Food and Agriculture Organization of the United Nations

BOBP

National Report on Strengthening Sustainable Aquatic Food Value Chains for Enhanced Food Security and Nutrition in Sri Lanka

National Report on Strengthening Sustainable Aquatic Food Value Chains for Enhanced Food Security and Nutrition in

Sri Lanka

Bay of Bengal Programme Inter-Governmental Organisation

91, St. Mary's Road, Abhiramapuram

Chennai 600 018, Tamil Nadu, INDIA

Preferred citation

BOBP IGO, 2025. National Report on Strengthening Sustainable Aquatic Food Value Chains for Enhanced Food Security and Nutrition in Sri Lanka.

Report Preparation

Dr. P. Krishnan, *Director, BOBP-IGO, Chennai*
Mr. Rajdeep Mukherjee, *Policy Analyst, BOBP-IGO, Chennai*
Dr Ahana Lakshmi, Senior Consultant, BOBP-IGO, Chennai

Background Research

Dr. T. Velumani, Project Scientist, *BOBP-IGO, Chennai*
Dr. K. Nirmala, Consultant, *BOBP-IGO, Chennai*
Dr. Anisha Shafni John, Research Associate, *BOBP-IGO, Chennai*
Ms Afifat Khanam Ritika, BIMReN Fellow, *BOBP-IGO, Chennai*
Ms Bhoomika Kosambi, Intern, *BOBP-IGO, Chennai*
Mr Nihal Kumar, Intern, *BOBP-IGO, Chennai*

Published by Dr. P. Krishnan, Director on behalf of the Bay of Bengal Programme Inter-Governmental Organisation, 91, St. Mary's Road, Abhiramapuram, Chennai 600 018, India.

National Report on Strengthening Sustainable Aquatic Food Value Chains for Enhanced Food Security and Nutrition in Sri Lanka

Table of Contents

1. Introduction and Context....1
   1.1. Overview of the country's demographic and economic profile (fisheries)....1
   1.1. Key nutrition challenges (e.g., undernutrition, micronutrient deficiencies, and overweight/obesity)....2
   1.1. Summary of the importance of aquatic foods in national diets and livelihoods....3
2. Country Snapshot Table....3
3. Aquatic Food Production and Utilization....4
   3.1. Trends in capture fisheries (inland and marine) and aquaculture....4
   3.1. Main species and product forms....6
   3.2. Major production zones and seasonal characteristics....7
   3.3. Processing, preservation and domestic consumption practices....7
4. Trade and Market Dynamics....9
   4.1. Overview of fish exports (species, value, markets)....9
   4.2. Key import flows and their drivers....9
   4.3. The role of domestic markets in providing affordable fish to households....11
   4.4. Barriers and opportunities (tariffs, non-tariff measures, certification, and traceability)....12
5. Nutritional Contribution of Fish....12
   5.1. Fish's share in total protein intake....12
   5.2. Key micronutrients supplied (Ca, Fe, Zn, I, Se, Vitamin A, Vitamin B12, DHA/EPA). 12
   5.3. Role of small fish species consumed whole....12
   5.4. Evidence from national nutrition surveys or literature....13
6. Fish Loss and Waste (FLW)....14
   6.1. The main points along the chain where losses occur (landing, transport, processing, retail)....14
   6.2. Available estimates of quantity and value lost....14
   6.3. Causes (infrastructure, handling, storage)....15
   6.4. Mitigation practices or innovations....15
7. Socio-economic and Gender Dimensions....16
   7.1. Employment generated by the sector (fisheries, aquaculture, post-harvest)....16

7.2. The role of women in processing, trading, and marketing....16
7.3. Constraints faced by small-scale actors (e.g. access to finance, technology). 16
8. Sustainability and Resilience....17
8.1. Summary of stock status where available (overfishing, recovery, habitat pressures) 17
8.1. Environmental risks (pollution, waste, carbon intensity)....17
8.2. Climate risks and adaptation measures....17
8.3. Resilience factors (diversification, community practices, and early warning systems). 17
9. Governance and Policy Framework....18
9.1. Overview of national fisheries and aquaculture policies 18
9.2. Food safety and quality assurance systems 18
9.3. Participation in international agreements (e.g., WTO fisheries subsidies, PSMA, CITES) 19
9.4. Institutional arrangements for managing value chains....19
10. Key Challenges and Opportunities....20
10.1. Most pressing constraints (production, markets, nutrition, gender, governance). 20
10.2. Promising opportunities or best practices that could be scaled up....20
11. Priority Policy Recommendations....21
11.1. Key actionable policy recommendations linking aquatic foods, value chains and Food Security and Nutrition (FSN - six dimensions) 21
11.2. Recommendations (specific, feasible, and linked to national priorities) 24
12. Provide the traffic-light scoring for the six key dimensions 25
13. References 27

List of figures

Figure 3.1: Sri Lanka - Inland fish production 5
Figure 3.2: Sri Lanka – Marine fish production....5
Figure 3.3: Relative contribution of marine and Inland production....6
Figure 3.4: Marine Sector fish catch by major commercial groups (Mt)....7
Figure 3.5: Inland fish Catch estimates by major species....7
Figure 3.6: Domestic production and Import of Clupeoids 9
Figure 4.1: Sri Lanka: Trend in seafood export and import (volume)....9
Figure 4.2: Aquatic food balance 11
Figure 6.1: Fish loss in the multiday fisheries in Sri Lanka....14
Figure 6.2: Major causes of loss in the multiday fisheries in Sri Lanka 15

List of tables

Table 1.1: Sri Lanka Fisher Population 1
Table 1.2: Sri Lanka Fishing Fleet 1
Table 1.3: Sri Lanka Fisheries Infrastructure 2
Table 1.4: Sri Lanka Fish Production 2
Table 2.1: Country Snapshot 3
Table 3.1: Per Capita Consumption of Fish, Dried Fish and Canned Fish (kg/year) 7
Table 3.2: Important fish species consumed at home 8
Table 3.3: Nutritional Composition of fish 8
Table 4.1: Export – Import – Re-export of fish 10
Table 11.1: Key actionable policy recommendations related to the six dimensions of FSN 21
Table 11.2: Specific recommendations linked to national priorities 24
Table 12.1: Traffic Light Score for the six key dimensions 25

1. Introduction and Context

1.1. Overview of the country's demographic and economic profile (fisheries)

Sri Lanka is a small island nation in the Indian Ocean with a population of 21.92 million in 2024[1]. It has a land area of 65,610 km^2, coastline of 2825 km and an EEZ of 5,17,000 km^2. The average GDP growth is 5% in 2024[2]. The fisheries sector in Sri Lanka contributes about 1.31% of the country's GDP and 15.26% of the agricultural GDP is from fisheries[3].

As of 2024, Sri Lanka has a total of 318,470 active fishers. Of these, 223,720 are engaged in marine fisheries, with approximately 85% working in coastal areas. An additional 34,550 individuals participate in offshore and deep-sea fishing using multi-day vessels. The total number of fishing households is estimated at 273,240, encompassing around 1.12 million people directly involved in the industry. Including dependants and indirect workers, the fisheries sector supports approximately 2.7 million people, accounting for about 18% of Sri Lanka's total population. The tables below give a snapshot of the population, fishing fleet, infrastructure and production in 2024 as per the Annual Statistical Bulletin. Sri Lanka's fisheries sector operates with approximately 48,000 marine fishing fleets, supported by about 75 large and medium seafood exporters and 32 EU-approved processing establishments, with high-value yellowfin and bigeye tuna mainly exported to the United States, European Union, and Japan[4].

Table 1.1: Sri Lanka Fisher Population

Category (in numbers)	2024
Inland fishers (men and women)	94,990
Inland fishing households	83,960
Inland fishing household population	223,610
Marine fishers (men and women)	225,480
Marine fishing households	188,940
Marine fishing household population	807,550
Direct and Indirect employments (marine and inland)	586,000
Fishing and related livelihoods	2.7 million

Table 1.2: Sri Lanka Fishing Fleet

Category (numbers)	2024
Multi-dayboats (offshore vessels) IMUL	4869
Multi-day boats high seas IMUL	1803
Multi-day boats other	3066
Inboard single day boats -DAY	880
Outboard motor FRP boats OFRP	24,823
Motorized traditional boats MTRB	2.709
Non-motorized traditional boats NTRB	15,037
Non-motorized traditional beach seine boats NBSB	953
Total marine fishing fleet	49,271
Inland fishing fleet	9,647

Table 1.3: Sri Lanka Fisheries Infrastructure

Category (numbers)	2021	2022	2023	2024
Major fishery harbours	5	5	5	5
Functioning Major fishery harbours	4	4	4	4
Proposed fishery harbours for upgrading	2	2	2	2
Ongoing fishery harbours	2	2	2	2
Other fishery harbours	5	5	5	5
Anchorages	20	20	20	20
Minor fish landing centres	720	720	720	720
Active Ice plants	45	45	45	45
Ice Production capacity (Mt/day)	1,050	1,050	1,050	1,050
Active boat manufacturing yards (registered)	15	15	15	15
Fishing gear factories	38	15	19	19

Table 1.4: Sri Lanka Fish Production

Marine sector				
	2021	**2022**	**2023**	**2024**
Coastal waters	178260	149400	164995	165040
Offshore/ Deep sea	153415	131270	128950	143800
Total	**331675**	**280610**	**293945**	**308840**
Inland and aquaculture sector				
	2021	**2022**	**2023**	**2024**
Inland capture fisheries	10225	10680	9340	8720
Aquaculture fisheries	9320	7680	8780	7800
Shrimp farms	84690	92760	95000	85810
Total	**104235**	**111120**	**113125**	**102330**

1.1. Key nutrition challenges (e.g., undernutrition, micronutrient deficiencies, and overweight/obesity).

Especially among older and rural groups, persistent undernutrition alongside widespread micronutrient deficiencies (iron, zinc, calcium, folate, and vitamin A) and rising rates of overweight and obesity (with 34% overweight and 17.8% obese according to the 2022 survey) have been reported[5].

Sri Lanka faces a malnutrition issue, characterised by the coexistence of undernutrition and rising rates of overweight and obesity. The National Nutrition and Micronutrient Survey 2022 revealed that 25% of children aged 5–17 years were underweighted**,** while approximately 7% of children aged 5 - 9 years and 12% of adolescents aged 10-17 years were affected by overweight or obesity, indicating a concerning upward trend since 2017. Micronutrient deficiencies are prevalent, with high rates of vitamin D deficiency and emerging concerns about deficiencies in vitamins B12 and zinc, particularly among children aged 5–17 years. Additionally, severe acute malnutrition (SAM) remains a critical issue, with 10,323 children

under five years reported as severely malnourished in 2024.[6] Addressing this issue requires school-based nutrition interventions, promotion of healthy diets, and policies to reduce the availability of unhealthy foods to children and adolescents[7].

1.1. Summary of the importance of aquatic foods in national diets and livelihoods

Fish is a staple in Sri Lanka's national diet, with per capita consumption averaging approximately 9 grams per day in 2019[8]. 82% of the rural households consume inland fish at least once in a month[9]. Aquatic foods play a crucial role in Sri Lanka's diets providing a major source of high-quality protein, essential fatty acids, and micronutrients for millions of people, particularly in coastal and rural communities.

The fisheries sector employs over 320,470 active fishers and supports approximately 2.7 million people, including dependents, contributing significantly to food security and income generation. Aquatic foods also contribute to national economic activity, with fisheries accounting for about 1.2 – 1.4% of GDP while supporting local markets, processing industries, and export earnings[10].

2. Country Snapshot Table

The table below provides a snapshot of the key aspects related to fisheries in Sri Lanka.

Table 2.1: Country Snapshot

	Indicator	Year	Value	Source
1	Population (millions)	2024	22,000 ('000 persons)	11
2	GDP per capita (USD)	2024	29,898,564 at the current market rate (GDP change rate 9%) (contribution to GDP 1%, as on 2015)	1
3	Fish production – capture ('000 tonnes)	2023	338161 tons	12
4	Fish production – aquaculture ('000 tonnes)	2023	60888 tons	13
5	Inland vs. marine share (%)	2023	In the year 2023, In capture fisheries 87% marine (293945 t) and 13% inland (44216 t); Total 2023 was 338161.2 tons, as per Fishsat J	13
6	Top 3 capture species		Clupeoids NEI Scads NEI Skipjack tuna	FishstatJ
7	Top 3 aquaculture species		Tilapia (*Oreochromis spp.*), Barramundi (*Lates calcarifer*), and Shrimp (Black Tiger Shrimp – Penaeus *monodon*)	13

	Indicator	Year	Value	Source
8	Employment in fisheries & aquaculture ('000, men/women)	2024	94,990 inland + 225,480 marine; 320,470 total men and women	14
9	Exports (value, USD million)	2023	305516 (1000 $)	13
10	Imports (value, USD million)	2023	306384 (1000 $)	13
11	Per capita fish consumption (kg/year)	2019	5.1 kg/year	15
12	% of animal protein from fish	2023	50% (per capita fish consumption – 15.1 – 17.3 kg/year)	16
13	Estimated fish loss & waste (%)	-	40-60%	19
14	Women's participation in post-harvest	-	No gender-disaggregated data. (ref. of 156 women in post-harvest in Trincomalee)	17
15	Key compliance measures (traceability, HACCP, CDS, PSMA)	-	HACCP, CDS and PSMA done	18, 19, 20
16	Major climate/environment risks		Sri Lanka faces major climate and environmental risks, including rising temperatures, erratic rainfall leading to droughts and floods, sea level rise causing coastal erosion, and biodiversity loss impacting ecosystems and livelihoods. These risks threaten agriculture, water security, health, and coastal communities, making the country highly vulnerable to climate change impacts	21

3. Aquatic Food Production and Utilization

3.1. Trends in capture fisheries (inland and marine) and aquaculture

Between 2014 and 2023, inland waters and marine areas have seen varying trends in aquaculture and capture production, with inland waters showing a gradual increase in aquaculture output, peaking in 2023 at 45,681 tons. Marine areas, however, experienced fluctuations, with culture production dipping in 2023 to 15,207 tons, and capture production also displaying a downward trend, reaching 293,945.2 tons in 2023. Overall, total production

from both inland and marine areas decreased in recent years, dropping from 457,136.3 tons in 2014 to 309,152.2 tons in 2023.

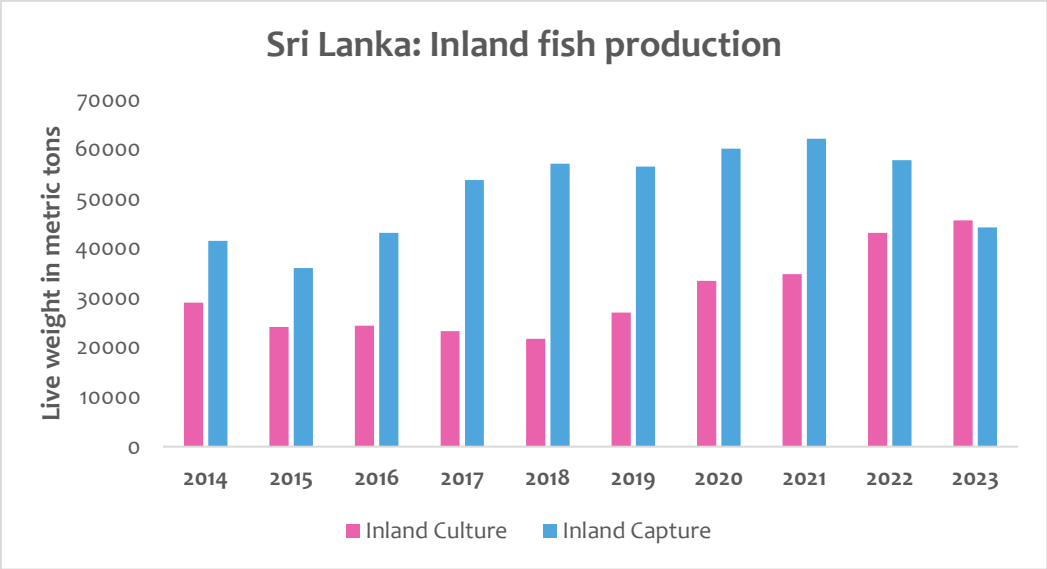


Figure 3.1: Sri Lanka - Inland fish production

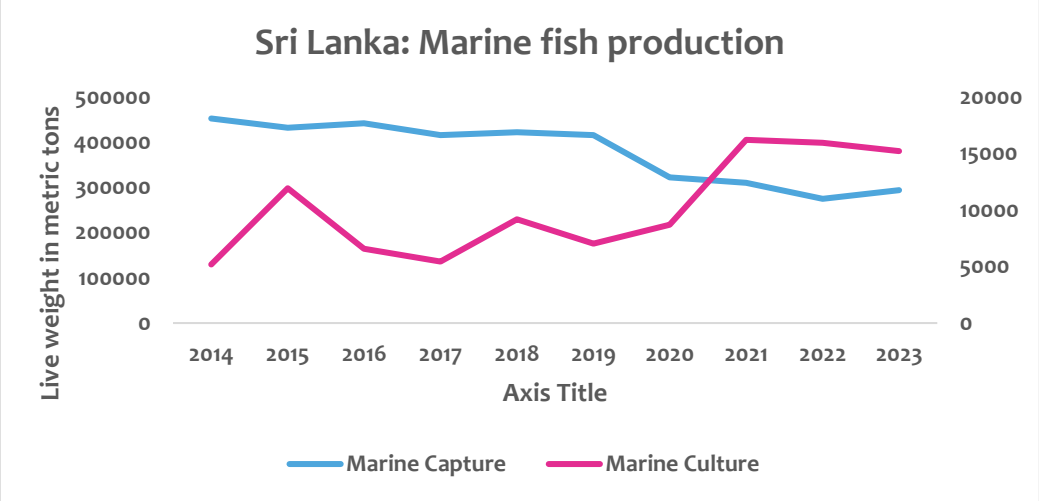


Figure 3.2: Sri Lanka – Marine fish production

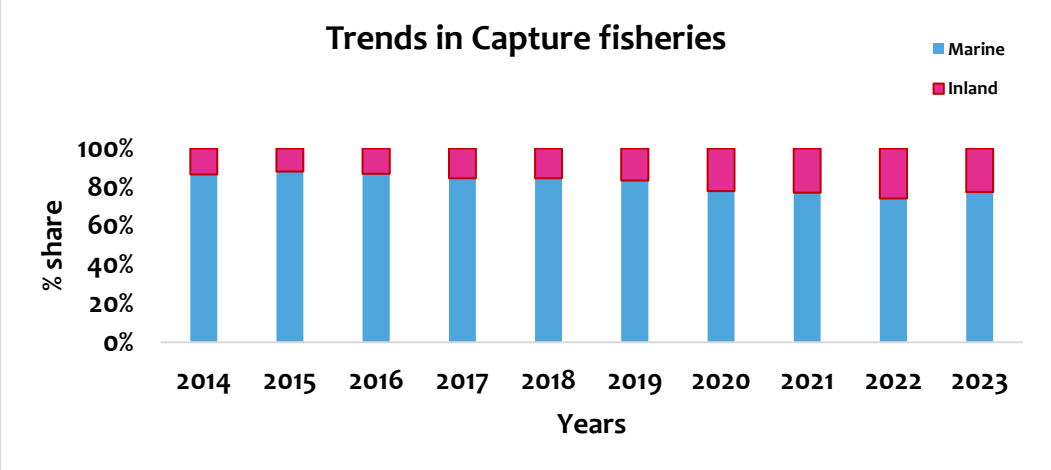
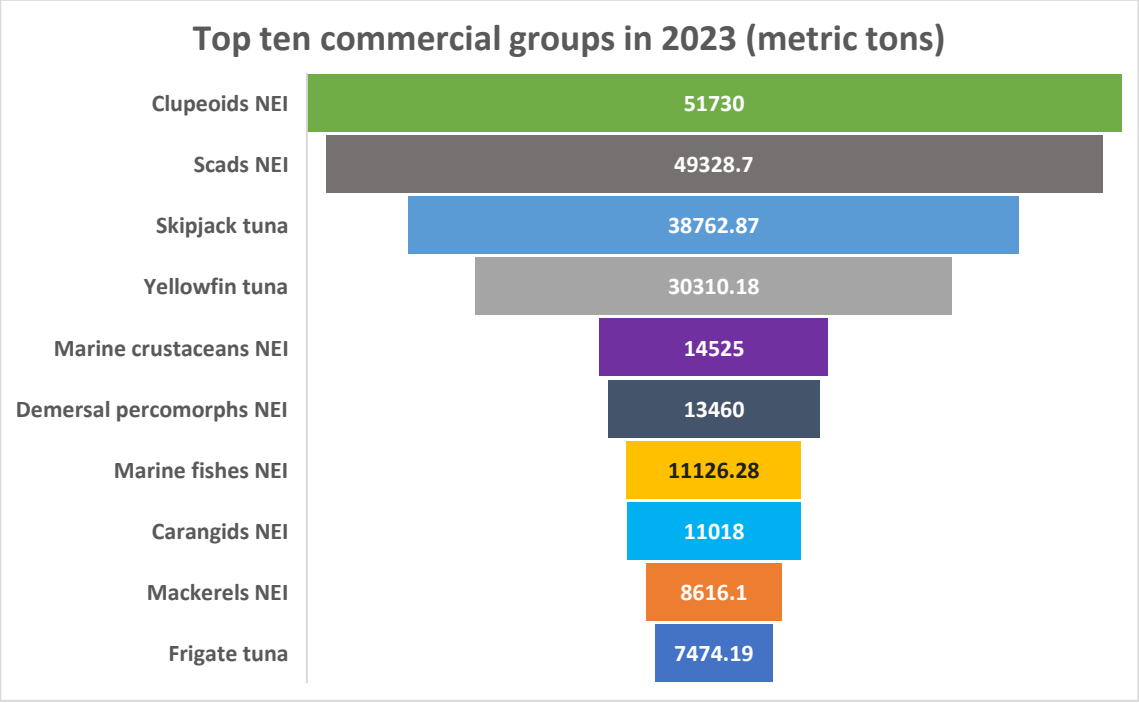


Figure 3.3: Relative contribution of marine and Inland production
(Data source: Fishstat J)

Sri Lanka's marine fish production peaked at about 452,000 tonnes in 2014 before gradually declining. From 2015 to 2018, production remained relatively stable around 415,000–440,000 tonnes. A sharp fall occurred in 2020, dropping to around 322,000 tonnes, likely due to external factors. Since then, production has shown a slow recovery, reaching about 294,000 tonnes by 2023.

3.1. Main species and product forms.

The top ten marine commercial groups in 2014 and 2023 are given in the figure below indicating the changing nature of the catch.



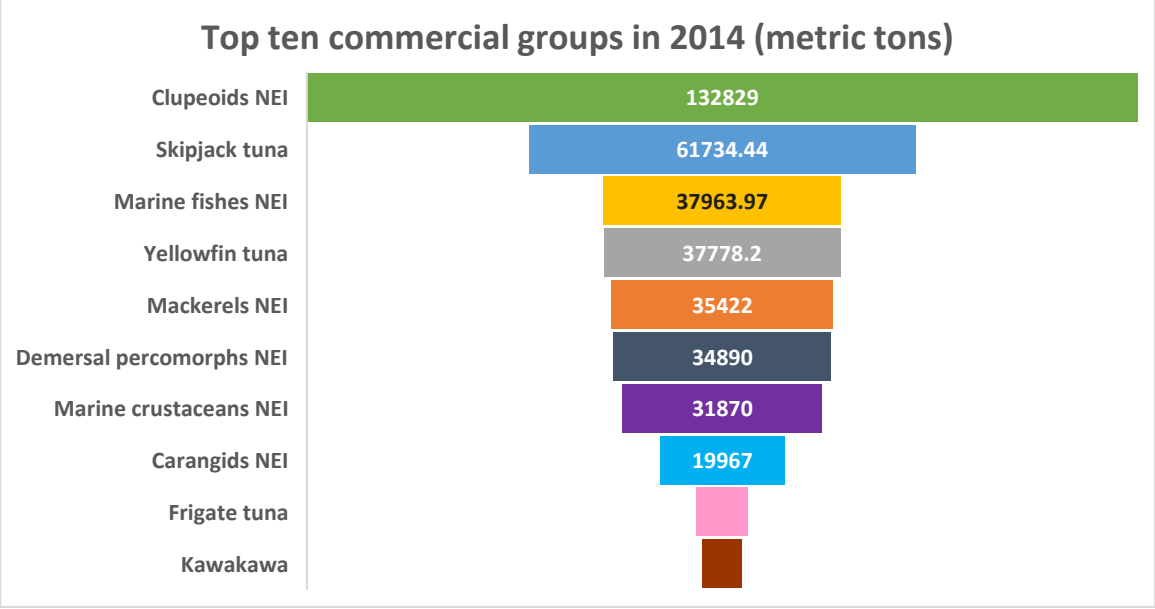


Figure 3.4: Marine Sector fish catch by major commercial groups (Mt)

Data Source: Fishstat J

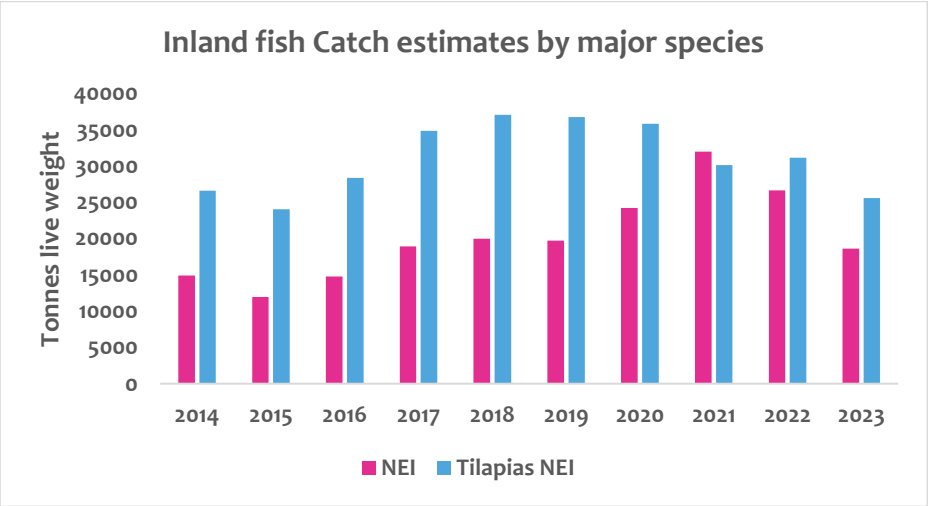


Figure 3.5: Inland fish Catch estimates by major species

Data Source: Fishstat J

3.2. Major production zones and seasonal characteristics

For marine production, Galle, Puttalam and Trincomalee lead; in the inland fisheries sector, Anuradhapura has the highest production, followed by Ampara and Polonnaruwa leads. Seasonal capture trends and zone wise data for Sri Lanka is not are not available.

3.3. Processing, preservation and domestic consumption practices

As per 2019 data, fresh fish consumption is high for large marine fish (44%), small marine fish (38%), and freshwater fish (16%)[22]. However, it may be noted that while fish consumption rose till 2016, there was a steep fall in consumption in 2019 to just a quarter of the 2016 consumption. In 2019, only marine dried fish prevailed, accounting for 21% compared to 3% for freshwater dried fish in 2016; there was no freshwater dried fish consumption in 2019. More details are furnished in the table below (2024 Annual Fisheries Statistics Bulletin).

Table 3.1: Per Capita Consumption of Fish, Dried Fish and Canned Fish (kg/year)

	1995/96	2002/03	2006/07	2009/10	2012/13	2016	2019
Fresh fish							
Marine large fish	2.6	3.7	3.9	4.3	4.4	4.5	1.4
Marine small fish	3.5	3.3	3.4	4.4	4.3	4.4	1.2
Freshwater fish	0.6	1.3	1.6	1.7	1.8	2.2	0.5
Other	0.1	0.2	0.2	0.4	0.4	0.5	0.1
Total	6.8	8.5	9.1	10.8	10.9	11.6	3.2
Dried fish							
Marine dried fish	3.3	3.9	3.8	3.7	3.5	3.5	1

	1995/96	2002/03	2006/07	2009/10	2012/13	2016	2019
Freshwater dried fish	0.1	0.04	0.1	0.1	0.1	0.1	
Total	3.4	3.9	3.8	3.8	3.6	3.6	1
Canned fish	0.26	0.75	0.7	0.7	0.6	1.4	0.9

Source: Table 8.5 Annual Fisheries Statistical Bulletin, 2024

The average household size came down from 4.2 persons in 2002-03 to 3.7 persons in 2019. The major fish consumed are listed in the table.

Table 3.2: Important fish species consumed at home

Local name	***Common name***	***Local name***	***Common name***
Large fish		**Small fish**	
Balaya	Skipjack tuna	Sprats	Sprats
Kelawalla	Yellowfin tuna	Hurulla	Sardinella
Mora	Shark	Salaya	*Clupea*
Thalapath	Sailfish	Sudaya	White sardinella
Paraw	Trevallies	Karalla/ Katuwalla	*Karalla*
Seer	Spanish mackerel	Kumbala	Indian mackerel
Maduwa	Rays	Linna	Indian scad
Inland fish		**Crustaceans**	
Lula		Prawns	
Thilapia	Tilapia	Crabs	
		Cuttlefish & Others	

Table 3.3: Nutritional Composition of fish[23]

Type of fish	Iron-Fe (mg)	Niacin (mg)	Crude fat (g)	Protein (g)	Calcium (mg)	Energy (kcal)	Phosphorus (mg)
Salaya (Coastal)	2.10	2.80	19.40	21.80	180.00	273.00	280.00
Tilapia (Inland – introducing)	0.40	3.10	2.80	18.80	54.00	106.00	172.00
Lula (Inland – traditional)	0.50	0.50	2.30	16.20	140.00	94.00	95.00

Salaya: *Clupea spp*.; Tilapia: *Tilapia spp*.; Lula: *Ophiocephalus striatus*

Source: (Biodiversity for Food and Nutrition in Sri Lanka)

It is of concern that the production of Clupeoids (Salaya) which have the highest nutrient have dropped considerably from 132829 metric tons in 2014 to about 38763metric tons in 2023 (Figure 4). There has been a steady import of dried unsalted clupeoids in the last ten years, with a peak during COVID (2020).

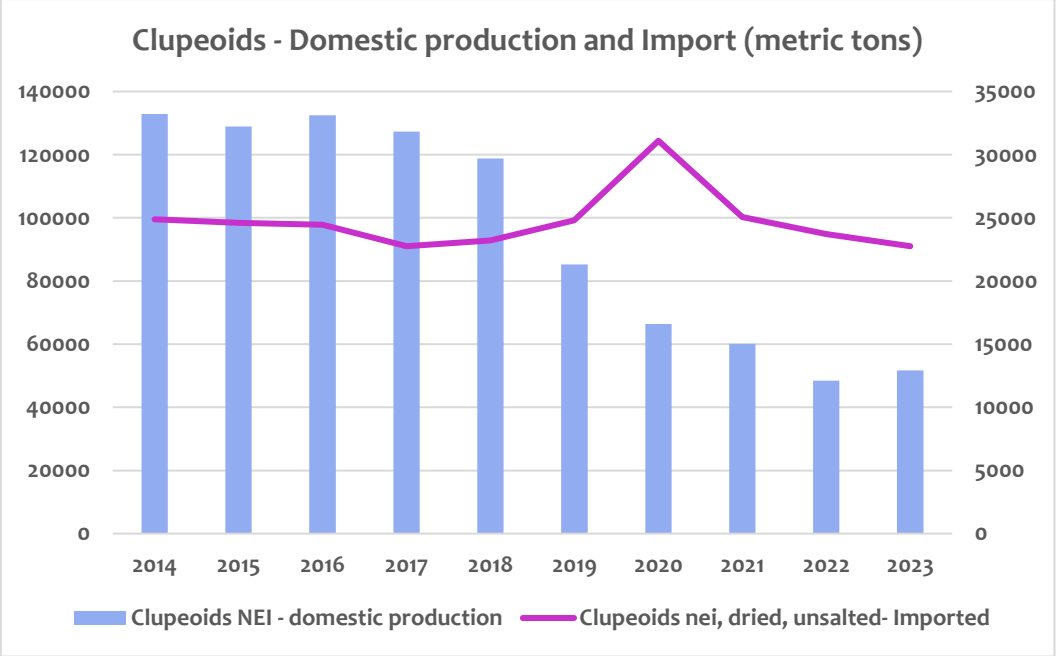


Figure 3.6: Domestic production and Import of Clupeoids

4. Trade and Market Dynamics

4.1. Overview of fish exports (species, value, markets)

From 2013 to 2023, Sri Lanka's seafood imports show a clear declining trend, particularly after 2019, indicating reduced dependency on imported seafood, while exports remain relatively stable with minor fluctuations.

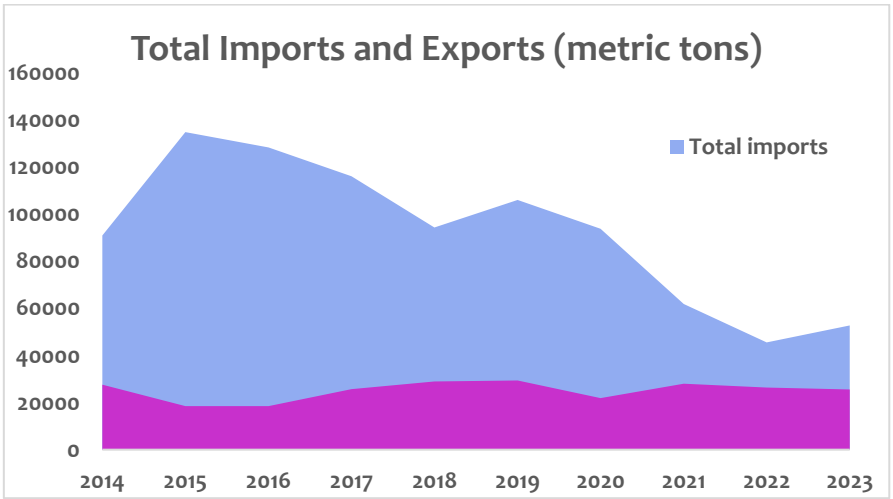


Figure 4.1: Sri Lanka: Trend in seafood export and import (volume)
Data from FishstatJ

4.2. Key import flows and their drivers

Dried fish is the highest imported (35,192 Mt, 19,941 Rs. Mn), followed by Food fish (11,697 Mt, 5186 Rs. Mn)[24] followed by canned fish, other fish and Maldives fish, as per 2024 data.

Key drivers for these imports include domestic demand exceeding local supply, price competitiveness, and consumer preference for convenient protein sources.

The table below gives the top ten commodities imported and exported in 2023. It may be noted from the table that among the top ten imports, clupeoids, mackerels, Miscellaneous coastal fish, Cuttlefish and squid, shrimp and prawn are not re-exported indicating that they serve the domestic market.

Table 4.1: Export – Import – Re-export of fish

	Export	**Import**	**Re-export**
1	Tunas nei, frozen	Clupeoids nei, dried, unsalted	Fish waste, nei
2	Shrimps and prawns, other than coldwater, even smoked, frozen	Mackerel prepared or preserved, not minced, nei	Mackerel prepared or preserved, not minced, nei
3	Fish fillets, fresh or chilled, nei	Herring, anchovy, sardine, sardinella, brisling/ sprat, mackerel, Indian mackerel, seerfish, jack & horse mackerel, jack, crevalle, cobia, silver pomfret, Pacif.saury, scad, capelin,etc, dried, salted or not, not smoked	Fish, frozen, nei
4	Yellowfin tuna, fresh or chilled	Mackerels nei, frozen	Herring, anchovy, sardine, sardinella, brisling/ sprat, mackerel, Indian mackerel, seerfish, jack&horse mackerel, jack, crevalle, cobia, silver pomfret, Pacif. Saury, scad, capelin,etc, dried,salted or not, not smoked
5	Cuttlefish and squid, frozen, nei	Fish waste, nei	Fish dried, whether or not salted, nei
6	Fish, frozen, nei	Fishmeals, nei	Shrimps and prawns, dried, salted or in brine, smoked nei
7	Crabs nei, frozen	Miscellaneous coastal fish, dried, whether or not salted	
8	Fish meat, whether or not minced, frozen, nei	Shrimps and prawns, dried, salted or in brine, smoked nei	
9	Cuttlefish and squid, other than live, fresh or chilled	Cuttlefish and squid, frozen, nei	
10	Seaweeds and other algae, unfit for human consumption, nei	Shrimps and prawns, other than coldwater, even smoked, frozen	

Data from FishstatJ

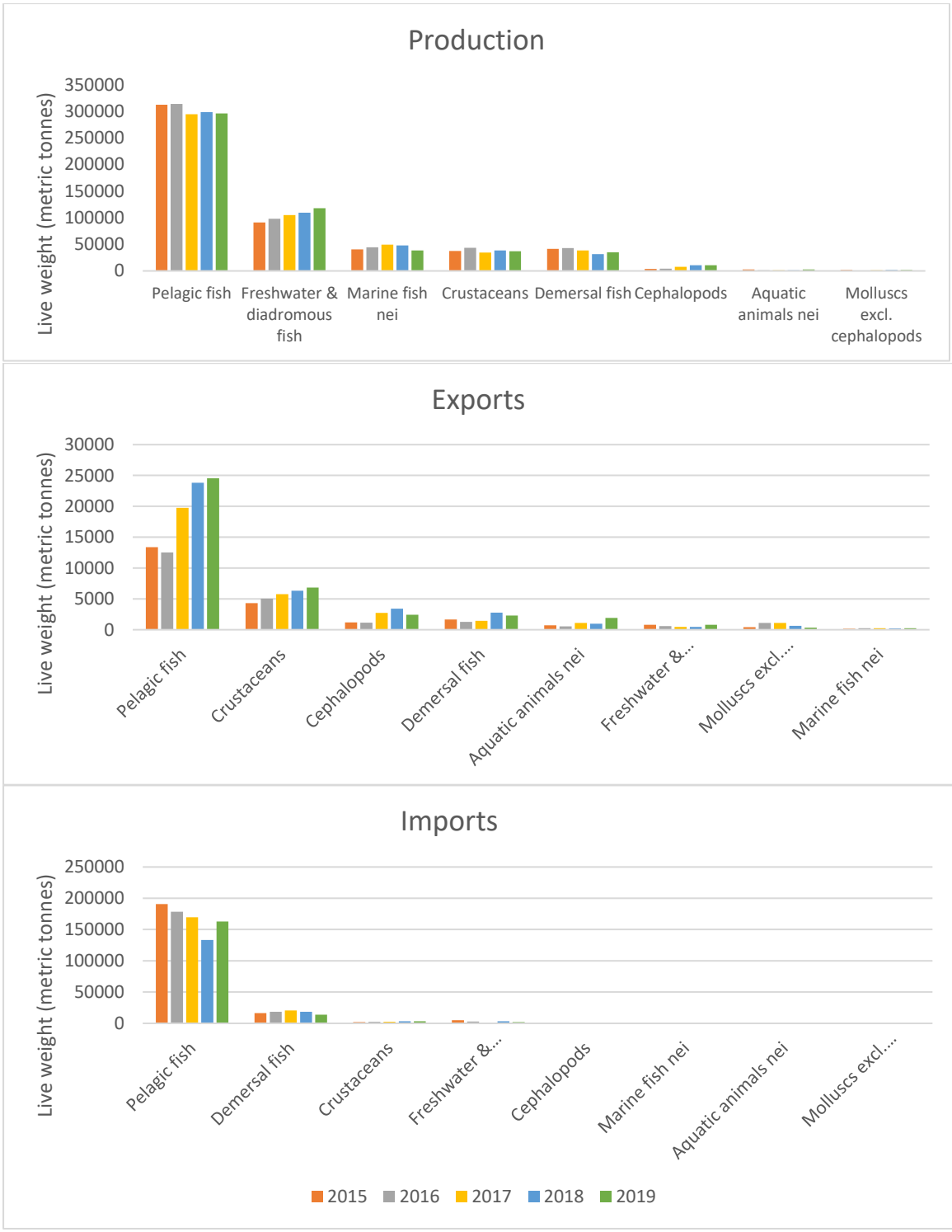


Figure 4.2: Aquatic food balance

Data from FishStatJ

4.3. The role of domestic markets in providing affordable fish to households

Domestic fish markets in Sri Lanka are vital in providing affordable and accessible fish to households, especially in coastal and rural areas. According to the Ministry of Fisheries, approximately 72% of the total fish required for consumption in the country is supplied by domestic fish production, highlighting the significance of local markets in meeting nutritional needs. In 2024, the per capita fish consumption was reported to be 36.85 grams per day,

reflecting a 7.4% increase compared to the previous year, indicating growing reliance on locally sourced fish[25].

4.4. Barriers and opportunities (tariffs, non-tariff measures, certification, and traceability).

Sri Lanka deposited the instrument of acceptance of the WTO Agreement on Fisheries Subsidies on 6 August 2025[26]. In Sri Lanka, the fisheries sector faces several barriers and opportunities related to tariffs, non-tariff measures (NTMs), certification, and traceability. High tariffs in key export markets, such as the United States, and strict sanitary and phytosanitary (SPS) regulations pose challenges, particularly for small-scale producers who often lack the resources to meet international certification standards like the Marine Stewardship Council (MSC) or Aquaculture Stewardship Council (ASC). At the same time, there are opportunities through government support for certification, implementation of traceability systems (e.g., RFID for tracking seafood from catch to consumer), and export diversification to new markets with more favourable trade terms. These measures can enhance competitiveness, ensure food safety, and improve access to premium markets while supporting livelihoods in the fisheries sector[27,28].

5. Nutritional Contribution of Fish

5.1. Fish's share in total protein intake

Fish plays a significant role in Sri Lanka's dietary protein intake, and according to the World Bank, fish constitutes approximately 50% of the animal protein consumed in the country, which is about three times the global average[29]. Additionally, a study published in 2025 indicates that seafood contributes to 48% of the daily protein requirement for Sri Lankans[30].

5.2. Key micronutrients supplied (Ca, Fe, Zn, I, Se, Vitamin A, Vitamin B12, DHA/EPA).

In Sri Lanka, fish and other aquatic foods are a critical source of key micronutrients that support health and nutrition. Fish products are an important source of animal nutrients, providing nearly 50% of animal protein and 22.2% of animal fat. They supply calcium (Ca) for bone health, iron (Fe**)** to prevent anaemia, zinc (Zn) for immune function, iodine (I) for thyroid health, and selenium (Se) for antioxidant protection. Fish also provides vitamin A for vision, vitamin B12 for red blood cell formation and neurological function, and long-chain omega-3 fatty acids (DHA/EPA)**,** which are essential for brain development and cardiovascular health[31,32].

5.3. Role of small fish species consumed whole

Small fish species as a source of micronutrients have been given little attention in the scientific literature so far but, due to their high nutrient content and affordability, could be used as a key component in strategies aimed at reducing micronutrient deficiencies and improving FNS in developing countries with prevalent micronutrient deficiencies like Sri Lanka[33]. The importance of small pelagic fish for dietary importance in Sri Lanka is also emphasised by other researchers[34]. As per the Fisheries Statistics Report of 2022, in the year 2019 the small pelagic consumption accounted for 22% of the total fish consumed in Sri Lanka[35].

5.4. Evidence from national nutrition surveys or literature

National surveys record fish as a major source of animal protein but do not always disaggregate species or 'whole-fish' vs fillet consumption in routine statistics - ministry statistics and nutrition surveys report fish consumption levels (per capita and household consumption) and emphasise fish for food security, but species-level, "whole vs fillet" detail is limited in many national survey outputs.[36]

National micronutrient surveys show ongoing micronutrient problems (iron, vitamin A, vitamin D and others) – national assessments and the Medical Research Institute's National Nutrition & Micronutrient Survey reports document persistent anaemia and other deficiencies among vulnerable groups (children, pregnant/lactating women)[37].

Anaemia remains a significant public health concern, with MRI/NNMS reports and programme reviews documenting high prevalence among pregnant women and children, which the 2017–2022 national strategies seek to address[38]

Peer-reviewed nutrient analyses show small fish eaten whole are micronutrient-dense – a multi-species analysis (19 common Sri Lankan marine fish) found small species commonly eaten whole contain much higher concentrations of calcium, iron, zinc, vitamin A and EPA/DHA per 100 g than larger species where only fillets are consumed. This is direct evidence that whole small fish substantially increase micronutrient intake if consumed[39].

Modelled contributions to recommended intakes are meaningful – literature using measured nutrient composition estimates that small whole fish can contribute sizeable shares of recommended nutrient intakes (e.g., substantial % of Ca, Fe, and vitamin A for women/children) when included in diets[40].

Recent National Nutrition & Micronutrient Survey (MRI) updates (2022/2023) provide the latest national prevalence figures but still lack routine species-level nutrient intake breakdowns – the 2022 NNMS (MRI) gives up-to-date prevalence estimates for anaemia and selected micronutrient statuses but does not present intake breakdowns by fish species (this remains a literature gap)[41]. Reviews and national strategy documents explicitly recommend food-based approaches – the National Strategy for Prevention and Control of Micronutrient Deficiencies (2017–2022) and nutrition reviews call for food-based interventions and strengthened data; promoting nutrient-rich foods (including fish) is part of these strategies[42].

Programmatic gap: linking fisheries data to nutrition outcomes - several papers and World Fish recommend better integration of fisheries / species composition data (small species that are available and consumed) with national dietary surveys to quantify how much small whole fish reduce micronutrient shortfalls. National survey datasets generally capture fish as a food group but do not specify species-level nutrient contribution[43].

6. Fish Loss and Waste (FLW)

6.1. The main points along the chain where losses occur (landing, transport, processing, retail).

Reports indicate that post-harvest losses are very high (40%-60%) in the deep sea/offshore fisheries subsector, where multiday fishing is involved[44]. Research conducted during 2023–2024 in Mullaitivu's coastal fisheries indicated that post-harvest losses were highest at landing sites (avg. 43.5%) compared to fishing (6.6%), collecting (1.9%), retailing (2.7%), and consuming (13.6%), primarily due to poor infrastructure, handling practices, and planning[45].

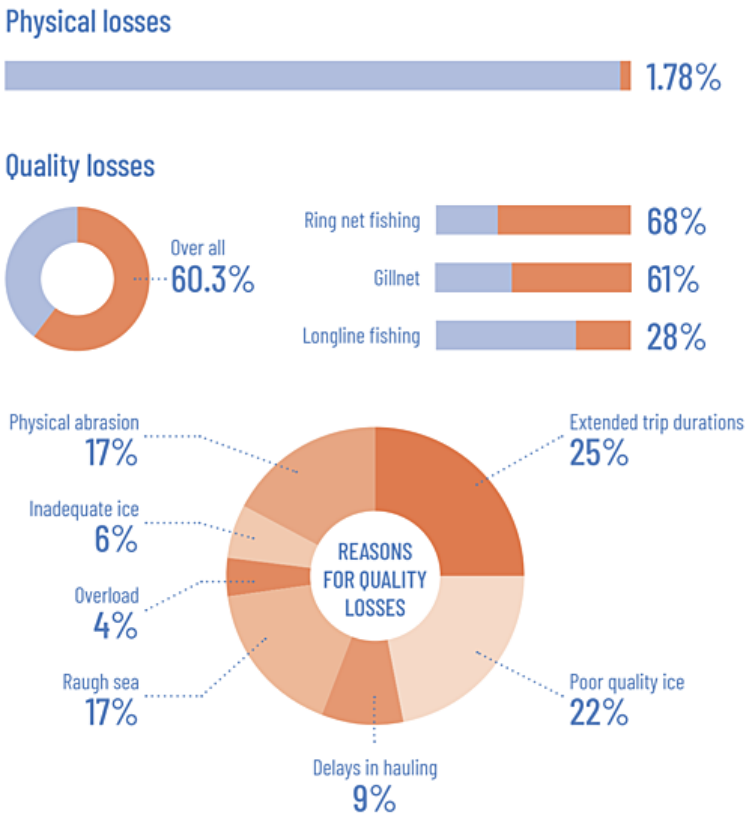


Figure 6.1: Fish loss in the multiday fisheries in Sri Lanka[46]

Fish loss is also considerable in the small-scale sector. A study in Puttalam Lagoon noted that fishermen could be throwing away more than half the fish. What's more, of the 62 species recorded in the survey, more than 80% were routinely discarded. The reasons for this practice are unclear but sometimes it is because the individual fish are too small or they are species without a high market value. Fishers targeting shrimp in particular caught more non-target species and had higher discards than those targeting fish[47].

6.2. Available estimates of quantity and value lost

As mentioned earlier, post-harvest fish losses in Sri Lanka's fisheries sector are substantial, with estimates indicating losses ranging from 40% to 60%, particularly in the deep-sea/offshore fisheries subsector involving multiday fishing. In 2020, at the Peliyagoda fish market (the largest whole sale market in the country), one ton of fish is discarded daily; in fin

fish processing, two third of the whole weight is discarded in the form of gut and frames and processing of prawns generate waste about 25% of the total weight depending on the final product[48]. A study by Daluwatte and Sivakumar (2018)[49] indicated a daily loss of 3-6% of *Katsuwonus pelamis*, 9-18% of *Decapterus russeli* and 13-23% of *Auxis thazard* at Dondra fisheries harbours. The economic loss was 2.88%, 6% and 8.63% respectively.

6.3. Causes (infrastructure, handling, storage)

In Sri Lanka, post-harvest fish losses are primarily attributed to inadequate infrastructure, poor handling practices, and insufficient storage facilities. These deficiencies lead to significant quality degradation and economic losses throughout the value chain, from harvest to consumption.

Figure 6.2: Major causes of loss in the multiday fisheries in Sri Lanka[50]

6.4. Mitigation practices or innovations

Addressing FLW issues in Sri Lanka should focus on improving storage conditions and on-board handling practices in fishing vessels, introducing proper and hygienic handling practices in respect of all steps in the value chain, modernizing processes adopted in dry fish and smoked fish preparation and introducing procedures for maintaining fish quality and hygienic conditions in fish sales outlets or stalls.

The Government of Sri Lanka, through the Ministry of Fisheries, is actively addressing fish loss and waste (FLW) across the fisheries and aquaculture value chain. Collaborating with the Food and Agriculture Organization (FAO) under the NORAD-funded project "Improving the sustainable use of fishery and aquaculture products and their contribution to livelihood and food security", the government is implementing strategies to reduce FLW through a multidimensional solutions strategy validated and endorsed by the FLW Working Group and the Government of Sri Lanka. It is being implemented by different relevant stakeholders through the leadership of the Ministry of Fisheries. These strategies include enhancing

storage conditions, improving on-board handling practices, modernising processing methods for dry and smoked fish, and ensuring hygienic practices in fish sales outlets[51].

7. Socio-economic and Gender Dimensions

7.1. Employment generated by the sector (fisheries, aquaculture, post-harvest)

Sri Lanka's fisheries sector provides Direct and Indirect employment (marine and inland) to 586,000 people (Annual Statistics Report, 2024). Including dependants and indirect workers, the fisheries sector supports approximately 2.7 million people, accounting for about 18% of Sri Lanka's total population.

Capture fisheries employ nearly 1 million individuals, including full- and part-time workers and their families[52]. Aquaculture engages around 22,898 people, with women representing roughly 6% of the workforce, and seasonal village tank fish culture provides additional employment to about 6,000 individuals[53]. Post-harvest activities, including processing, packaging, and distribution, further expand employment opportunities, making the sector crucial for food security and economic support for coastal and rural communities.

7.2. The role of women in processing, trading, and marketing

In Sri Lanka, women play a pivotal role in the fisheries sector, particularly in post-harvest activities such as fish processing and marketing. They are predominantly involved in drying, salting, and smoking fish, often managing small-scale processing units at the household or community level. Additionally, women dominate retail fish markets and street vending, handling the sale of both fresh and processed fish, and are key in linking fishers to consumers. Their work is crucial for income generation, household food security, and sustaining local fish value chains, yet it often remains informal, under-recognised, and unsupported by formal credit or training programs[54].

Women make up ~7% of workers in the marine fishing sector (capture fisheries) as of 2022, but have a much larger share in processing, fish drying, packaging, and marketing[55]. In aquatic culture and ornamental fish farming, women also feature in large numbers (~30% in ornamental breeding) in certain subsectors. While data is patchy and often excludes informal work, it's clear that women play essential roles all along the fisheries value chain, especially in value-addition and household-level activities.

7.3. Constraints faced by small-scale actors (e.g. access to finance, technology).

Small-scale actors in Sri Lanka's fisheries sector face several constraints that hinder their growth and sustainability. Limited access to formal financial services forces many, especially women, to rely on informal financing mechanisms such as borrowing from family, friends, or local moneylenders. These informal sources often come with high interest rates and lack financial security[56]. Additionally, outdated legislative frameworks, limited research and development efforts, and weak institutional linkages create significant barriers to accessing modern technologies and markets[57]. These constraints undermine the potential for small-scale fisheries to contribute effectively to food security and economic resilience in Sri Lanka.

8. Sustainability and Resilience

8.1. Summary of stock status where available (overfishing, recovery, habitat pressures)

Fish stocks are facing overexploitation challenges like in the sea cucumber fishery[58]. In Sri Lanka, coastal and offshore fish stocks are increasingly under pressure from overfishing, habitat degradation, and climate change impacts. Coastal fisheries have expanded dramatically over the past decades, leading to declining catch per unit effort and reduced earnings, with many stocks being harvested at or above sustainable levels[59]. Offshore and deep-sea fisheries also face overexploitation and illegal, unreported, and unregulated (IUU) fishing, which hinders stock recovery[60]. Habitat pressures from coastal ecosystem degradation, pollution, and climate change, such as rising temperatures, extreme weather, and microplastic pollution, further threaten fish populations. While some recovery and management measures, including stock enhancement and catch limits, are being implemented, sustained conservation efforts are essential to maintain fishery productivity and support the livelihoods of dependent communities.

8.1. Environmental risks (pollution, waste, carbon intensity)

Sri Lanka's marine environment faces severe pollution pressures from land-based sources, maritime accidents, and inadequate waste management. Plastic pollution is a major issue, exemplified by the 2021 MV X-Press Pearl disaster, which released 1,680 metric tons of plastic pellets (nurdles) and hazardous chemicals into the ocean, contaminating the coastline and affecting marine life[61]. Oil spills from such incidents, along with untreated sewage and industrial effluents, contribute to habitat degradation, algal blooms, and hypoxic "dead zones" in coastal waters. Microplastics have been detected widely, entering the food chain and posing long-term ecological risks[62]. These combined pressures threaten biodiversity, fisheries, and the livelihoods of coastal communities, highlighting the urgent need for improved waste management, stricter enforcement of environmental regulations, and public awareness initiatives.

8.2. Climate risks and adaptation measures

Sri Lanka's fisheries face multiple climate risks, including ocean warming, acidification, sea-level rise, salinity changes, habitat loss of mangroves and sea grasses, and more frequent storms, which disrupt fish stocks, breeding grounds and coastal infrastructure. To respond, the country is promoting ecosystem-based fisheries management, climate-resilient aquaculture, improved early-warning and safety systems for fishers, climate-proof harbours and vessels, breeding of tolerant species, and livelihood diversification to reduce vulnerability, supported by research and monitoring to guide adaptive policies[63,64].

8.3. Resilience factors (diversification, community practices, and early warning systems).

Sri Lanka has introduced community-based fisheries management under its NPOA-IUU to strengthen surveillance and support small-scale fishers[65]. The sector is exploring livelihood diversification and alternative income strategies to reduce the vulnerability of fishing

households to climate and market shocks[66]. Early warning and climate/disaster risk management tools, such as risk transfer instruments (insurance schemes) and forecasting systems, are being considered to buffer against climate hazards[67]. Sri Lanka's fisheries are also investing in data, monitoring, and participatory governance to improve adaptive capacity and more responsive management[67].

9. Governance and Policy Framework

9.1. Overview of national fisheries and aquaculture policies

Sri Lanka's National Fisheries & Aquaculture Policy (first formalised in 2018, currently being revised) seeks to sustainably develop the fisheries and aquaculture sectors in a way that balances production, environmental conservation, social equity, and investor confidence[68]. The government implements the Fisheries and Aquatic Resources Act No. 2 of 1996 and related amendments and regulations[69] as well as NAQDA Act No. 53 of 1998, with amendments to regulate fishing practices, licensing, safety, environmental impact, and biosecurity in aquaculture. Key policy elements include applying ecosystem-based and spatial planning for aquaculture and inland fisheries; restricting harmful gear; carrying out environmental, socio-economic, and cultural impact assessments before approving aquaculture projects; ensuring conservation of aquatic biodiversity; strengthening governance, co-management, and human resources; improving post-harvest handling and export potential; and investing in infrastructure, research, and technology. The policy also aims to increase domestic fish production to enhance food security, reduce reliance on fish imports, and improve livelihoods in fishing communities.

9.2. Food safety and quality assurance systems

Sri Lanka's Department of Fisheries & Aquatic Resources (DFAR) has a Quality Control Division that oversees export regulations under the *Fish Products (Export) Regulations* (1998), ensuring processing plants, landing sites, fishing vessels, transport, and laboratories meet hygiene, sanitary, and residue safety standards[70]. For monitoring chemical residues (e.g. heavy metals, antibiotics, pesticides) in aquaculture, regular inspections and sampling are carried out under a national residue monitoring programme.

There are also ISO/ HACCP / GMP / SSOP food safety management systems widely adopted by leading seafood processors and exporters; many firms maintain in-house or third-party laboratory capacity for tests like histamine in tuna, mercury, and microbial pathogens, and ensure cold chain integrity from catch to export.

The Sri Lanka Standards Institution (SLSI: https://slsi.lk/en/) develops national standards and provides certification / inspection services (e.g. ISO 22000, HACCP) and SLSI inspection is part of the import/export regulatory framework. The Food Safety & Quality Assurance Laboratory at University of Peradeniya provides accredited testing (ISO 17025) for veterinary drug residues and chemical contaminants in fish and aquaculture products[71]. In addition, processors are required to ensure staff training in hygiene, correct handling, cooling, packaging, traceability and record-keeping (GMP & HACCP) under regulations and via capacity building by DFAR and related agencies.

9.3. Participation in international agreements (e.g., WTO fisheries subsidies, PSMA, CITES)

Sri Lanka is party to several international agreements relevant to fisheries and marine conservation: it ratified the WTO Agreement on Fisheries Subsidies in August 2025. It is also a Party to the FAO's Port State Measures Agreement (PSMA) (ratified in 2011, in force from 2016) and is actively developing its legal framework and institutional capacity to implement PSMA effectively (e.g., via new draft Fisheries Act, strengthened monitoring, control and surveillance). Additionally, Sri Lanka has acceded to the FAO Compliance Agreement**,** adheres to UNCLOS and the UN Fish Stocks Agreement, and follows the FAO Code of Conduct for Responsible Fisheries. FAO Voluntary Guidelines for Flag State Performance and has taken necessary measures to be in compliance with the requirements of the Regional Fisheries Management Organizations (RFMOs) like Indian Ocean Tuna Commission (IOTC) and binding measures of the other international organizations to promote sustainable fisheries governance[72]. Sri Lanka is a founder member of the IOTC and ratified the IOTC agreement in 1994. It also implements CITES, including modernised permit systems (eCITES) to regulate trade in endangered aquatic species[73].

9.4. Institutional arrangements for managing value chains

Sri Lanka's value-chain institutional arrangements in fisheries and aquaculture involve multiple government bodies, research institutions, community groups, and private sector actors, each with defined roles. The Ministry of Fisheries & Aquatic Resources Development (MFARD**)** is the key policymaking agency, while its regulatory arm, the Department of Fisheries & Aquatic Resources (DFAR)**,** handles licensing, surveillance, and standards enforcement. Research, technology, and development are handled by the National Aquatic Resources Research and Development Agency (NARA) and the National Aquaculture Development Authority (NAQDA**)**. At the producer and local level, farmer/tank-owner associations (in inland and community aquaculture) manage collective action in harvesting, infrastructure, and marketing, often working under co-management arrangements. In Sri Lanka, exporters, processors, and middlemen form another key layer in the fisheries value chain, connecting auction markets, assemblers, wholesalers, and retailers. They play a crucial role in value addition, quality control, and distribution, while regulatory authorities ensure food safety compliance and adherence to export standards. Projects led by international partners (e.g., FAO, Norway) are also supporting reduction of post-harvest loss, improved market access, and capacity building along the chain[74]. Sri Lanka is promoting digital traceability through QR-based catch records and the introduction of electronic logbooks, alongside the deployment of smart, eco-friendly fishing vessels to enhance sustainability, monitoring, and climate adaptability in fisheries operations[4].

10.Key Challenges and Opportunities

10.1. Most pressing constraints (production, markets, nutrition, gender, governance).

Sri Lanka's fisheries sector faces several pressing constraints. Production is limited by declining fish stocks due to overfishing, IUU fishing, and habitat degradation, while post-harvest losses remain high because of inadequate handling, storage, and cold chain infrastructure[75] [76]. Market access is weak, with small-scale producers and women processors often facing unfair prices and limited opportunities to reach high-value markets. Nutrition and food security are affected as domestic production struggles to meet demand for protein-rich fish, while gender gaps limit women's participation in upstream activities and decision-making. Governance challenges include weak enforcement of regulations, lack of social protection, and limited capacity for scientific monitoring, constraining evidence-based management. Opportunities exist in scaling up aquaculture and offshore fishing, modernising vessels and cold chain systems, developing inclusive value chains, and strengthening governance and climate resilience interventions [77,78].

A detailed study on the governance in fisheries in Sri Lanka indicated the absence of comprehensive fisheries management and development plans, low participation of women, youth, and other marginalized groups, limited involvement of state and non-state agencies beyond the Department of Fisheries and Aquatic Resources, and weak linkages between co-management programs and economic benefits for fishers[79]. Sri Lanka's aquatic food value chains remain fragmented with weak coordination among actors, where income is often skewed toward intermediaries, and domestic supply frequently fails to meet emerging consumer demand for eco-labelled and certified quality products[4].

10.2. Promising opportunities or best practices that could be scaled up

Reducing Post-Harvest Losses: A significant challenge in Sri Lanka's fisheries is the high post-harvest loss, particularly in deep-sea and offshore fisheries, where losses can reach 40–60%. The FAO, through the NORAD-funded project "Improving the Sustainable Use of Fishery and Aquaculture Products", is supporting the government to address this issue by enhancing storage conditions, onboard handling practices, and hygienic processing methods[80].

Aquaculture Expansion: Sri Lanka is embarking on an ambitious plan to double its aquaculture production to approximately 90,000 metric tonnes. This initiative focuses on sustainable development, technology transfer, training programmes, and ensuring food safety and environmental integrity[81]. At present, Sri Lanka is emerging as a target country for foreign investment in aquaculture. During the last decade, Sri Lanka has received investments from such countries as Norway, Scotland, Vietnam, Japan, the USA, and Canada. Investments are channelled into hatcheries, land-based on-growing systems, sea cages, and the development of infrastructure facilities such as roads, common inlet/outlet canals for water intake and release, sedimentation canals, ponds, electricity, etc[82].

Technological Innovations: Sri Lanka is increasingly introducing new technology to the local aquaculture industry such as biofloc technology that helps farmers to manage waste and

nutrient retention in a highly effective manner. In addition, Sri Lanka has experimented with mitigation measures like real-time environmental alerts in shrimp farms in Chilaw[83].

Regional Collaboration: The Aqua Livelihood Project, a regional initiative involving Sri Lanka and other SAARC countries, aims to enhance the livelihoods of small-scale fish farmers and improve nutritional security. Under this project, about 11,000 rural fish farming (pisciculture) households in Sri Lanka will directly benefit, and an amount of USD 586,224 (approximately Rs. 175 million) has been allocated for this project. The National Aquaculture Development Authority of Sri Lanka (NAQDA) is the leading agency for the implementation of this project in Sri Lanka.[84] They also include joint harbour infrastructure upgrade projects, shared training and extension services for fishers and processors, and collaborative research and technology transfer for climate-smart fishing gear and resilient vessel designs[4].

Governance: Development of comprehensive co-management plans, actively involving all stakeholders, including women, youth, and marginalized groups needs to be prioritised along with creating co-management platforms that accommodate the diverse interests of all stakeholders[85].

11.Priority Policy Recommendations

11.1. Key actionable policy recommendations linking aquatic foods, value chains and Food Security and Nutrition (FSN - six dimensions)

Table 11.1: Key actionable policy recommendations related to the six dimensions of FSN

S. No.	Dimension		Rationale	Supporting text
1	**Fish Loss & Waste (FLW)**	Implement national FLW reduction programme	Extremely high losses (40–60%) undermine food availability, income, and value-chain efficiency	6.2: post-harvest fish losses in Sri Lanka's fisheries sector are substantial
		Upgrade landing sites, cold chain and ice plants	Infrastructure gaps are a primary driver of losses and reduced quality	6.1: high post-harvest losses in landing sites
		Improve on-board handling and hygienic processing	Poor vessel-level handling is a critical point of quality loss	6.4: strategies include enhancing storage conditions, improving on-board handling practices,…

S. No.	Dimension		Rationale	Supporting text
2	**Gender Inclusion**	Support women's processing & marketing enterprises (finance, training, co-ops	Women dominate post-harvest roles but lack support, credit, and recognition	7.2 women play a pivotal role in the fisheries sector, particularly in post-harvest activities such as fish processing and marketing
		Formalize women's roles, secure access to credit & equipment	Lack of formalisation limits earnings and visibility in planning	7.2: …remains informal, under-recognised, and unsupported by formal credit or training programs
		Target women in value-chain upgrades	Unsupported by any training programmes in the value chain	7.2 have a much larger share in processing, fish drying, packaging, and marketing
3	**Compliance & Trade Readiness**	Strengthen food-safety, HACCP/ISO adoption and residue monitoring	Export competitiveness depends on meeting hygiene & residue standards	9.2 Food safety and quality assurance systems
		Support traceability/certification pathways suitable for small producers	Export markets require traceability; SMEs currently face barriers	4.4 there are opportunities through government support for certification, implementation of traceability systems
		Align with WTO/PSMA and export regulations	Need to ensure legislation aligns with WTO/PSMA requirements	9.3 is actively developing its legal framework and institutional capacity to implement PSMA effectively

S. No.	Dimension		Rationale	Supporting text
4	**Environmental Sustainability**	Protect and restore mangroves, seagrass and critical habitats	Habitat degradation is reducing fish productivity and ecosystem resilience	8.1 combined pressures threaten biodiversity, fisheries, and the livelihoods of coastal communities
		Apply ecosystem-based fisheries management and restrict harmful gear		8.2 Summary of stock status where available
		Low-impact aquaculture and sustainability certification	Need to reduce environmental footprint of growing aquaculture sector	10.2 Sri Lanka is embarking on an ambitious plan to double its aquaculture production
5	**Nutrition Contribution**	Promote small whole-fish consumption & school feeding links	Small fish are micronutrient-dense and key to addressing deficiencies	1.1 key nutrition challenges 5.4 evidence from national surveys
		Develop affordable nutrient-dense small-fish products (dried/ smoked/ packaged)	Affordable processed products expand access for vulnerable groups	5.4 (evidence from) National Strategy for Prevention and Control of Micronutrient Deficiencies
		Integrate fisheries species data into national nutrition monitoring	Current nutrition surveys do not track species-level intake	5.4 programmatic gap
6	**Climate Resilience & Readiness**	Climate-resilient aquaculture, early-warning & forecast integration	Climate variability threatens production stability; loss of fishing days due to bad weather	8.2 Sri Lanka's fisheries face multiple climate risks
		Strengthen regional collaboration through joint harbour infrastructure upgrade projects, shared fisher and processor training	Regional collaboration reduces infrastructure duplication, strengthens	Potential areas for regional collaboration identified include harbour infrastructure

S. No.	Dimension		Rationale	Supporting text
		platforms, and cooperative research and technology transfer for climate-smart fishing gear and resilient vessel design.	technical capacity, and accelerates adoption of climate-resilient technologies across national fisheries systems.	upgrades, shared training services, and climate-smart fishing technology development.
		Micro-insurance / risk-transfer pilots for fishers	Reduces vulnerability of fishers to climate and market shocks	8.3 Resilience factors

11.2. Recommendations (specific, feasible, and linked to national priorities)

Specific recommendations linked to national priorities are mapped against the six dimensions considered in this report.

Table 11.2: Specific recommendations linked to national priorities

	Dimension	Policy Action(s)	Linked National Policy / Strategy
1	**Fish Loss & Waste (FLW)**	1. Implement national FLW reduction programme (at landing, during transport, while processing and during retail) 2. Upgrade landing-site handling, cold-chain & ice plants 3. Improve on-board handling and hygienic processing	National Fisheries & Aquaculture Policy (2018, revised); FAO–NORAD FLW Strategy; Fisheries Infrastructure Development Programme
2	**Gender Inclusion**	1. Support women's processing & marketing enterprises (finance, training, co-ops) 2. Formalize women's roles, secure access to credit & equipment 3. Target women in value-chain upgrades	National Women's Charter (1993); Gender Policy Framework (2019); Fisheries Policy (2018) – social equity goal

	Dimension	Policy Action(s)	Linked National Policy / Strategy
3	**Compliance & Trade Readiness**	1. Strengthen food-safety, HACCP/ISO adoption and residue monitoring 2. Support traceability/certification pathways suitable for small producers 3. Align with WTO/PSMA and export regulations	Food Act No. 26 of 1980; Fish Products (Export) Regulations (1998); SLSI HACCP/ISO standards; WTO Trade Policy Review
4	**Environmental Sustainability**	1. Protect and restore mangroves, seagrass and critical habitats 2. Apply ecosystem-based fisheries management and restrict harmful gear 3. Low-impact aquaculture and sustainability certification	Fisheries and Aquatic Resources Act (1996); National Environmental Policy (2019); Blue Economy Strategy (draft)
5	**Nutrition Contribution**	1. Promote small whole-fish consumption & school feeding links 2. Develop affordable nutrient-dense small-fish products (dried/smoked/packaged) 3. Integrate fisheries species data into national nutrition monitoring	National Nutrition Strategy (2017–2022); National Nutrition & Micronutrient Survey (2022); National Food Security Policy
6	**Climate Resilience & Readiness**	1. Climate-resilient aquaculture, early-warning & forecast integration 2. Climate-proof harbours/vessels and livelihood diversification 3. Micro-insurance / risk-transfer pilots for fishers	National Climate Change Policy (2023); Disaster Management Act (2005); Climate Adaptation Plan for Fisheries

12.Provide the traffic-light scoring for the six key dimensions

Table 12.1: Traffic Light Score for the six key dimensions

Dimension	Score (1–5)	Colour	Key Notes
Fish Loss & Waste	1		High post-harvest losses: In Sri Lanka, fish loss can reach 40–60% in some fisheries due to inadequate handling, poor storage, lack of on-board refrigeration, and weak cold chain infrastructure.

Dimension	Score (1–5)	Colour	Key Notes
			Quality deterioration and economic impact: Poor hygienic practices during processing, transport, and marketing lead to spoilage, reduced shelf life, and economic losses for fishers and small-scale processors, particularly affecting women in post-harvest roles. Explanation: Minimum score is given based on the available data that the post-harvest losses and waste are high in the sector.
Gender Inclusion	1		Women's key role in post-harvest and value chains: Women are heavily involved in processing, drying, marketing, and small-scale trading of fish, yet their contributions are often undervalued and informal. Barriers to participation and empowerment: Limited access to credit, technology, training, and decision-making restricts women's full participation in fisheries value chains, reducing productivity and economic benefits. Explanation: Score is given based on the available data that though the role played by women are large at post-harvest, they are undervalued and not recognised. Women have limited access to many areas in the sector.
Compliance & Trade Readiness	2		Adherence to international agreements: Sri Lanka implements the Port State Measures Agreement (PSMA), CITES regulations, and WTO fisheries subsidy rules to combat IUU fishing and ensure sustainable trade practices. Export quality and safety standards: Compliance with HACCP, ISO 22000, and national food safety regulations ensures fish and aquaculture products meet international market requirements, supporting trade readiness and market access. Explanation: Score is given based on the compliance met for export quality and agreement with international instruments. It needs further M&E and stricter enforcement.
Environmental Sustainability	0.5		The country needs to further progress in terms of addressing marine and inland water pollution Explanation: The main act is the Marine Pollution Prevention Act No. 35 of 2008 (along with others – Fisheries and Aquatic Resources Act No. 11 of 2017: An amended act related to marine pollution. Coast Conservation Act: Amended in 1981 and

Dimension	Score (1–5)	Colour	Key Notes
			2019.National Environmental Act No. 53 of 2000: A broader act that includes provisions for environmental protection). However enforcement is not considered strict and faces several significant challenges, including legislative loopholes and limited resources.
Nutrition Contribution	2		As per 2022 survey nutritional challenges exist among rural and older populations, alongside widespread micronutrient deficiencies (iron, zinc, calcium, folate, vitamin A). Total dietary protein from fish is between 50% and 60 % in SriLanka[86] [87]. Protein intake ranges from 68.5g in Southern province to 56.4g in Eastern province; fishing sector has the highest intake of protein (68.2 g) (as per WHO, protein intake should be 0.8 g per body weight; a 60 kg person should take 48 g of protein); Pulses contribute only around 8% of per capita protein supply in Sri Lanka, indicating potential gaps in plant-protein sources[88].Other than protein, Sri Lanka faces challenges of malnutrition, with 25% of children aged 5-17 years underweight and rising rates of overweight and obesity (7% among 5-9 years and 12% among 10-17 years), alongside widespread micronutrient deficiencies-notably in vitamin D, B12, and zinc-according to the National Nutrition and Micronutrient Survey 2022[89]. Explanation: Fisheries make a strong contribution to protein source. But micronutrient deficiencies among children is high.
Climate & Resilience Readiness	3		Readiness score – 0.354 (on a 0-1 scale) in the Notre Dame Global Adaptation Initiative (ND-GAIN) index, placing it at 105th in "readiness"[90]. Vulnerability - 0.475 Explanation: A mid-level rating (3/5) reflects that the country is neither poorly prepared nor among the best prepared-it's in the middle, with room for improvement.

13. References

[1] Annual Fisheries Statistical Bulletin 2024, Ministry of Fisheries, Aquatic and Ocean Resources Maligawatta, Colombo -10. https://www.fisheries.gov.lk/web/images/statistics/annual_report/Annual_Fisheries_Statistical_Bulletin_2024_compressed.pdf

[2] Sri Lanka https://www.fao.org/3/cc5680en/cc5680en.pdf

[3] Sri Lankan Economy https://www.cbsl.gov.lk/en/sri-lanka-economy-snapshot accessed 8 November 2025

[4] Regional Workshop on Strengthening Sustainable Aquatic Food Value Chains for Enhanced Food Security and nutrition in Asia: Sri Lanka – Country Presentation.

[5] National Nutrition and Micronutrient Survey in Sri Lanka: 2022. Department of Nutrition Medical Research Institute partnership with UNICEF and WFP. March 2023 https://www.mri.gov.lk/wp-content/uploads/2023/05/National-Nutrition-and-Micronutrient-Survey-Sri-Lanka-2022.pdf

[6]National Nutrition Month Summary Report 2024 https://nutritiondialogues.org/wp-content/uploads/2024/12/National-Nutrition-Month-Summary-Report-2024-2.pdf

[7] Strengthening Nutrition in Schools in Sri Lanka https://www.unicef.org/rosa/media/31221/file/Companion%20NSR%204%20-%20Strengthening%20School%20Nutrition%20in%20Sri%20Lanka.pdf.pdf

[8] Annual Fisheries Statistical Bulletin 2024

[9] Murray, F. J., & Little, D. C. (2022). Rural consumer preferences for inland fish and their substitutes in the Dry-Zone of Sri Lanka and implications for aquaculture development. Frontiers in Sustainable Food Systems, 6, 867701.

[10] Annual Fisheries Statistical Bulletin 2024

[11]Annual Fisheries Statistical Bulletin 2024

[12] Fishstat j

[13] Sri Lanka: Clearing myths about GIFT (Tilapia): the miracle fish https://icsf.net/newss/sri-lanka-clearing-myths-about-gift-tilapia-the-miracle-fish/

[14] Annual Fisheries Statistical Bulletin 2024

[15] Annual Fisheries Statistical Bulletin 2024

[16]Food Loss and Waste in Fish Value Chains https://www.fao.org/flw-in-fish-value-chains/resources/articles/sri-lanka-to-give-priority-for-addressing-issues-in-fish-loss-and-waste/en/

[17] Women remain marginalised in fisheries in Trincomalee https://www.sundaytimes.lk/180204/business-times/women-remain-marginalised-in-fisheries-in-trincomalee-279284.html

[18] Sri Lanka Standards Institution https://slsi.lk/en/

[19] Sri Lanka NPOA-IUU https://faolex.fao.org/docs/pdf/srl208818.pdf

[20] Fish Catch Data Collection Regulations, 2014. https://leap.unep.org/en/countries/lk/national-legislation/fish-catch-data-collection-regulations-2014

[21] Climate Change Issues in Sri Lanka https://www.ips.lk/wp-content/uploads/2022/05/Climate-Change-Issues-in-Sri-Lanka-Volume-1_E_Book.pdf

[22] Annual Fisheries Statistical Bulletin, 2024

[23] The Unlocked Potential of Inland Fish to Contribute to Improve Nutrition in Sri Lanka. https://openknowledge.fao.org/server/api/core/bitstreams/1297616b-6758-49ef-be93-3e8ba74d76d6/content

[24] Annual Fisheries Statistics Bulletin, 2024

[25] Annual Performance Report, 2024 Ministry of Fisheries, Aquatic and Ocean Resources

[26] Members submitting acceptance of Agreement on Fisheries Subsidies

https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_acceptances_e.htm

[27] Sri Lanka Overarching Agricultural Policy Revised Draft (Final) Department of National Planning July 2019
https://www.agrimin.gov.lk/web/images/Information_Act/Development/OAP_new.pdf

[28] Potential exports and nontariff Barriers to trade - Sri Lanka national study April 2019
https://www.adb.org/sites/default/files/publication/497651/sri-lanka-exports-nontariff-barriers-trade-study.pdf

[29]Towards Improved Livelihoods and Higher Revenues From Sustainable Fisheries in Sri Lanka https://www.worldbank.org/en/news/feature/2022/03/02/towards-improved-livelihoods-higher-revenues-from-sustainable-fisheries-srilanka

[30] Bimalka, D. M. O., Nugawela, N. P. P. S., Liyanage, N. P. P., & Mahaliyana, A. S. (2025). The first island-wide survey on quantifying household fish and seafood consumption in Sri Lanka. *Fisheries Research*, *285*, 107382.

[31]Jayasekara, I. G. R. I., Wijekoon, A. P., & Somaratne, G. M. (2022). Contribution of dried fish to food and nutrition security in Sri Lanka: A review. *The Journal of Nutrition and Food Sciences*, *1*(1).

[32] Fisheries Statistics

[33] Reksten, A. M. et al. (2020). Nutrient composition of 19 fish species from Sri Lanka and potential contribution to food and nutrition security. Journal of Food Composition and Analysis, 91: 103508.

[34] Wickramarathne, Lanka & Jayasooriya, M.C.N. & De Silva, Achini & Senevirathne, Sulochana & Pupulawaththa, C.N.. (2024). Comparative Nutritional Analysis of Six Selective Small Pelagic Fish Species in Sri Lanka.

[35]Fisheries Statistics 2022
https://www.fisheries.gov.lk/web/images/statistics/annual_report/Fisheries_statistics_2022_compressed.pdf

[36] Medical Research Institute Sri Lanka. Survey Reports – Department of Nutrition
https://www.mri.gov.lk/units/nutrition/survey-reports/

[37] Jayatissa R, Fervando D.N, Perera A, De Alwis N, National Nutrition and Micronutrient Survey among school adolescents aged 10-18 years in Sri Lanka 2017. Medical research

Institute, Ministry of Health, Colombo 2019 https://www.mri.gov.lk/wp-content/uploads/2020/01/2017-NATIONAL-NUTRITION-AND-MICRONUTRIENT-SURVEY-.pdf

[38] Jayatissa et al., 2017

[39] Reksten, A. M., Somasundaram, T., Kjellevold, M., Nordhagen, A., Bøkevoll, A., Pincus, L. M., ... & Aakre, I. (2020). Nutrient composition of 19 fish species from Sri Lanka and potential contribution to food and nutrition security. *Journal of Food Composition and Analysis*, *91*, 103508.

[40] Reksten et al, 2020

[41] Jayatissa R, Perera A, De Alwis N, 2023. National Nutrition and Micronutrient Survey in Sri Lanka: 2022 https://www.mri.gov.lk/wp-content/uploads/2023/05/National-Nutrition-and-Micronutrient-Survey-Sri-Lanka-2022.pdf

[42]National Strategy for Prevention and Control of Micronutrient Deficiencies in Sri Lanka (2017-2022) https://nutrition.health.gov.lk/wp-content/uploads/2020/11/National-Strategy-for-Prevention-and-Control-of-Micronutrient-Deficiencies-in-Sri-Lanka-2017-2022.pdf

[43]Reksten et al, 2020

[44]Sri Lanka to give priority for addressing issues in fish loss and waste https://www.fao.org/flw-in-fish-value-chains/resources/articles/sri-lanka-to-give-priority-for-addressing-issues-in-fish-loss-and-waste/en/

[45] G. Sinthujan, M.D.S.T. de Croos and S.T. Gonapinuwala, 2024. Evaluation of post-harvest losses of coastal fish catches along the market chains in Mullaitivu fish landing sites. in Proceedings of the Tenth Undergraduate Research Symposium UReS 2023 "Food and Health Innovations Towards Circular Economy" https://flfn.wyb.ac.lk/wp-content/uploads/2024/09/UReS-2023-proceedings-final-for-website.pdf (page 110)

[46] Fish loss in the multiday fisheries subsector in Sri Lanka. https://openknowledge.fao.org/handle/20.500.14283/cc8477en

[47] Jones, B. L., Unsworth, R. K., Udagedara, S., & Cullen-Unsworth, L. C. (2018). Conservation concerns of small-scale fisheries: by-catch impacts of a shrimp and finfish fishery in a Sri Lankan lagoon. *Frontiers in Marine Science*, *5*, 52.

[48] Sri Lanka: Potential products from fishing industry waste: Green solutions. https://icsf.net/newss/sri-lanka-potential-products-from-fishing-industry-waste-green-solutions/

[49] D. Daluwatte, S.S. Sivakumar. Economic loss of fisheries due to the post harvest quality loss and assessment of the quality loss in fish Global Scientific J., 6 (9) (2018), pp. 115-124

[50] Fish loss in the multiday fisheries subsector in Sri Lanka. https://openknowledge.fao.org/handle/20.500.14283/cc8477en

[51] Multidimensional solutions strategy for the reduction of food loss and waste in the multiday fisheries subsector in Sri Lanka https://www.fao.org/flw-in-fish-value-chains/projects/sri-lanka/multidimensional-solutions-strategy/en/

[52]Sri Lanka and the World Bank Explore Path to Sustainable and Inclusive Growth for the Fisheries Sector Press Release march 3, 2022. https://www.worldbank.org/en/news/press-release/2022/03/03/srilanka-world-bank-explore-sustainable-inclusive-growth-for-fisheries

[53] Fishery and Aquaculture Country Profiles- Sri Lanka https://www.fao.org/fishery/en/facp/lka

[54] Walpita Gamage Inoka Lakshmi , Women's involvement in Fisheries on Socio-economics in a Coastal Fishing Community in Ambalangoda, Southern province of Sri Lanka https://www.fao.org/fishery/static/tenure-user-rights/root/volume8/C83.pdf

[55] Empowering women in Sri Lankan fisheries and aquaculture: unlocking opportunities for sustainable growth https://www.was.org/Meeting/pdf/Posters/AQUA24_0650.pdf

[56]Senevirathne, Sulochana & De Silva, Achini & Esham, Mohamed. (2025). Informal Financing Mechanisms Adopted by Female Small-Scale Fish Processors in the Face of Climate Change Impacts in Sri Lanka. 10.1007/978-981-96-8301-7_26.

[57] Basnayake, R., & De Silva, A. (2024). Institutional Innovations towards Sustainable Small-Scale Fisheries: An Assessment of Co-Management Approach in Lobster and Giant Freshwater Prawns Fisheries, Sri Lanka. *Research on World Agricultural Economy*, *6*(1), 624–638. https://doi.org/10.36956/rwae.v6i1.1547

[58] Prasada, D. V. P. (2020). Assessing the potential for closure rules in the Sri Lankan sea cucumber fishery: Empirical models of practices and preferences of fishers. *Marine Policy*, *120*, 104130.

[59] World Bank. 2021. Priorities for Sustainably Managing Sri Lanka's Fisheries, Coastal Aquaculture, and the Ecosystems That Support Them. Washington, DC https://documents1.worldbank.org/curated/en/308261634198704809/pdf/Priorities-for-Sustainably-Managing-Sri-Lanka-s-Marine-Fisheries-Coastal-Aquaculture-and-the-Ecosystems-that-Support-Them.pdf

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

[61] X-Press Pearl Maritime Disaster Sri Lanka - Report of the UN Environmental Advisory Mission (July 2021) https://www.unep.org/resources/report/x-press-pearl-maritime-disaster-sri-lanka-report-un-environmental-advisory-mission

[62] Dharmadasa, W. S., Andrady, A. L., Kumara, P. T. P., Maes, T., & Gangabadage, C. S. (2021). Microplastic pollution in marine protected areas of Southern Sri Lanka. *Marine Pollution Bulletin*, *168*, 112462.

[63] Third National Communication of Climate Change in Sri Lanka https://unfccc.int/sites/default/files/resource/Third%20National%20Communication%20of%20Sri%20Lanka.pdf

[64] Nationally Determined Contributions Implementation Plan (2021-2030) https://faolex.fao.org/docs/pdf/SRL219537.pdf

[65] Sri Lanka National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing https://faolex.fao.org/docs/pdf/srl208818.pdf

[66]Turning the Tide: Charting a Sustainable Future for Sri Lanka's Fisheries, 21 November 2023. https://tinyurl.com/mpndhhm9

[67]Risk and Vulnerability Assessment for Resilience Building in the Colombo City Region Food System (CRFS) https://www.fao.org/fileadmin/user_upload/faoweb/ffc/docs/Climate%20Resilient%20CRFS%20in-depth%20assessment_IWMI.pdf

[68] The National Fisheries and Aquaculture Policy https://fisheries.gov.lk/web/index.php/en/12-overview/17-the-national-fisheries-and-aquaculture-policy

[69] Fisheries and Aquatic Resources Act https://fisheriesdept.gov.lk/fisheries-act/

[70] Department of Fisheries and Aquatic Resources Quality Control Division https://fisheriesdept.gov.lk/quality-control-division/

[71] Food safety and Quality Assurance Laboratory of the University of Peradeniya (FSQAL) https://vet.pdn.ac.lk/fsqal/about.html

[72] International Compliance https://www.fisheries.gov.lk/web/index.php/en/international-compliance

[73] New wildlife trade management system goes live in Sri Lanka. https://cites.org/eng/news/new_wildlife_trade_system_goes_live_SriLanka_12032020

[74] FAO Introduces Innovative Technologies to Build Resilience in Sri Lanka's Fisheries Sector. 5 Nov 2024. https://www.fao.org/responsible-fishing/news-events/news/news-details/fr/c/1718743/

[75]Sri Lanka and the World Bank Explore Path to Sustainable and Inclusive Growth for the Fisheries Sector Press Release March 3, 2022https://www.worldbank.org/en/news/press-release/2022/03/03/srilanka-world-bank-explore-sustainable-inclusive-growth-for-fisheries

[76] Unveiling Sri Lanka's Fishing Dilemma: Quality Loss and Climate Challenges, 18 January 2024. https://www.dailymirror.lk/opinion/Unveiling-Sri-Lankas-Fishing-Dilemma-Quality-Loss-and-Climate-Challenges/172-275220 last accessed 10 November 2025

[77]Sri Lanka. Report of in-depth country assessment, September 2014. https://www.fao.org/fileadmin/templates/rap/files/Project/Global_Strategy_Country_Pages/Sri_Lanka/Sri-Lanka-IdCA-FINAL_for-web.pdf

[78] O. Amarasinghe and K. Piyasiri, 2020. Post-harvest losses, processing and gender issues in fisheries. 1 November 2020. https://archives1.sundayobserver.lk/2020/11/01/news-features/post-harvest-losses-processing-and-gender-issues-fisheries last accessed 10 November 2025

[79] Ranatunga, Dhammika, Achini De Silva, Achini, O. Amarasinghe and M Kularatne. (2025). Gaps hindering the objectives of fisheries co-management mechanisms in Sri Lanka. Tropical Agricultural Research and Extension. 28. 126-139. 10.4038/tare.v28i2.5759.

[80]Sri Lanka to give priority for addressing issues in fish loss and waste https://www.fao.org/flw-in-fish-value-chains/flw-in-fish-value-chainsresources/articles/sri-lanka-to-give-priority-for-addressing-issues-in-fish-loss-and-waste/zh/

[81] Drengstig, A. (2013). Aquaculture in Sri Lanka: History, current status and future potential. *International Journal of Aquaculture and Fishery Science*, *6*(3), 102-105.

[82] Sri Lanka: a Target Country for Foreign Investments in Aquaculture. https://www.srilankabusiness.com/sea-food/sri-lankan-sea-food-supply-chain-channels.html ; Japan and FAO Support Strengthening of Inland Fisheries in Sri Lanka with Handover of Upgraded Hatchery and Live Fingerling Bowzers https://www.lk.emb-japan.go.jp/itpr_en/11_000001_00597.html last accessed 10 Nov. 25

[83] Sustainable aquaculture practices from Sri Lanka https://www.srilankabusiness.com/blog/sustainable-aquaculture-practices-sri-lanka.html

[84] Regional 'Aqua Livelihood' Project Launched to Empower 11,000 Small-Scale Fish Farming (pisciculture) Families in Sri Lanka https://www.fisheries.gov.lk/web/index.php/en/information/news/1120-11-000-aqua-livelihood

[85] Ranatunga et al, 2025

[86]Athauda, Saman & Chandraratna, Nimal. (2020). Fisheries Sector Contribution for Sustainable Food System: Past, Present, and Future. 10.1007/978-981-15-2152-2_14.

[87]Towards Improved Livelihoods and Higher Revenues From Sustainable Fisheries in Sri Lanka, March 2, 2022 https://www.worldbank.org/en/news/feature/2022/03/02/towards-improved-livelihoods-higher-revenues-from-sustainable-fisheries-srilanka

[88] Measuring the Pulse of Pulses: Improving Food Security in Sri Lanka https://www.ips.lk/talkingeconomics/2024/05/08/measuring-the-pulse-of-pulses-improving-food-security-in-sri-lanka

[89] Reksten et al., 2020

[90] Sri Lanka https://gain-new.crc.nd.edu/country/sri-lanka last accessed 11 Nov. 25

Bay of Bengal Programme
Inter-Governmental Organisation
91 St. Mary's Road, Chennai - 600 018, India.
Tel: +91 44 42040024
Email: info@bobpigo.org | www.bobpigo.org