrower fisher hands over all his future catches to the merchant. The price paid is considered 'unfair' (much lower than the auction price).

Normally the small-scale fish merchants include cycle traders, motorcycle traders and van traders. The Ceylon Fisheries Corporation (CFC) also purchases a small quantity of fish. Some community organisations have also been engaged in direct selling of some of the landings of their members to super markets, hotels, etc. The majority of fish marketed in this manner reaches the nearby consumers within the same day. Catches are iced very rarely. However, when there are surplus catches, the van traders transport them to distant wholesale markets. Among the retailers, women occupy a significant proportion in Catholic and Hindu communities.

Those fish which are poor in quality, are sold for processing, generally to dried fish processors. These fish are bought by women fish processors, who are generally the wives of fishers who are engaged in fish processing as an activity generating supplementary incomes. All supply chain actors involve in this process often come from the same community or nearby fishing villages and the personal anonymity among them is very low.

With respect to export fish varieties like lobster, fishers take their catches to urban centres and sell to agents of export firms who have established their collecting centres in urban areas close to fishing village. The agents of export firms directly purchasing fish from landing sites is also not rare. Such export varieties like lobster are then sent to fish exporting firms in Colombo (especially in the Wattala area).

Information is not available to make any assessment of the number of supply chain actors involved and its breakdown by gender. Yet it could be safely stated that involvement of women in the harvesting stage is quite low, while their involvement in beach-based activities is very high in Catholic and Hindu societies (West, North and the East of the country). Presence of women in Buddhist societies is socially despised. Fish processing is mainly carried out by women. However, during the recent time small and medium type enterprises are emerging in the processing sector and both men and women are engaged in such enterprises.

There are innumerable number of actors involved in the provision of various services to ensure that fish moves from the producer to the final consumer the right time, in the right form and at the right place. These services providers include, Department of Fisheries, National Aquatic Resources Research and Development Agency (NARA), Banks, Cooperatives, fishing boat and gear manufacturers, bot repair workshops, Fuel Suppliers, etc. The Fisheries Acts, Ordinances and the National Fisheries Policy also play and indirect buy an important role in this process.

3.3. Grouping of Supply Chain Actors

The following table gives an account of diverse supply chain actors, their role and organizational membership.

Table 3.2: Grouping of Supply Chain Actors

Stakeholder Type	Role in the Supply Chain	Organizational Membership / Local Specifics
Fishers (fish harvesters)	In harvesting activities almost all involved belong to the same fishing community and they often have kinship ties.	Community Organisations such as Cooperatives, Rural Fisheries Organisations, Teppam Fishermen's Union (Negombo). Everybody is a member of some organisation.
Fish workers	Once the catches are ashore, one has to remove fish from nets. Which might take time. Sometimes other community members including young children are involved in removing fish from nets. Even women are involved in this activity in non-Buddhist societies Landing, cleaning, sorting, transporting catch from coastal/lagoon fisheries (e.g., in Negombo, Jaffna, Mannar)	Largely from Karawa or Karaiyar and Mukkuvar communities; many are members of fisheries cooperatives and Rural Fisheries Organisations

Stakeholder Type	Role in the Supply Chain	Organizational Membership / Local Specifics
Traders	Auctions, direct selling and handing over the catches to merchants are the major channels of fish marketing. Auctions are generally held for large fish varieties and prices received by the fishers are considered 'good'. Direct selling is for small fish varieties (e.g.. Anchovies), where fish is kept in baskets and the merchants move around bidding. When the seller fisher is satisfied with price quoted, he will sell the fish to that merchant. Een in this case the producer prices are considered as fair'. The other method of marketing is direct handing over to the fish merchant. This is due to the seller fisher's indebtedness to the merchant and merchants provide credit on the condition that the borrower fisher hands over all his future catches to the merchant. The price paid is considered 'unfair' (much lower than the auction price). Normally the small-scale fish merchants include cycle traders, motorcycle traders and van traders Most of the fish sold in this manner include, Sardinella, Mackerel, anchovies, and other shore-seine varies. (Ex. Gandara, Godawaya, Negombo, Jaffna)	Some part of trader associations; many women operate independently in North Western Province[16]
Processors	Drying/salting fish species (e.g., Sprats, Sharks, Mackerel) in Kottegoda, Negombo, Mannar, Trincomalee, Kalpitiya; Export varieties like lobster are sorted, and packed in export firms and	Frequently part of women's SHGs and "Jaadi" processors in the North[17]

[16] Marine Small-scale fisheries of Sri Lanka: A General Description. BOBP 1984, BOBP/1NF/6. https://www.fao.org/4/ae484e/ae484e00.pdf

[17] Progress Report, Ministry of Fisheries, Sri Lanka https://fisheries.gov.lk/web/images/downloads/pdfs/2023/Ministry_of_Fisheries_E_compressed.pdf

Stakeholder Type	Role in the Supply Chain	Organizational Membership / Local Specifics
	women re usually employed to carry out those tasks	
Support services	There are innumerable number of actors involved in the provision of various services to ensure that fish moves from the producer to the final consumer the right time, in the right form and at the right place. These services providers include, Department of Fisheries, National Aquatic Resources Research and Development Agency (NARA), Banks, Cooperatives & other CBOs, Fish Export Firms, fishing boat and gear manufacturers, boat repair workshops, Fuel Suppliers, Landing site facilities (ice plants, storge boxes, auction hall), etc. The Fisheries Acts, Ordinances and the National Fisheries Policy also play and indirect buy an important role in this process.	Many villages possess technicians who can attend to engine repairs. However, replacement of engine parts require travel to urban centres. The district level Fisheries Offices of the Department of Fisheries and the Fisheries Inspectors attached to them assist fishers in all beach-based activities. Presence of ice plants and storage boxes (e.g. Godawaya of Hambantota District) also helps fishers to preserve fish during excess supply. The draft Fisheries Act (2025) and the draft Fisheries Policy (2025) have several provisions to ensure effective an effective supply chain process, benefiting both the producer and the consumer.

3.4. Local community

Fishing communities are generally quite closely knit communities where people are brought together through trust and reciprocity. Social capital or social networks are strongly present in fishing communities. Although they have played an important role

during the pre-war period, the village elders or traditional leaders do not play a significant role today in the process of SSF decision making, although the head priest (*piyathuma*) in Catholic Church has a strong influence in SSF decision making, especially in conflict resolution (ex. the western catholic fishing communities), because the church is strongly involved in fish marketing. For example, the Catholic church has a strong influence on the functioning of fish market in Negombo.

At present, there are two types of community organisations: Fisheries Cooperatives and Rural Fisheries Organisations. In fact, fisheries cooperation in Sri Lanka has its origin in 1912 with the establishment of Rural Credit Societies. Then the Department of Cooperatives, which was established in 1930, took a new interest in the development of credit societies into cooperatives. They were formed with the involvement of the Department of Fisheries and Department of Cooperative Development. Many of the fishery cooperatives in Sri Lanka can be characterized as multi-purpose, combining functions such as the provision of credit, technology and insurance; and occasionally, the organization of marketing. However, a new form of fisheries community organisation called Rural Fisheries Organisation (RFO) was introduced in 2010, with the involvement of the Department of Fisheries only, which led to the collapse of a number of fisheries cooperatives in the country. State assistance is only channelled through RFOs today. However, a number of cooperatives continued to function well despite this move, even without government assistance (Amarasinghe and Bavinck 2011)[18]. Success of these cooperatives could be attributed to the strong interpersonal relationships among members of cooperatives (bonding social capital) which ensured continuity of operations with satisfactory levels of savings, and their ability to horizontally link up with similar societies (bridging social capital) and with supra-local agencies such as the government, NGOs, and development agencies (linking social capital). Credit provided by cooperatives against group guarantees of members performed both a credit function and an insurance function (due to the existence of 'instant' loan schemes). Due to their attractive loan schemes, even non-fishers (ex. farmers) have also saved in fisheries cooperatives (ex. Godawaya, Dehigahalanda). (Some of the best functioning fisheries cooperatives, with high rates of savings and lending have been restructured as Fisheries Cooperative Banks (*Dheewara* banku). There had been about 120 such banks in operation in 2007[19].

A study carried out in the Hambantota district of Southern Sri Lanka[20] showed that among the three major community organisations in operation at that time (Fisheries

[18] Amarasinghe, O., & Bavinck, M. (2011). Building resilience: fisheries cooperatives in southern Sri Lanka. In *Poverty mosaics: realities and prospects in small-scale fisheries* (pp. 383-406). Springer, Dordrecht

[19] (Amarasinghe and Bavinck, 2011; Amarasinghe and Bavinck, 2017)

[20] Piyasiri K. H. K. L. & O. Amarasinghe (2018). Managing multi-stakeholder coastal resources; the relevance of incorporating SSF Guidelines into coastal management: a case study in Rekawa of Sri Lanka, M.Sc. thesis, University of Nha rang, Nha Trang, Vietnam

Cooperative, Lagoon Fisheries Management Authority and the Rural Development Society). the fisheries cooperative had made the best contribution towards improving the wellbeing of the fishing communities. It is quite interesting to note that, as revealed by the national consultations carried out in 12 out of 15 coastal districts in Sri Lanka under the implementation of SSF Guidelines project (2018-2019[21]), the fisheries stakeholders have indicated that they had more faith in fisheries cooperatives than in RFOs. Nevertheless, Fisheries cooperatives have failed dramatically in taking any steps towards resources management and conservation. As community organisations, the coops facilitate entry into fisheries rather than regulating it.

Apart from the Coops and RFOs, there are also associations based on type of fishing activity: teppam fishers (Negombo), beach seine fishers, stilt fishers (Galle) who are formed to voice their specific needs but playing a much smaller role than coops in terms of the provision of diverse livelihood capitals.

The fisheries cooperatives, rural fisheries organization (RFOs) and other community-based organization (CBOs) play an important role in voicing the needs of fishers. They represent fishers at the district level (at district-level meetings of the Department of Fisheries) and the district level federations of Coops and RFOs represent SSF interests at the national level. The plight of the fishers is that, although their voices are heard, decisions are not based on ground level realities, but on other factors; political, financial, international (subsidies), etc.

In coastal communities, fisheries cooperatives (and sometimes RFOs), and other fisheries organisations (depending on their strength) play a very important role socially and culturally. Usually, the new year festivals and other social and religious festivals are organised by them. They work closely with the 'Death Donation' societies of the village. They assist temples and churches in securing their diverse needs, etc, showing their very close links with other rural organisations.

Apart from Community organisations, the individual community members, fish merchants and shop keepers form a very important source of credit and other livelihood assistance. Studies have shown that, while fishing communities are gradually becoming dependent on self-insurance strategies (ex. savings) in building up their resilience against shocks, they often borrow from kin, friends, shop keepers and fish merchants in meeting their diverse needs. While personal trust matters in most of these transactions, the promise of borrower fishers to hand over all their future catches becomes the collateral against borrowing from merchants (ex. Gandara, Tangalle, etc.)[22]. Among many roles played by community members, 'reciprocal credit' functions as an important

[21] Op.cit.
[22] Dharmasiri & Amarasinghe

strategy in smoothening fluctuations of daily fishing incomes; fishers who have surplus catches lending part of their incomes to unlucky ones.

3.5. The role of women in small-scale fisheries

In Sri Lanka, fishing, in general is considered as an activity for man, although they play an important role in catholic and Hindu communities in the west, north and the east of the country. In the predominantly Buddhist communities in the south of the country, the presence of women on the beach is socially shunned. While direct fishing or engagement in beach-based activities by women is rare, many of them are involved in marketing and post-harvest processing and also in inland fisheries (where they even engage in direct fishing). Although women play a major role in taking up household responsibilities, these roles are not well recognised.

Compared to Catholic fishing communities in the Western and North-Western coasts, where women are traditionally engaged in fish marketing and processing to a greater extent, the only fishery-related activity of fisher women in the Southern coast is fish drying. In fact, for many fishing villages, where dried fish processing is widely practised, it has become a way of life for the women, indicating its high social value within the fishing communities.

One of the traditional household activities of fisher women in Sri Lanka has been the processing of fish into dried fish, Maldive fish and salted fish. Dried fish processing and small-scale trading, form the major employment activity in coastal villages for women fisher folk and marginalized groups. In Catholic and Hindu communities, women are involved in many beach-based activities (e.g. Negombo in the west and Wadamarachchi in the North), net mending and fish selling. Some of the money lenders too are women. Women hardly get engaged as transport agents or wholesalers and even roadside retailers, although the latter activity is carried out by them in fishing village-based fish markets and on the beach.

Very high involvement of women is found in the sphere of fisheries and other rural institutions. In Negombo, for example, women have formed themselves into Women's *Teppam* Association (log raft association of women), although they do not engage in fishing with log raft. The aim is to support their family members and community members engaged in fishing with the artisanal craft- *Teppam* (log raft).

Household responsibilities of women are growing along with the development of the fisheries sector, in which the fishing trips are longer and more time need to be spent on the 'job'. Gradually women have taken over a number of responsibilities. They not only have to feed, educate and protect children and to manage the household, but they are also supposed to confront and resolve all health and other household problems, to meet

social obligations and to represent the fisher household at diverse community organisations (cooperatives, environmental organisations, etc.) (ex. Kalametiya of Hambantota, Negombo, Trincomalee, etc.). Participation of women in SSF decision making is quite high, and as mentioned above, many have formed into strong women's organisations (ex. Sri Vimukthi Fisherwomen Association in Negombo; Southern Fisheries Organisation in Dondra of Hambantota District.

Nevertheless, women are generally underrepresented in top level management of CBOs, although their presence as members is quite conspicuous at monthly meetings (Bata Atha Fisheries Cooperative Society, Kalametiya Fisheries Cooperative of Hambantota District). Women are quite active in informal networks, self-help groups, and post-harvest collectives that support small-scale fisheries.

However, women's access to credit, information and training opportunities is weak, and very little efforts have been made to improve women's access to such financial, physical and human capital.

It is quite evident that one needs to empower women fisher folk so that they will have access to resources and opportunities, will be able to control their lives and cope effectively with vulnerabilities and improve the wellbeing of their families. It is high time that attitudes of fishing society to be changed towards more gender equitable way, providing more opportunities for women to engage in employment in fishing related activities and to hold leading positions in community organisations such as fisheries cooperatives. Towards achieving this end, provision of credit to women at concessionary interest rates, training and capacity building of women to take up improved fish processing methods and other alternative livelihoods could be suggested.

4. Small scale fisheries management

4.1. Fisheries laws

4.1.1. The State Law (State Legal System)

Among the numerous Ordinances and Acts which has relevance to fishing at the time of independence (in 1948), the Village Communities Ordinance of 1889 (VCO) and subsequent amendments, and the Fisheries Ordinance of 1940 (FO) and subsequent amendments were the most relevant, which covered fishing and fisheries management. What is interesting about the VCO is its emphasis on regulating fisheries according to local customs and, the involvement of the state only when there was a need to settle disputes, which was done at the local level, by a fisheries committee chaired by the GA (Government Agent). The FO of 1940 was enacted mainly to establish the Department of Fisheries.

Fisheries and Aquatic Resources Act No. 2 of 1996 (FARA) is the principal legal instrument that determines the opportunities and constraints available to the aquatic resource users in the country. The Department of Fisheries under the Ministry of Fisheries is responsible for implementing the provisions in the Act. FARA repealed the Fisheries Ordinance of 1940 and all the amendments to it along with other legislations such as the Chank Fisheries Act, the Pearl Fisheries Ordinance and the Whaling Ordinance. While there have been a series of regulations and amendments to FARA subsequently, another major Act of significant importance is the Regulation of Foreign Fishing Boats Act No. 59 of 1979 and its 2018 amendment.

In the management of fisheries and aquatic resources of Sri Lanka, the diverse Fisheries Acts rely completely on Input Control measures, which include the need to obtain compulsory operating licences, banning the use of certain gear (ex. bottom set gill nets, use of monofilament nets, poisons, explosives, scuba diving in certain areas, triple nets, moxy nets for ornamental fish, Brush park fisheries, etc.), closed seasons (lobster ban during February & September), etc. Although the issue of operating licences could be used to prevent excessive entry into fisheries, this measure is constrained by the fact that vey little is known about the Total Allowable Catch (TAC). The new fisheries act under preparation imposes very high penalties to violators of state law. However, incidences of rule breaking are not rare. Dynamiting and the use of monofilament nets are practiced all around the country and incidences of scuba divers damaging coral rich areas and use of 'moxy nets', a fishing activity involving cover of a coral reef and breaking corals using a iron stick to catch fish in the corals) are also commonly heard (Galle, Matara and Hambantota Districts).

The Fisheries and Aquatic Resources Act is complemented by a number of other Acts, guiding different aspects of utilizing aquatic resources, which are not covered under the fisheries act.

Among the most important ones are:

1) National Aquaculture Development Act (1998)
2) The Fishermen's Pension and Social Security Benefit Scheme Act No. 23 of 1990
3) Coast Conservation Act No. 57 of 1981 and 2011 amendment
4) Marine Pollution Prevention Act
5) The Fauna and Flora Protection (Amendments) Act 1949 (No 38). 1964 (No. 44), 1970
6) (No.1) and 1993 (No.49)
7) National Environmental Act No 47 amended by No 56 of 1988
8) Forest Act 34 of 1951 amended in 1954, 1966 and 1979

It is to be noted that, a new fisheries act is under preparation now, which will take into account Fisheries and Aquatic Resources Act, No.2 of 1996 and all its amendments, which would be repealed once the new Act comes into force.

4.1.2. Community Law (community legal system)

Norms and customs are rules of behaviour which are not explicitly stated (Amarasinghe. (2002). In fact, these are 'unwritten' laws. Identification of such unwritten laws are difficult and they are only implicit in the day-to-day behaviour of the fishers. Most of the community laws have their roots in certain principles of the peasantry, of which what matters most are the principles of Reciprocity, Equality, Wellbeing and Social Harmony. Behavioural norms, values, customs, etc., have a strong influence in shaping the behaviour of village people.

Community norms/laws such as the beach seine net sequence, restriction of fishing to perform religious rituals and various laws governing access to resources, all indicate that community laws are generally based on the principles of equality, wellbeing and harmony. Community rules aiming at resource conservation are hard to find. Laws which emerge from the community have legitimacy within the community and rule breakers are few. Community rules, to a great extent, ensure that conflicts are resolved either at sea or on the beach, without the involvement of an outside authority. They are self-reinforced without the involvement of any enforcement authority and thus involve low transaction costs.

The failure to recognize the existence of legal pluralism (existence of different legal system in one and the same setting) has been one of he serious issues in understanding the behaviour of small-scale fishers in the past.

4.2. Governance structures

Fisheries governance in Sri Lanka is the responsibility of the Ministry of Fisheries (MOF), which oversees national policy, conservation, and development of fisheries and aquatic resources under the Fisheries and Aquatic Resources Act of 1996. Seven institutions coming under the MOF are entrusted with diverse responsibilities in implementing the diverse aspects of the Act; the Department of Fisheries (DOF) (responsible with marine fisheries), National Aquaculture Development Authority (NAQDA) (responsible with inland fisheries and aquaculture), National Aquatic Resources Research and Development Agency (NARA) (carrying out fisheries research), Ceylon Fisheries Harbour Corporation (responsible for development and maintenance of fisheries harbours), Ceylon Fisheries Corporation (responsible for fish marketing), Cey-Nor Foundation Ltd (construction of boats and nets) and Northsea Ltd (net manufacturing). Among others, the MOF also has a Social Development Division which is entrusted with enhancing the

standard of living of the fisher communities including fishers who are directly engaged in fishing and the groups involved in indirect occupations in the fisheries industry.

The two institutions that are important in the management of SSF are the DOF and District level of offices of these institutions deal with SSF communities at the local level. Discussions with fishers and their organisations with fisheries officers often take place at this level. The DOF has its band of Fisheries Inspectors (FI) operating at the level of landing sites, who is responsible for managing fisheries issues at landing site level in 15 coastal districts. There about 1,083 minor landing centres in both marine and inland fisheries. In the governance of inland fisheries, especially those in perennial tanks, fisher organisations sit with farmer organisations, along with the officers of the Department of Irrigation, Agriculture and others to govern water management.

Fisheries interests are generally brought to the decision-making table by the Assistant Directors of Fisheries and NAQDA officers who meet monthly at the DOF office in Colombo and NAQDA office at Battaramulla. Monday is declared as a day where all state officers are required to stay at office so that the public could meet them. This also provides an opportunity for general public bring their urgent issues to the attention of the decision makers. However, no governance responsibilities are vested with the CBOs although the DOF and NAQDA work closely with CBOs in MCS activities (identifying and suing rule breakers).

After a long consultation process, the Ministry of Fisheries has recently concluded a national fisheries policy development process and the draft policy is to be submitted to the Cabinet of Ministers soon.

The Ministry of Fisheries inform NARA about the country's national fisheries research priorities, who conduct research under 10 divisions that deal with diverse aspects of fisheries which include both ecosystem issues and human system issues.

4.3. Management measures

In the management of fisheries, a number of instituios are involved because fishers form only a part of the ecosystem in which they operate: coastal zone, inland aquatic environments, etc; Department of Fisheries, Department of Coast Conservation and Coastal Resources Management, Department of Forestry, Department of Wildlife Conservation, Department of Agriculture, Marine Environmental Protection Authority, etc.

MFARD has started establishing co-management platforms for export oriented fisheries, with the participation of all stakeholders in designated fisheries management areas in a number of districts. The process has been faciliated by funds provided by international

donors. But these committes became defunct after some time for a number of reasons; withdrawal of foreign assistance, absence of a leader organisation to work towards achieving the goals of co-management and, the apathy of the state authorities to continue with the process.

Following the provisions made in Article 31.(1) of the Fisheries and Aquatic Resources Act No. 2 of 1996, the Department of Fisheries has declared 18 lagoons as Fisheries Management Areas (FMAs) of which 13 have formed a number Fisheries Management Committees (FMC); Negombo, Rekawa, Batticaloa, Periya, Puttlam, Komari-Murukkandan-Thimitta; Chilaw, Kokilai, Urani-Kottal, Madampa, Koggala, Garanduwa and Dedduwa.Each FMA has a Fisheries Coordinating Committee (FCC), composed of four persons elected from among members of the fisheries management committee (FMC) formed for that Fisheries Management Area. This can be considered an official recognition of co-management in the legal framework of the fisheries in Sri Lanka[23]. The FCC is entrusted in the preparation of a Fisheries Management Plan for that area. The FCs of a particular FMA, decides about the management fisheries resources within its area. They make decisions on the number of fishers allowed to fish, type and quantity of gear to be used, etc. with the participation of all within the FC area, which include youth, women, etc. in that area (inclusive and participatory).

One of the factors that facilitated the adoption of the above co-management approach was due to the presence of clearly demarcated boundaries of lagoons. However, such an approach would not be feasible in open access fisheries, such as SSF. Yet, Spiny Lobster and Prawn (Shrimp) Regulations, 1973 In Sri Lanka, imposed certain management measures such as closed seasons for lobsters (February and September, which are the breeding months of lobster), catching young lobster (<8 cm) and lobsters with eggs. Moreover, no person can catch thresher shark species of the family Alopiidae. In addition, there is a ban on shark finning at sea, catching of whale shark and oceanic whitetip shark.[24]

Nevertheless, fisheries management is facilitated by the enforcement of the Fisheries and Aquatic Resources Act of 1996, in which fisheries are regulated through banned gear, banned fishing practices, fishing licenses, penalties for rule breaking, etc. will definitely have a positive impact on sustainable resource management.

The interest in Ecosystem Approach to Fisheries Management (EAFM) has also emerged as a new management paradigm. Although not wide spread, a few initiatives have been taken to bring under EAFM 3 particular SSF areas: Sea Cucumber Fisheries in Mannar,

[23] Ranatunga, R.A.D.S., De Silva, D.M.A., Amarasinghe, O., Kularatne, M.G. (2024) 'Contribution of legal architecture toward strengthening comanagement platforms in small-scale fisheries in Sri Lanka', Sri Lanka Journal of Aquatic Sciences, 29(2): 99 -108. http://doi.org/10.4038/ sljas.v29i2.7618

[24] https://old.mpatlas.org/region/country/LKA/

Pelagic Fisheries in the West Coast and Puttalam Lagoon Fisheries, with the involvement of the Bay of Bengal Programme Inter Governmental Organisation (BOBP-IGO).

Sri Lanka has designated a number of marine protected areas (MPAs) to protect its marine biodiversity. The key MPAs include, Hikkaduwa National Park, Pigeon Island National Park, Bar Reef Marine Sanctuary, Rumassala Sanctuary, Adams Bridge Marine National Park and Kalpitiya. However, their management has been poor and many have come under the threat of plastic pollution.

However, in communal property inland resources, such as perennial tanks, the Rural Fisheries Organisations are involved in fisheries management to a considerable extent.

5. Small scale fisheries knowledge

5.1. Research

Sri Lanka's fisheries research plays a significant role in ensuring sustainable use of marine and inland aquatic resources, which has a positive impact in strengthening food security, protecting and conserving resources and supporting the livelihoods of fishing communities. To address challenges of overfishing, IUU fishing, climate change, pollution, resource management, and aquaculture development, a wide range of research activities has been undertaken in the country over the decades by research institutes and universities.

5.1.1. The Institutional Framework in Fisheries Research

The National Aquatic Resources Research and Development Agency (NARA), which is the research rm of the Ministry of Fisheries, is the major national institute entrusted with conducting fisheries and aquatic resources research. Established in 1981, NARA conducts research in many areas, including fishery resources management and planning, fish and aquatic plant culture, aquatic environment management and planning, fishing technology and gear development, improvement of post-harvest practices and value addition of fish products for quality enhancement, exploration and estimation of non-living resources, ocean dynamics management for safety and other applications, hydrographic applications and the socio-economic development and welfare of fishers.

In addition, international collaborations with FAO, IOTC (Indian Ocean Tuna Commission), Bay of Bengal Programme Inter Governmental Organisation (BOBP-IGO) and regional research networks have definitely enhanced the scientific capacity and data sharing of NARA.

5.1.2. Research on Marine Fisheries

Marine fisheries research is undertaken by NARA and an array of universities in Sri Lanka; Ocean University, University of Ruhuna, University of Sri Jayawardenapura, Wayamba University, Eastern University, Jaffna University, Kelaniya University, Colombo University, being the key universities. The primary focus of marine fisheries research include the management of coastal and offshore fisheries resource; stock assessments of commercially important species such as tuna, small pelagics, crustaceans, and demersal fish; bycatch reduction; ecosystem impacts of fishing gear; the migratory patterns of tuna and billfish in Sri Lankan waters;. coral reef and mangrove ecosystem studies; culture-based fisheries management, ecosystem approach to fisheries management (EAFM), etc.

5.1.3. Research on Inland Fisheries and Aquaculture

Research activities have been carried out in fisheries carried out in reservoirs, tanks, and rivers, which contribute significantly to rural nutrition and wellbeing of rural communities. Then focus of research has been on the introduction and management of exotic species such as tilapia, carp, and catfish, along with studies on the breeding biology of indigenous species. One of the fast-growing field of research is Aquaculture, covering shrimp farming, ornamental fish culture, and sea cucumber farming. Research on disease management, feed development, and water quality monitoring is critical to sustaining aquaculture expansion while minimizing environmental impacts. National Aquaculture Development Authority of Sri Lanka (NAQDA) is mandated for inland fisheries and aquaculture development in the country, and research is carried out by NARA.

5.1.4. Research on Post-Harvest and Value Addition

The Institution of Post Harvest Post-Harvest Technology (IPHT) of NARA is entrusted with research that addresses fish preservation, reduction of post-harvest losses, and value addition. Apart from IPHT, universities too have undertaken research on the development of improved fish drying techniques, hygienic handling methods, cold chain systems, value-added products, such as fish-based snacks and ready-to-cook items which are promoted to increase export earnings and domestic consumption of fish proteins.

5.1.5. Socio-Economic and Policy Research

Such research explores the social and economic dimensions of fisheries. While Sri Lanka has produced world renowned researchers working on life below water (aquatic resources), very few social scientists have done work on life above water (the human system). In general, socio-economic research have focused on profitability of craft operations, supply chain analysis, community livelihoods, gender roles in fisheries, etc. Although quite important, research work on communities, especially their traditional knowledge, values, beliefs, legals system, working rules, etc., and the impacts of policy

reforms (such as fuel subsidies or licensing systems) on the ecosystem and the human wellbeing have not attracted the attention of research.

5.1.6. Emerging areas of research

Of recent research interest, are areas such as climate change adaptation, marine spatial planning, and blue economy development (including blue injustice), marine pollution, etc. which can be considered as the new frontiers for fisheries research in Sri Lanka, of which climate change has become an area of research for NARA and almost all universities. Needless to say, the importance of investigating into ocean acidification, sea level rise, and shifts in fish stocks, and also digital technologies, such as GIS mapping and satellite monitoring etc., are also being integrated into fisheries research.

Continued investment in research, capacity building, and international cooperation will be essential for Sri Lanka to protect and conserve its aquatic resources while ensuring the well-being of its present and future people.

5.2. Data

Fisheries data is primarily collected by the Ministry of Fisheries, Aquatic and Ocean resources, the Department of Fisheries (DOF), and the National Aquatic Resources Research and Development Agency (NARA).

DOF gathers data on marine and inland fisheries through field officers stationed in coastal districts, fishery harbours, and landing sites. They collect statistics on fishing effort, catch volumes, vessel registrations, and fisher populations. The database is updated regularly, but information available in the database is less descriptive in terms of species-wish and fishing type-wise data. NARA complements this by conducting scientific surveys, resource assessments, and socio-economic studies to provide more in-depth and research-oriented data. In addition, the Ceylon Fisheries Corporation (CFC) and Ceylon Fisheries Harbours Corporation (CFHC) collect operational and market-related information such as landings, prices, and harbour activities. All such data is fed into the fisheries statistics database of the Ministry of Fisheries, Aquatic and Ocean resources (MFAOR) which is the principal data source for small-scale fisheries. The best source of all fisheries data is the Annual Statistical Bulletin published by the Ministry of Fisheries, Aquatic and Ocean Resources.

Universities and NGOs also contribute through project-based research, particularly on small-scale fisheries and community-level data. Together, these agencies ensure that fisheries statistics are compiled for national planning, management, and reporting to international organizations such as the FAO.

5.3. Projects

Projects implemented by the Ministry of Fisheries currently are as follows[25].

Table 5.1: Current projects of the Ministry of Fisheries, Aquatic and Ocean Resources

	Project	Financial Allocation (Rs)
1	Cleaning and Conservation of lagoons (started in 2018)	100 m for 2024
2	Deepening and Cleaning of Lagoons	65.1 m in 2004
3	Lagoon Productivity Enhancement Programme	15 m
4	Demarcation of selected lagoons	3 m in 2024
5	Lagoon Management	0.5 m in 2024
6	Development of Negombo Lagoon (phase 1)	1,000 m
7	Development of Freshwater Fisheries	200 m
8	Development of the fishing industry in the Northern Province	500 m in 2024
9	Construction of Gandara Fishery Harbour	9,450 m
10	Mailidy Fishery Harbour	200 m

Of the locally funded projects, all except project no. 9 and 10 are related to SSF. Moreover, there are number of foreign funded projects undertaken by the Ministry of Fisheries, which are enumerated below[26].

Table 5.2: Current Foreign-funded Projects of the Ministry of Fisheries, Aquatic and Ocean Resources

	Project (Foreign Funded)	**Cost (US $) / Rs.**
1	Development of Self-sustained Culture-based Inland Fisheries to ensure Food and Nutritional Security and Livelihood Improvements in Rural Communities in Sri Lanka	3 m US $
2	Ensuring food security through minimizing post-harvest losses in fishery industry (focussing on dep sea fishing)	7.8 m US $
3	Smart and sustainable aquaculture through effective biosecurity and digital technology	1.2 m US $
4	Technical assistance in sea cucumber aquaculture and processing, restocking and management of depleted wild resources	2.m US $
5	Granting of 1,630 MTt of rice ,500 prefabricated houses and 75,000 fishing nets which are worth Rs.1,804.00 million to low-income	Rs. 1804 m

[25]Chrome extension: //efaidnbmnnnibpcajpcglclefindmkaj/https://www.fisheries.gov.lk/web/images/downloads/pdfs/2025/PR_2024_English_-_Ministry_of_Fisheries_compressed.pdf

[26] Ibid.

	Project (Foreign Funded)	Cost (US $) / Rs.
	fishing families residing in Northern and Eastern provinces (Chinese Government Aid).	
6	The United States Agency for International Development (USAID) is providing 4 Maldives drying machines, primarily to mitigate the impacts of weather and climate change on the fisheries sector.	Rs. 84,199 m
7	Training and expertise in marine ornamental fish breeding (Thai Government aid)	Rs. 54 m
8	Supply of necessary equipment for the fishing industry in the northern and eastern provinces (Providing supportive equipment for fisheries industry) (Japanese Government Aid)	3,000,000 m US $

Of the 8 foreign funded projects, 6 are related to SSF (Nos. 1, 4,5,6,7,8)

5.3.1. Projects undertaken by NARA

Sri Lanka has been participating in the Bay of Bengal Large Marine Ecosystem (BOBLME-2) program for quite a long time. In the year 2024, a national workshop advanced the Ecosystem Approach to Fisheries Management (EAFM), emphasizing cross-boundary stocks, habitat protection, bycatch mitigation, and data standards that align national assessments with Bay-wide objectives (Palk Bay). These efforts complement NARA's monitoring and facilitate coordinated management advice to the Department of Fisheries and Aquatic Resources.

With respect to Marine resources and oceanography, projects routinely assess small and large pelagics, update catch statistics, and run oceanographic and bathymetric surveys, with a National Oceanographic Data Centre supporting physical, biological, chemical and geological datasets.

Some International partners bolster technical capacity in certain priority domains. FAO has supported sea-cucumber aquaculture and processing through hatchery infrastructure and skills development, with plans to expand stock assessment in the north and to strengthen sea-ranching guidelines—bridging science and regulation for an export-led value chain.[27]

The UK–Sri Lanka Ocean Country Partnership Programme (OCPP) is running projects on marine biodiversity baselining, pollution monitoring, and sustainable seafood verification—designed to couple conservation targets with seafood market access.[28]

[27] Open Knowledge FAOICSF
[28] marinescience.blog.gov.uk

At the policy interface, World Bank analytics since 2021–2024 have framed research needs around data-rich management, quality improvement in multiday fleets, and "blue social protection"—linking fisher welfare, safety nets, and compliance incentives to sustainability outcomes. These studies inform project preparation and pilot designs that integrate biology, economics, and social protection for coastal fisheries.[29]

Gear and habitat innovation—such as fish aggregating device (FAD) pilots and site-specific restoration—are being trialed with NARA/DFAR participation to enhance monitoring and productivity while reducing waste and improving quality control. These trials are documented in the Ministry's most recent performance reporting.

Aquaculture & inland fisheries: Research covers seed production and grow-out of key species (e.g., multiple successful breeding trials), health management in farms (including disease investigations such as mycobacteriosis in ornamentals), and diversification (e.g., seaweed and sea-cucumber initiatives)[30].

Post-harvest & food safety: The Institute of Post-Harvest Technology leads studies to reduce losses, improve handling, value addition, and ensure quality standards for exports and domestic markets[31].

Fishing technology & management: Work includes gear selectivity, bycatch reduction, and craft safety, feeding into national management plans and advice to the Ministry/DFAR under NARA's statutory mandate[32].

Coastal & environmental studies: NARA conducts shoreline and habitat assessments, water-quality monitoring, and (to a limited extent during fiscal constraints) investigations of non-living marine resources such as sand and minerals[33].

Taken together, Sri Lanka's fisheries research portfolio blends stock assessment, aquaculture innovation, ecosystem-based management, and socio-economic design. The through-line is to generate decision-grade data and practical technologies that raise value per kilogram, safeguard habitats, and align fisher incentives with long-run sustainability.

5.3.2. Programs

[29] World Bank+1World Bank Blogs Open Knowledge Repository
[30] Parliament of Sri Lanka+1The Fish Site
[31] nara.ac.lk
[32] Fiheries.gov.lk
[33] NARA op.cit

The diverse programmes undertaken by the Ministry of Fisheries include the following.

- Regional 'Aqua Livelihood' Project: This initiative aims to empower small-scale fish farmers and enhance nutritional security in the South Asian region.
- National Fishing Vessel Census 2025: The Ministry has undertaken a boat census, after it was first done in 2006. This also aims to digitize and promote the sustainable development of the country's fisheries industry.
- Risk Management and Training: Workshops are conducted to address risk management within the fisheries industry and provide technical training to the fishing community.
- 'Sayura' Special Life Insurance Scheme: The Ministry is promoting a life insurance scheme designed specifically for the fishing community.
- Infrastructure Development: This includes projects to enhance the cold chain, such as installing ice-making machines and providing refrigerated trucks to improve product quality and storage.
- Project Blue: A concept that integrates fisheries with marine tourism development, aiming to boost earnings through enhanced tourism attractions like the Hummanaya of Tangalle, Weligama Bay, etc.
- Special Program for Inland Fishing: A specific program was launched to address and resolve issues related to inland fishing.
- Fisheries Community Empowerment Program: A broad program designed to uplift the living standards, welfare, and empowerment of the fishing community through various initiatives.
- Ornamental Fish Export Industry: Projects focus on developing this industry to generate export income.
- Coastal Belt Development: Efforts are underway to develop fisheries harbours and infrastructure along the coastal belt.

Notice should be of the fact, the majority of programmes undertaken by the government aim at improving the wellbeing of fishing communities.

5.3.3. BIMReN Projects

Under the BIMSTEC-India Marine Research Network Project funded by the Ministry of External Affairs, Government of India, the following are the three ongoing twinning projects:

1. Sustaining Fisheries Ecosystem in the Palk Bay Region: Assessing Management Options, Livelihoods and Fishers' Perspectives. Collaborating institutions are Tamil Nadu Dr. J. Jayalalithaa Fisheries University, Nagapattinam, India and University of Jaffna.
2. "Harnessing Climate Finance for Financial Inclusion of Small-Scale Fish Processors: Empowering Women in Fisheries". Collaborating institutions are

ICAR- Central Institute of Fisheries Technology (CIFT) and Sabaragamuwa University of Sri Lanka.

3. Fishery Management Regimes: Optimization and Innovation for the Blue Economy in the BOB Region. Collaborating institutions are ICAR-Central Marine Fisheries Research Institute and University of Ruhuna, Sri Lanka.

6. Issues and opportunities

6.1. Issues

The following table presents key issues in the small-scale fisheries sector of Sri Lanka based on the five sections in Part 2 of the SSF Guidelines.

Table 6.1: Key issues in the small-scale fisheries subsector

Small-scale fisheries dimension	Stakeholders to ask*	Key issues*
5. Governance of tenure in small-scale fisheries and resource management a. Responsible governance of tenure	Local leaders Local government Regional government National government	○ Small scale fisheries are strongly recognized in government policy. ○ Small scale fishers do not enjoy secure tenure rights. Both fishing rights and human rights are violated*. ○ No. There is a spatial separation of different technological categories**. ○ Small-scale fisheries are involved in fisheries management decision-making, which is especially true with lagoons, where boundaries are clear.
5b. Sustainable resource management	Fishers Researchers, scientists, Resource managers	There is high fishing pressure in coastal area occupied by SSF fishers. This has brought down CPUE and fishing incomes. Fishers complain of low incomes and there is a need for social protection*** Anthropogenic forces such as coastal pollution and the use of environmentally unfriendly gear and fishing practices are causing serious threats to the ecosystem (e.g. use of banned gear such as monofilament nets, use of seines in lagoons, dynamiting). ○ Loss of beach area due to coastal erosion and tourism activities,

Small-scale fisheries dimension	Stakeholders to ask*	Key issues*
		○ Illegal constructions on the coast (especially by tourism stakeholders), ○ Lack of access to areas around lagoons and the beach, ○ Coastal pollution (especially plastic pollution of near-shore waters. ○ Lack of knowledge and awareness about coastal resources and communities, ○ Lack of trained/skilled officers, weak post-harvest handling of fish, ○ Obsolete fishing and fish processing technology, ○ Poor concern for protecting resources during breeding periods, ○ Failure to demarcate coastal boundaries (buffer zones, no-build zones, etc.). (Source: FAO/ICSF/SLFSSF, 2019)[34]
6. Social development, employment and decent work	Fisher groups (per fishery) Small-scale fisheries community groups, leaders, elders	○ Conflicts between SSF and commercial fishers (those operating large crafts with inboard engine in offshore and deep-sea water) are rare because the two categories exploit different resource areas and are spatially separated. However, conflicts often arise with others using same coastal resources, such as Tourism stakeholders, as enumerated under * below. ○ Conflicts between fishers and farmers are common in area where inland fisheries are widespread (ex. perennial tanks). Since the tank waters are meant mainly for irrigation, fisher voices are not much respected in water management. ○ Small-scale fisheries communities have reasonably good access to public services such as education, healthcare

[34] FAO/SLFSSF/ICSF (2019). Final report submitted to ICSF on the process of SSF Guideline implementation in Sri Lanka.

Small-scale fisheries dimension	Stakeholders to ask*	Key issues*
		and public safety, except for isolated villages.
7. Value chains, post-harvest and trade	Supply chain groups: Upstream – suppliers (net and boat builders) Downstream – buyers, processors, traders, retailers	○ Other than fishers, fisherwomen often participate in discussions and small-scale fisheries decision-making, through fisheries cooperatives or through fisher women's associations (such as Women's Teppam (log raft) Association in Wellaweediya, Negombo; Southern Fisheries Organisation in Dondra of the south) or as associations of fish processors. But other supply chain actors, such as fish middlemen, transport agents, retailers, etc. do not participate in such meetings. ○ For the same task women are paid less than men. However, there are no complaints on this issue. ○ Alternative employment is often found within the sector: artisanal fishers working as crew labourers in motorized crafts during off-season; fish processing (mainly undertaken by women); fish selling; agriculture (in areas of the South, such as Godawaya; Children of fishers finding employment in the tourism sector as guides and diverse service providers, etc. Integrated Tourism also has a high potential, which will be discussed under opportunities. ○ There is no competition with industrial fisheries as noted above: different resource areas; spatial separation; even governed by legal systems; SSF strongly influenced by community legal system, whereas industrial fisheries is guided by state law.

Small-scale fisheries dimension	Stakeholders to ask*	Key issues*
8. Gender equality	Small-scale fisheries community groups, leaders, elders	○ Differences in opportunities in small-scale fisheries vary among ethnicity and religion. Women in Muslim communities enjoy less freedom in taking up diverse opportunities available in fisheries (religious and cultural barriers), whereas women in Catholic and Hindu communities often engage in diverse activities in fisheries. Gender equality an even equity is often respected in such communities (Negombo, Jaffna, Batticaloa). However, due to religious and cultural barriers women in Buddhist communities (south) do not engage in beach-based activities, although they are even engaged in active fishing in inland fisheries in interior villages. ○ Both men and women have equal access to public services.
9. Disaster risks and climate change	Resource managers, Scientists Fisher groups (per fishery) Small-scale fisheries community groups, leaders, elders	○ Scientifically, climate change has several impacts on fisheries; Sea level rise, increase in sea water temperature, ocean acidification, loss of wetlands, **coastal erosion, increase in frequency and intensity of storms, seasonal shifts, etc.** However, fishermen only notice the latter three impacts. ○ Climate change might cause idiosyncratic shocks affecting individuals (damage and loss of crafts and gear) or collective shocks (affecting the whole community. But the latter is more common with climate change shocks. ○ Fishers tend to increase their resilience by adopting strategies such as, adopting mechanised fishing (by artisanal fishers), engaging in 'activity diversification' (both fishing and non-fishing related), borrowing (instant loans by coops; fish merchant, private

Small-scale fisheries dimension	Stakeholders to ask*	Key issues*
		money lender), Mortgaging jewellery, etc. Adopting also Group strategies (reciprocal help; sacrificing individual wellbeing for community wellbeing, tightening of belt, etc. Finally, in the absence of any effective strategy within the village, they fishers might resort to migration or even leaving fisheries. It is evident that social capital or social networks, based on trust and reciprocity play an important role in coping with climate change impacts.

**Rights of access of fishers to coastal waters, inland waters and to the beach are emerging as serious threats to the livelihood of fishers. However, forces of national integration, market expansion, tourism development and industrial expansion, have significantly pushed the value of coastal land, and investment in real estate related to coastal land became a lucrative avenue of investment. Although the Coast Conservation Department has been involved in providing the public (including fishers) with beach access roads, there are complaints from fishers that their access to the beach has been barred in certain areas due to tourism-related constructions and fencing by hoteliers. Some public beaches are arbitrarily demarcated as private beaches by hoteliers and coastal waters are used by them for the recreational activities of their customers. Fishers complain that they have lost their beach-seining sites, craft landing sites, and fish drying sites, which have pushed many of them into the dumps of poverty, violating both their fishing rights and human rights. Although, the FAO Voluntary Guidelines for securing sustainable fisheries strongly emphasize the need to recognize, respect and record the legitimate tenure rights of SSF communities, including their customary rights, action towards achieving this goal have not been taken so far. Nevertheless, the draft National Fisheries Policy includes policy statements which states that the state shall recognize, respect and customary rights of fishers.*

*** Blue revolution in Sri Lanka, marked by the introduction of motorised crafts and new fishing gear and techniques in the 1960's pushed fishers gradually into deeper and deeper waters, keeping interaction among artisanal and motorised fishers to a minimum.*

**** One of the serious issues that have affected the wellbeing of fishing populations and the health of the coastal fisheries resources is the high fishing pressure: too many boats and too many fishers. Of the total fleet of 58,918 crafts, 90.24% (43,552 crafts) are small scale, which operate up to a maximum distance 0-24 nautical miles (edge of the*

Contiguous Zone) within an ocean area of about 17% of the EEZ. The remaining 5,749 crafts (9.76% of the fleet) operate in 83% of the EEZ area. SSF fishers complain that there are too many crafts in their waters and that their incomes have declined significantly threatening their livelihoods (see figure…) Although entry could be controlled through the system of licensing of fishing operations, the Department of Fisheries can not control the number of licenses issued without estimating the Total Allowable catch, which has been done only for a very few species; sea cucumber, lobster, shrimp, and marine ornamental fish by NARA.

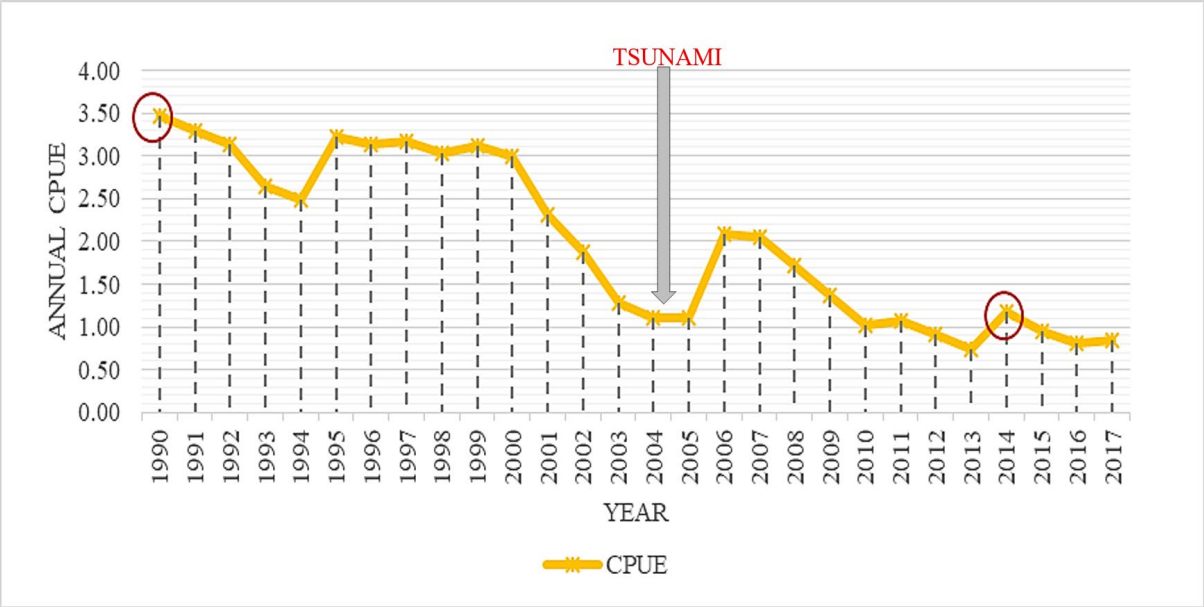


Figure 6.1: Changes in Catch per Unit of Effort – Coastal Fisheries, Hambantota[35]

*****Dichotomy in Fisheries Management*

As mentioned earlier, a study carried out in the Hambantota District in 2019 (Weralugolla et al, 2019) revealed that the fishery was operating close to the Open Access Equilibrium (OAE) (where all profits have been dissipated under heavy fishing pressure). Therefore, this high fishing pressure need to be reduced. Yet, governments (of developing countries) intentionally tend to perpetuate this situation (high fishing pressure) because in a context of high degree of unemployment it would be politically wise to keep fishers there. By reducing effort from the fishery, a rural proletariat would be created, who would cry for jobs, assistance and who will even revolutionize against the authorities. In fact, what happens is, due to various subsidies soft loans, social assistance, etc., the cost of effort might fall. This is the dichotomy in fisheries management we need to resolve.

[35] Weralugolla, S.S.S., O. Amarasinghe, O. and C. Armstrong, C. (2019). An integrated approach to the assessment of post tsunami status of the fisheries with further reference to Climate Change: The case of the Small- Scale Fisheries sector of Southern Sri Lanka (Unpublished master's thesis), Nha Trang University, Nha Trang, Vietnam

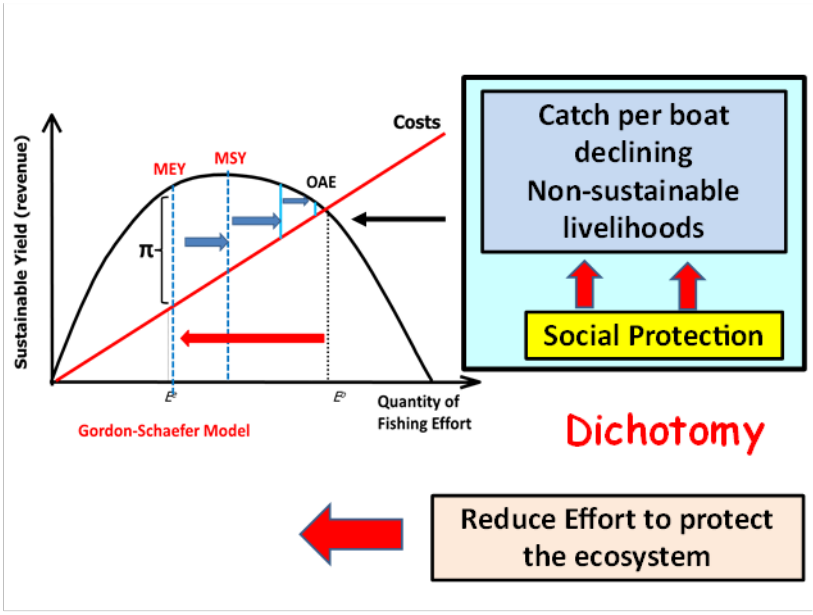


Figure 6.2: Dichotomy in fisheries management

Apart from training, capacity building, etc. that have been suggested to reduce fishing effort, one important way to reduce fishing effort is to STOP FURTHER ENTRY. Section 5.20 of SSF Guidelines states "States should avoid policies and financial measures that may contribute to fishing overcapacity and, hence, overexploitation of resources that have an adverse impact on small-scale fisheries", . In this respect, one could curtail further entry into fisheries by providing vocational educational facilities to children of fishing families. It would be worth noting_section 6.4 of SSF Guidelines, which states "States should provide and enable access to schools and education facilities that meet the needs of the small-scale fishing communities and that facilitate gainful and decent employment of youth, respecting their career choices and providing equal opportunities for all boys and girls and young men and women". One of the key strategies in this regard could be to provide the children of fishers with physical and economic access to vocational education to enable them to take up employment in blue economic sectors other than fisheries or employment in completely different sectors, local or abroad.

******Lack of effective Community-Research/Policy link*

There is serious communication issue in SSF because of the lack of any effective communication link (2-way communication) between the fishing community and Research (NARA) and Policy actors. This also prevents (among other things), in preparing an annual research plan that aims at addressing urgent SSF issues. Today, SSF is not a key research area of NARA or even universities. Lack of this communication link has also had a negative impact on the process of 'knowledge translation'. Knowledge generated by scientist do not reach fishing communities and vice versa.

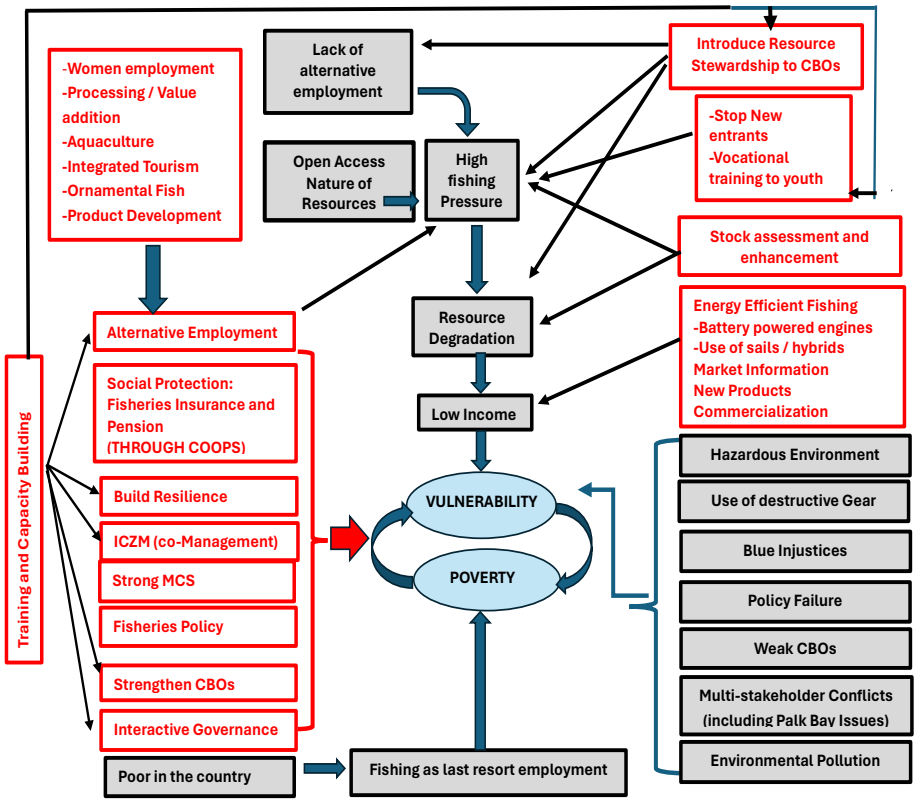


Figure 6.3: Issues in small scale fisheries and actions proposed to address them

Issues affecting SSF are given in grey boxes. Actions need to be taken are given in blue boxes

Source: Oscar Amarasinghe (this study). (Based on stakeholder consultations carried out in 12 out of 15 coastal Districts) (FAO/ICSF/SLFSSF, 2019[36])

6.2. Opportunities

The government is prioritizing the fisheries sector with its new draft Fisheries and Aquaculture Policy. The policy outlines strategies to develop the small-scale fisheries sector by focusing on key areas: sustainable resource management, improving livelihoods, and providing social security and safety. The new policy acknowledges the critical role the small-holding sector plays in both economic and social development. It aims to create opportunities for these small-holders to increase their incomes, improve their living standards, and achieve long-term, sustainable livelihoods.

Additionally, the existing legal framework allows small-scale fishermen to participate in decision-making through co-management. This process empowers them to build

[36] FAO/SLFSSF/ICSF (2019). Final report submitted to ICSF on the process of SSF Guideline implementation in Sri Lanka.

business and social networks, represent their communities, get government support, and address the main challenges they face.

Coastal aquaculture provides a very good avenue for coastal fishing families to earn not only supplementary incomes but also to start full-time farming activities, which would definitely contribute to reducing pressure on coastal resources. National Aquaculture Development Authority (NAQDA) has suggested investment in ornamental fish farming as a good alternative income source for rural populations. NAQDA is also proposing to increase Seabass, Crab, Seaweed & Sea Cucumber production. Coastal aquaculture activities have been successfully carried out by NAQDA in a number of areas with good results. Moreover, it has the potential of providing coastal fishing families with alternative and principal livelihood activities.

IST in the coastal zone is a tourism initiative developed with the participation of all types of stakeholders in a particular coastal area, providing the tourist with the opportunity to learn from and enjoy diverse activities planned with coastal marine, lagoon and, cultural and social resources, and opportunities for the people in the area to improve their wellbeing while maintaining the sustainability of the ecosystem and protecting people's cultural and social traditions. IST initiatives have already been initiated by people themselves, like organising boat trips, mangrove and bird watching, snorkelling and swimming, yoga and cultural dances for tourists, etc.

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