Fishery Industry Outlook 2011

Socio-Economic and Marketing Research Division

National Aquatic Resources Research and Development Agency-NARA

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Acknowledgement

The 'Fishery Industry Outlook' is an annual publication of the Socio-economic and Marketing Research Division (SED) of the National Aquatic Resources Research and Development Agency (NARA). The 'Out Look' comprised of data and information on the current status of fisheries sub-sector with special emphasis on production, trade & marketing and consumption of fish and fishery products of Sri Lanka. This is the all in one hand book of fisheries industry statistics of Sri Lanka.

In compilation of this volume NARA heavily depends on data and information sources of various governmental, semi-governmental and non-governmental organizations. The Planning and Monitoring Division and Department of Fisheries and Aquatic Resources of the Ministry of Fisheries and Aquatic Resources were the key data and information providers of this publication. We place on record our gratitude to all those who rendered valuable assistance by providing data and information for this volume, including privet sector establishment.

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K.H.M.Lalith Amaralal

Head/Socio-economic & Marketing Research Division

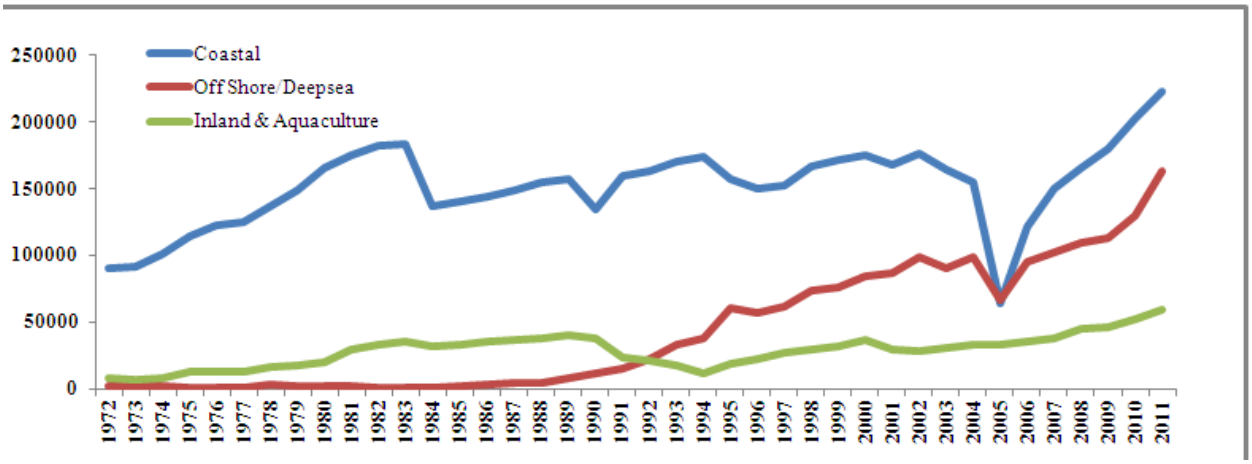
National Aquatic Resources Research and Development Agency

Overview

The fisheries industry plays an important role in the economy of Sri Lanka by providing livelihood for more than 2.5 million coastal communities as well as providing more than 50% of animal protein requirement of people in the country. The industry can be divided in to costal, offshore/deep sea, and inland and aquaculture sub sectors. Further, since last three years the share of fisheries to the Gross Domestic Production (GDP) of the country has remain unchanged and that was 1.7 with a stable contribution of inland (0.2) and marine fisheries (1.5)

The total fish production of the country has gradually increased in the last decade excepting 2005. As a result of tsunami disaster, both coastal and deep sea fish production of the country had drastically declined in 2005. Since the disaster was critically affected to costal fishery resources, coastal fish production of the country had declined drastically in 2005. With the facilities provided by the Government and national and international nongovernmental organizations, fishery sector back to normal after few years. In 2011, the total fish production of the country has increased by nearly 16% compared to the 2010. Similarly deep sea fish production has significantly increased by about 25% while the costal fish production and inland fish production has increased by nearly 10 and 14% respectively in 2011 compared to 2010 production levels. Figure 1 shows trends of fish production in three sub sectors since 1972.

Figure 1 Fish production in Sri Lanka



Source: Ministry of Fisheries.

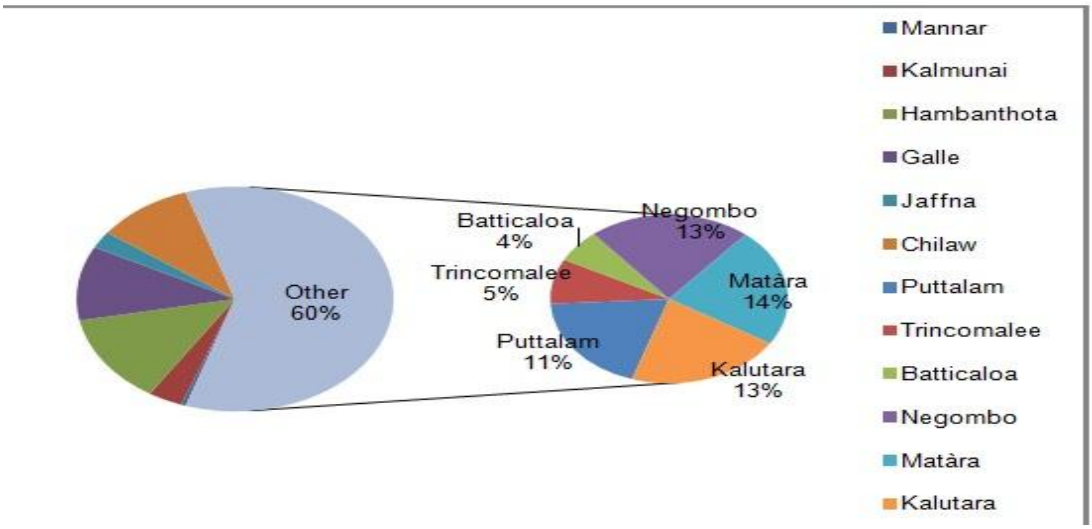
1. Marine Fish Production

Marine fish production which is contributed more than 85% to the total fish production and the most important sub sector in the fisheries industry of the country. Due to more fishers engage in coastal fisheries its contribution to the marine fish production is higher than the deep sea fisheries. However, the contribution of deep sea fisheries to the total marine fish production is gradually increased over the years. For an instance, proportion of deep sea fish production to the total marine fish production of the country was 2% in the year 1980 but it has increased by 9% in 1990, 33% in 2000 and 43% in 2011. Therefore, deep sea fisheries will surpass the coastal fisheries and be the most important sub sector of Sri Lankan fisheries industry in the future. Especially Ministry of Fisheries and related institutions provide more facilities to this sub sector for further development. In addition to the local consumption, a significant proportion of the production goes for the export markets from deep sea fisheries. Therefore, development of this sub sector will be beneficial for the both local consumers as well as exporters of the country.

For the administrative purposes the Ministry of Fisheries has demarcated 15 marine fisheries districts in the country. But, contribution of these districts to the total fish production of the country is significantly differing. For an instance about 5 fisheries districts contribute more than 50% to the total marine fish production of the country.

Before 1985, Jaffna district was a dominant fish producing district that contributed more than 25% to the total marine fish production. But, at present, Kalutara district is the dominant fish producing district of the country. The main reason for that is well developed Beruwala fishery harbor which could be facilitated for fish landings. After relaxing the high security zone in the Northern and Eastern districts, marine fish production of Jaffna, Killinochchi and Mulathive districts has been gradually increased. Figure 2 shows marine fish production in 2011 according to the fisheries districts of the country.

Figure 2 Marine fish production by districts - 2011

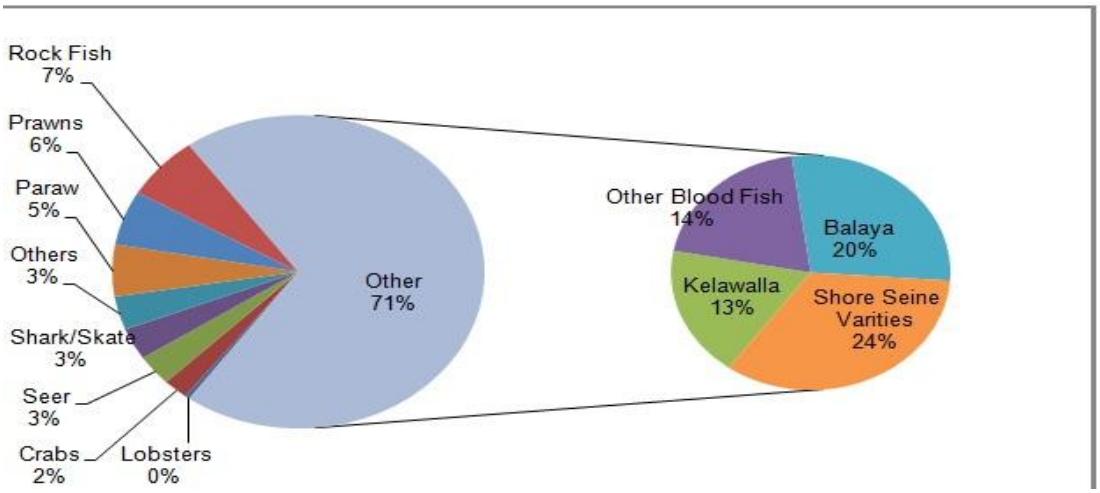


Source: Ministry of Fisheries.

2.1 Species Composition

Before 1980s, marine fish production mainly derived from the costal fisheries which was contributed more than 95% to the total marine fish production of the country. As a result shore seine verities were dominant that of more than 50% of the total marine fish production. However, after introduction of multiday boats to deep sea fisheries, contribution of tuna fish species such as Balaya (skipjack tuna) and Kellawalla (yellowfin tuna) to the total marine fish production has shown an increasing trend. In 1995, it was about 27% while 34% in 2011. Main reason for this situation was rapid increased of multiday boats with sophisticated equipments entering in to the fisheries. This has affected to reduce the proportion of shore seine varieties to the total fish production which is only 24% in 2011. Other major fish species were Rock fish, Seer, Para and other blood fishes.

Figure 3 Marine fish production by major fish species – 2011



Source: Ministry of Fisheries.

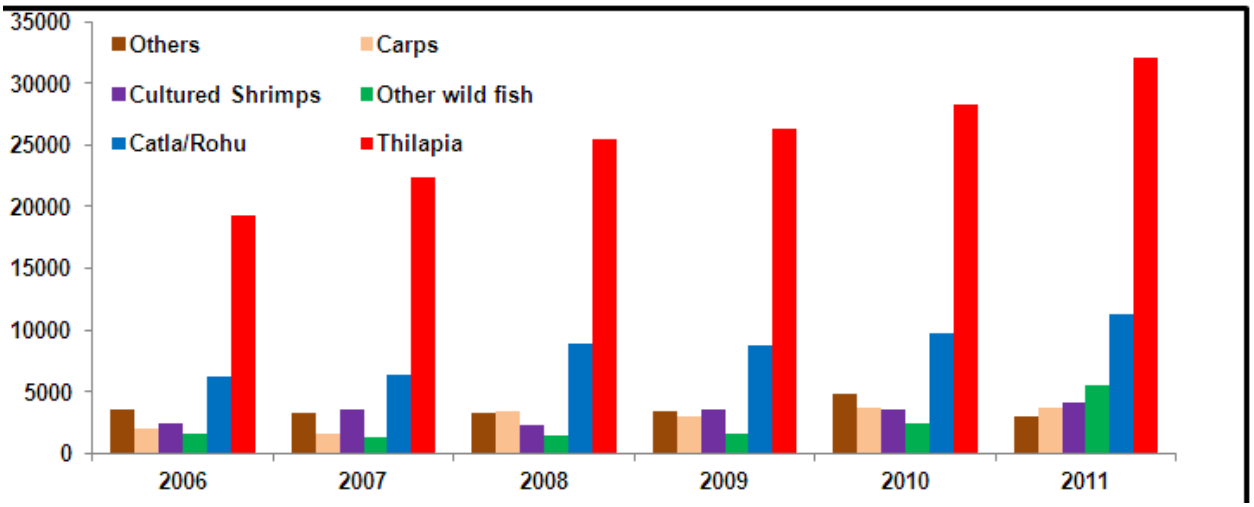
2. Inland and Aquaculture Fish Production

Aquaculture is a booming sector at present in world fisheries. According to the food and Agriculture Organization (FAO), the world aquaculture fish production in the last three decades has expanded by almost 12 times or at an average annual rate of nearly 9%.

In 2011, 154 million metric tons of fish have been produced through inland and marine culture that of more than 50% of the total fish production in the world. Compare to the other Asian countries, aquaculture fish production in Sri Lanka was minimal in recent years.

In 2011, Inland fish production has increased up to 59,560 Mt which is nearly 14% compared to the 2010 level due to increased in fingerlings stocking in to the perennial reservoirs as well as seasonal tanks. About 45 Million of fingerlings had stocked in 2011 which was about 34% increased compared to the 2010.

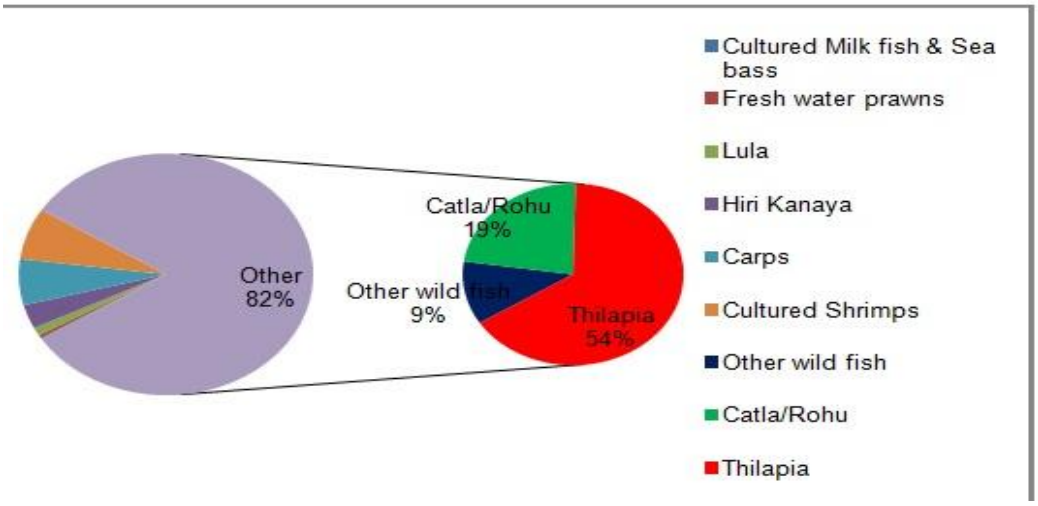
Figure 4 Inland and Aquaculture fish production by major species



Source: Ministry of Fisheries.

Thilapiya, Catla/Rohu and other wild fish species have contributed more than 80% to the total inland production and are the dominant species in the production of the country. In 2011, Thilapiya, Catla/Rohu and other wild fish have contributed 54, 19 and 9% to the total inland production of the country respectively. Figure 4 shows Inland fish production of the country and species composition in 2011.

Figure 5 Inland fish production by major fish species - 2011



Source: Ministry of Fisheries.

Other: Cultured milk fish and sea bass, fresh water prawns, Lula, Hiri kanaya

3. Trade and Distribution of fish and fishery products

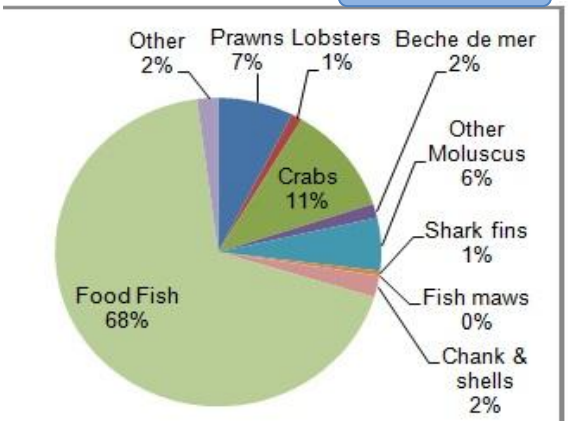
Export of fish and fishery products is crucially important because it brings foreign currencies to the country. In 2011, Sri Lanka has exported 18,464 Mt of fish and fishery products valued to 21,876 million rupees. It has increased around 1 and 10% compared to the 2010 level respectively. Due to declined in export quantity of Chank by around 33% export earnings has declined by around 43% in 2011 compared to the 2010. Although quantity of edible fish export has declined by around 6% export earnings have increased by around 3% in 2011 compare to the 2010 mainly due to higher prices in the export markets especially for yellow fin tuna. Further, export earnings from crabs, lobsters and prawns have increased by 75, 27, and 18% respectively in 2011 compared to the 2010.

Earnings from edible fish export have contributed more than 70% while prawns, lobsters, beach de mer, chank and shell fish contributed 8, 5, 5, 2 and 2% respectively

to the total earnings of fish and fishery products. Although earnings gained by exporting prawn had contributed about 25% to the total export earnings of 2010 as a result of the disease outbreak it has declined at the end of the year. Figure 5 shows quantity and value of exported fish and fishery products in 2011.

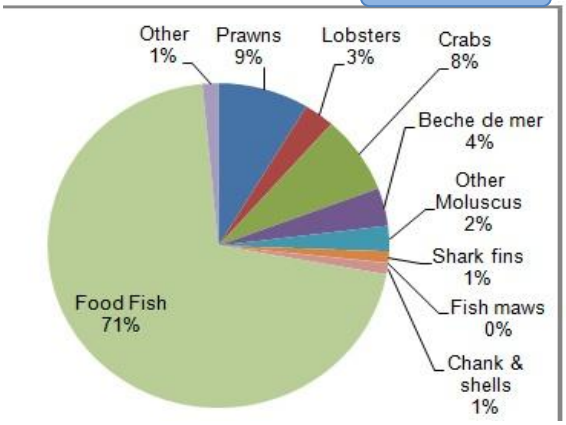
Figure 6 Quantity and Value of Fish and Fisher products export - 2011

Quantity



Source: Ministry of Fisheries.

Value



Source: Ministry of Fisheries.

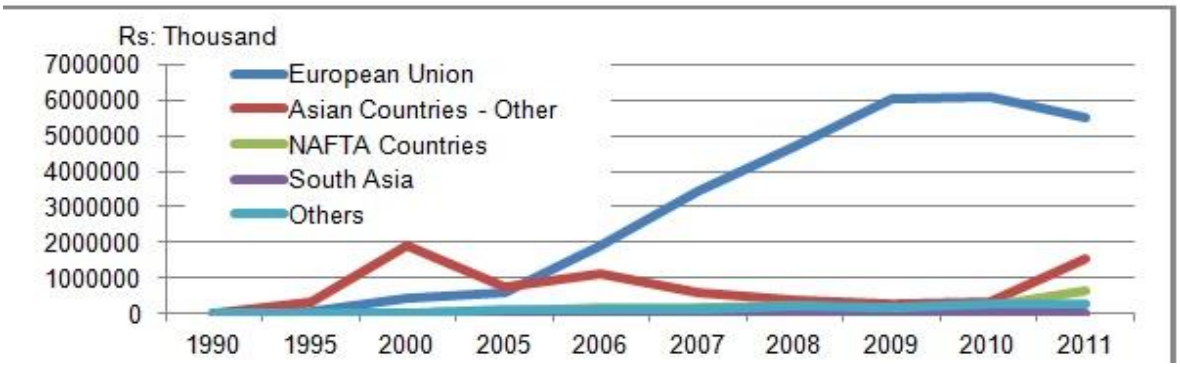
4.1 Export destinations and Trend

European Union, East Asian countries, North American countries and South Asian countries are main destinations for fish and fishery products of Sri Lanka. Especially EU countries are the major fish importers in recent past. Due to GSP + tariff concession given by EU countries from 2005, exports of fish and fishery products have significantly increased. This concession was suspended since August 2010 and export earnings have slightly decreased in 2011. However, Sri Lanka still enjoys not only EU GSP scheme but also USA GSP scheme.

According to the Export Development Board (EDB), exported fish had mainly categorized into seven categories which are fresh or chilled, frozen, prawn, crabs, other edible fish, aquarium fish and lobsters. Out of them fresh or chilled and frozen fish have contributed 30 and 41% to the total export earnings respectively likewise the

contribution of other edible fish categories was less than 10%. For Aquarium fish too EU countries are main importers since many years except in 2009. In 2011, United Kingdom, Germany, France, Italy and Netherlands had imported aquarium fish with the value of 127, 96, 52, 49 and 35 million rupees respectively. On the other hand United State had imported aquarium fish with the value of 299 million rupees in 2011.

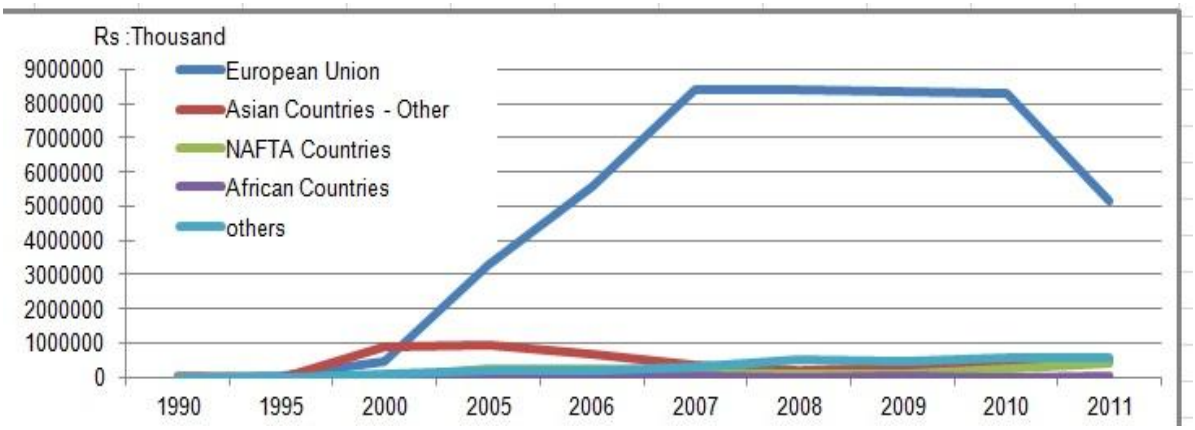
Figure 7 Export destinations for fresh or chilled



Source: Ministry of Fisheries

Fresh or chilled, Frozen, fish as well as aquarium fish have mainly been exported to EU countries. It could be seen from 2005 to onwards. Italy, German, United Kingdom, France and Netherlands were main importing countries of fresh or chilled and their values were million rupees 1433, 1464, 796, 699, and 652 respectively in 2011.

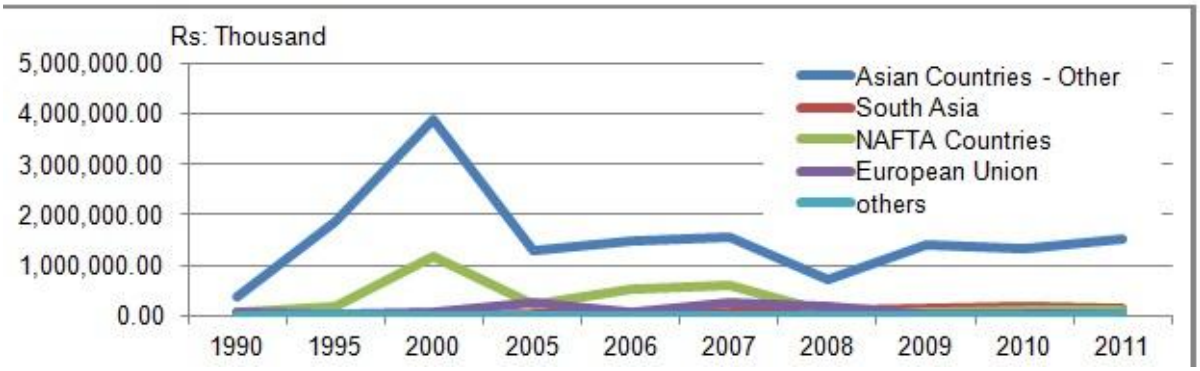
Figure 8 Export destinations for frozen



Source: Ministry of Fisheries

For frozen fish a large proportion has imported by EU countries since 2000 and remained until 2010. Although the export earnings have declined in year 2011, EU countries are still the dominant frozen fish importers.

Figure 9 Export destinations for Prawns

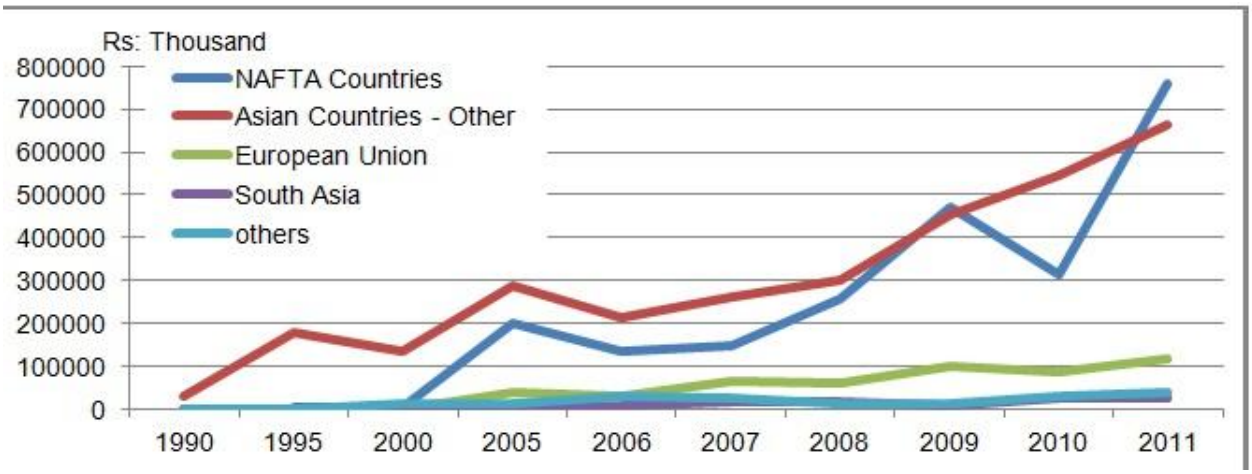


Source: Ministry of Fisheries.

Prawns, Lobsters and other edible fish have mainly been imported by Asian countries. Since 1995 to 2000 export earnings have increased but from 2000 to 2005, export earnings of prawn have drastically declined while export earnings remain stable with small fluctuation after 2005. Prawn has mainly been exported to Japan, Maldives, and Taiwan and earned Rs 1459, 151, 35, million in 2011.

While other edible fish and lobster income gain from other Asian countries has fluctuated in last decade. However, the export earnings from other Asian region countries have increased in increasing trend.

Figure 10 Export destinations for Crabs



Source: Ministry of Fisheries.

Crabs have mainly been exported to NAFTA countries and earned Rs: 759 million rupees in 2011. This is 140% increased compare to 2010. This increased had caused to change the dominant export region from other Asian countries to NAFTA countries. In 2011, USA has been imported Rs 641 million valued crabs and it is a 40% of contribution compared to the total export earnings of crabs.

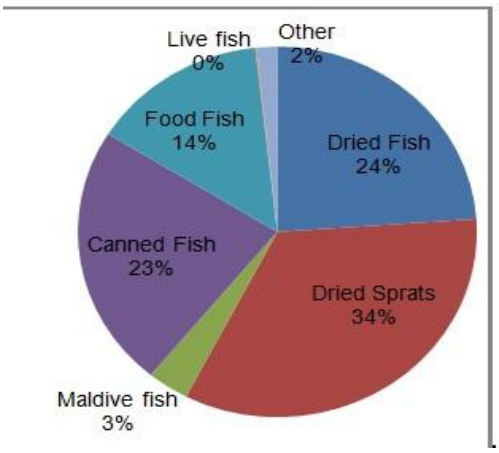
4.2 Fish and Fishery products Imports

Sri Lanka is the major fish importer in the Southern Asian region (FAO 2003-2005) contributing more than 75% of the total imports of the region but a large proportion of imported fish has re-exported to other countries and the rest has used to local consumption. Dried fish, Spats, Maldive fish, canned fish and edible fish are the major imported fish and fishery products to the country. Of them dried fish and spats had contributed more than 50% to the total imports of the country. In 2011, 81,957 Mt of fish and fishery products were imported with the value of 16,240 million rupees. Imported dried fish from India, Indonesia, Pakistan, Maldives and China that of contributes around 60 per cent to the annual dried fish requirement of the country. Thailand, Singapore, United Arab Emirates are the major spats suppliers to the country. Total

quantity and value of fish and fishery products imported in 2011 has increased by over 2 and nearly 15% compared to 2010.

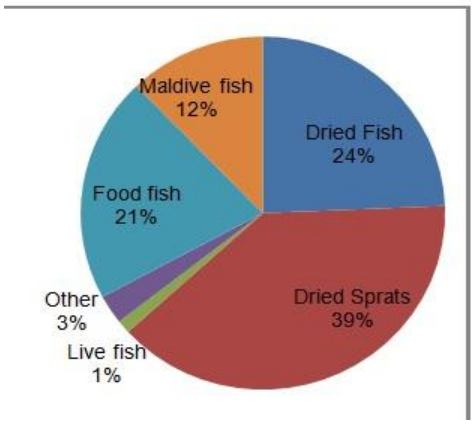
Figure 11 Quantity and Value of imported Fish and Fishery Products

Quantity



Source: Ministry of Fisheries.

Value

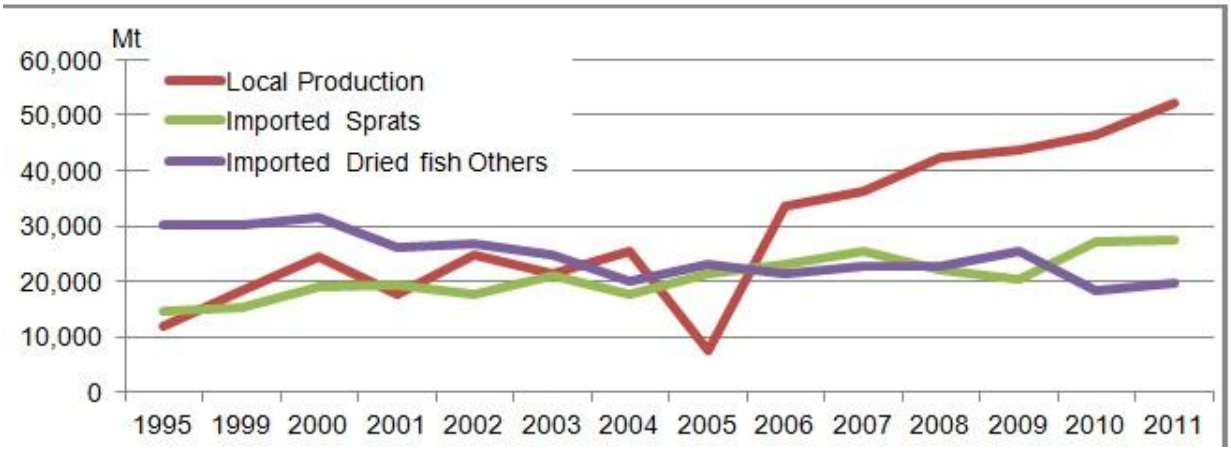


Source: Ministry of Fisheries.

4.3 Dried fish

Dried fish are more popular and consumed by country side dwellers due to lack of fresh fish supplies as a result of lack of proper transportation and marketing facilities. Total dried fish demand of the country is fulfilled through local production and imports. More than 60% of dried fish demand is fulfilled through imports while the rest from local production. However, the contribution of imports to the total demand has been gradually declined since 2005. As a result of that in 2011 local dried fish production has contributed more than 50% to the country requirements. In details 47,182 Mt of dried fish had imported in 2011 that was about 48% of the total dried fish demand of the country. Among dried fish Spats are major and contribute around 50% to the total dried fish imports. Similarly spats contribute around 30% to the total dried fish demand in the country. About 70% of local dried fish production of the country comes from Northern and Eastern provinces. Figure 11 shows trends of dried fish production and quantity of imports since 1995.

Figure 12 Dried fish production and imports

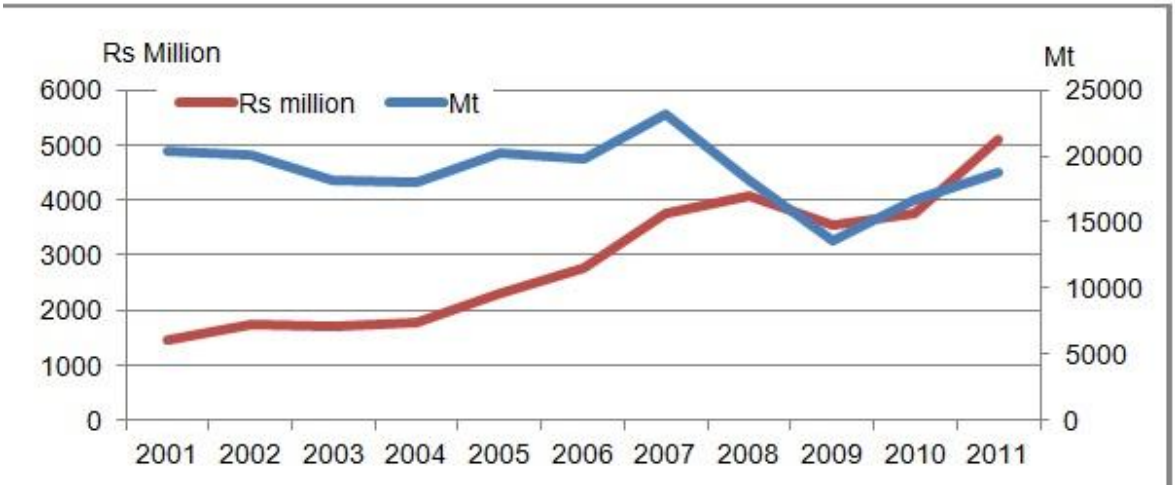


Source: Ministry of Fisheries.

4.4 Canned fish production

Canned fish are popular among Sri Lankan consumers irrespectively in rural and suburbs. Due to lack of facilities, technology and raw materials in the country almost all required quantity of canned fish has been imported to the country for the fulfillment of consumers demands. However, a canned fish factory will be operated as a joint venture with Ceylon Fisheries Corporation and Happy Cook Lanka Food (Pvt) Ltd in Galle in near future. It is planned about 10,000 units of canned fish can be produced daily at the beginning and will be extended up to 12,000 units. Further according to the Ministry of Fisheries another two canned fish factories will be operated in Peliyagoda and Mundalama in future to curtail imports. Figure 12 shows quantity and value of imported canned fish to the country since 2001.

Figure 13 Quantity and Value of imported canned fish



Source: Ministry of Fisheries.

It is clear that quantity and value of imported canned fish to the country has been shown an increasing trend since 2009.

4.5 Trade Balance

Quantity of fish and fishery products imports were recorded more than 80,000 Mt while exports less than 20,000 Mt in 2011. Hence it is clear that a huge trade deficit, around 60,000 Mt, has been experienced by the country. Figure – shows the trade balance and its trend for the past few years.

Figure 14 Balance of trade

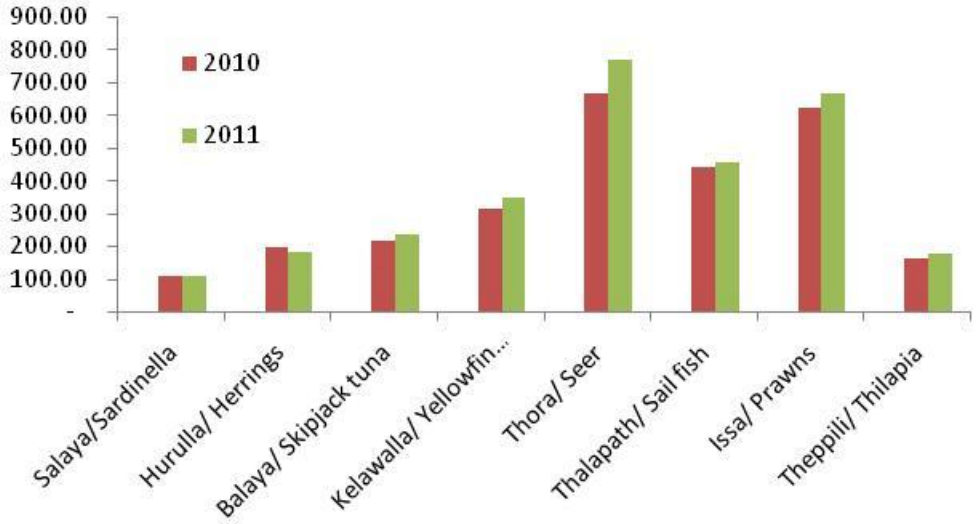
Source: Ministry of Fisheries.

It is clear that country is always experiencing a trade deficit which is moving around 15,000 and 20,000 Mts. Although a trade deficit recorded, a surplus in terms of value has been experienced by the country. Since 2001 until 2005 it was on an average 3,231 million rupees and it has been further expanded to 6,388 million rupees in between 2006 to 2009 but has declined to around 5,500 million rupees since 2009.

4. Whole sale and Retail Price

Fish market in Paliyagoda which was declared opened in 2011is the largest whole sale and retail fish market in Sri Lanka. In addition to that there are a number of whole sale and retail fish markets in the coastal belt based on fishery habours. On the other hand thousands of retailers are engaged in distribution and marketing of fish in the country. Apart from those private entrepreneurs, the Ceylon Fisheries Cooperation (CFC), the government owned cooperation, is involving in fish marketing and distribution but its share is minimal. Seer, Prawn, Sail fish and Yellow fin Tuna were high value while Salaya, Hurulla and Thilapia were low value fish species in both markets in general. Figure 15 and 16 show wholesale and retail prices of selected fish varieties in 2010 and 2011.

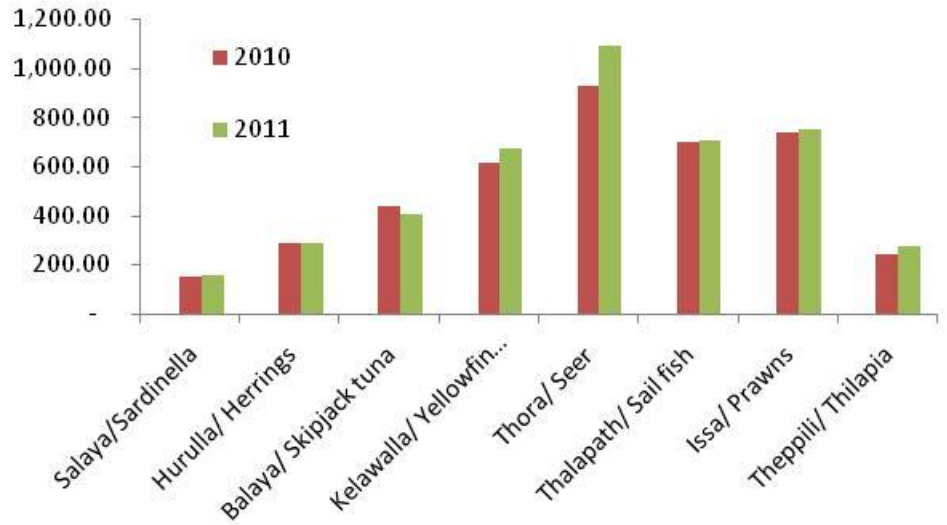
Figure 15 Wholesale price of selected varieties



Source: Ministry of Fisheries

Wholesale prices of almost all varieties have increased in 2011 compared to the 2010 prices. Of them Seer and prawns pech a higher values and showed incremental growth in prices in 2011 compare to the 2010. High demand at the producer market according to consumers' preferences at the end market on these varieties was major reason for this price increase and secondly increased production cost mainly driven by fuel price hike has also critical factor for the higher prices at the producer market.

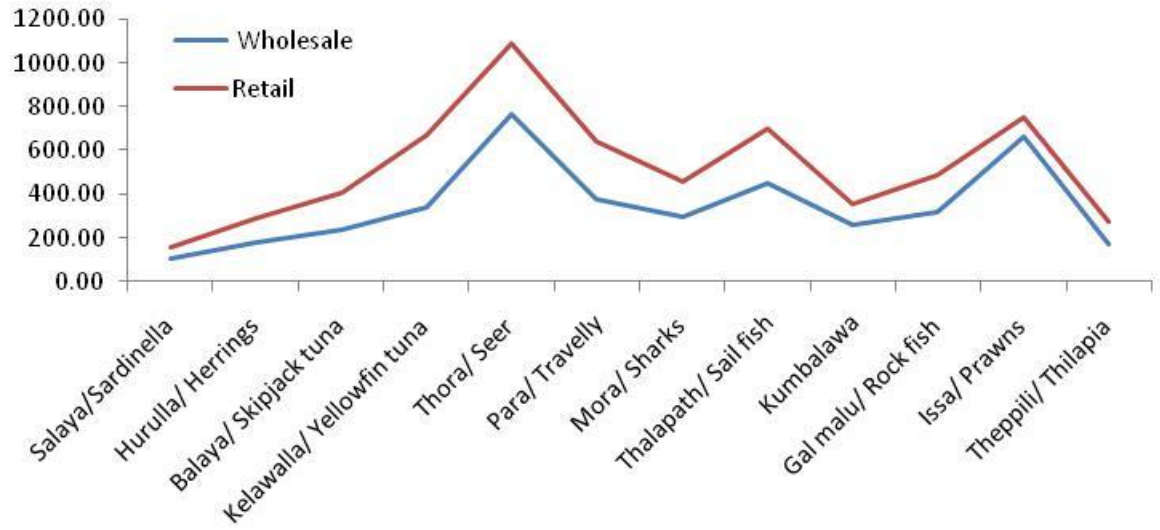
Figure 16 Retail price of selected varieties



Source: Ministry of Fisheries

Retail prices of Seer and Yellow fin Tuna of marine species and Thilapia of Inland species have increased in 2011 compare to 2010 prices while others were stable except Skipjack tuna which was declined. Higher retail prices reflected the higher wholesale prices of those varieties in the producer markets. Further it's governed by supply and demand at the markets and consumer preferences.

Figure 17 Wholesale and Retail price in 2011



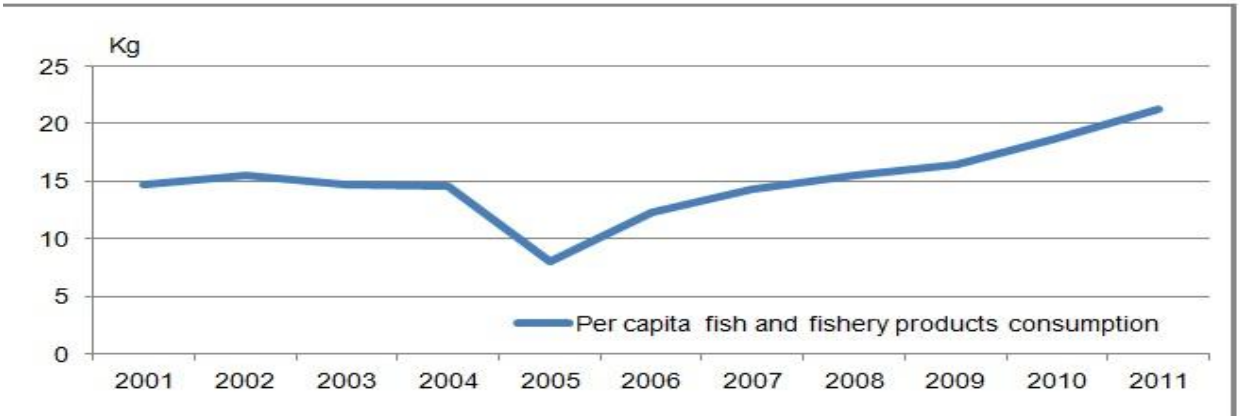
Source: Ministry of Fisheries

Marketing margin varies according to producer price and consumer price which is mainly governed by consumer preference level. In 2011 the highest marketing margin is recorded for Seer and Yellow fin tuna while the lowest for Salaya and Thilapia. Marketing margin for Thalapath and Para is also in moderate level. Figure 17 shows marketing margins of selected fish varieties in 2011.

5. Fish consumption

Fish is the most important source of animal protein intake of people in Sri Lanka. Ministry of Fisheries plans to increase per capita fish consumption to 21 Kg by 2013 in the hope of fulfilling the protein requirement of the people.

Figure 18 Per capita fish and fishery products consumption



Source: Ministry of Fisheries.

Per capita consumption of fish and fishery products is governed by local fish production and fish and fishery products imports and exports. Accordingly in 2011 per capita fish and fishery products consumption of the country has estimated about 21kg. It has nearly 13% increased compared to 2010 which was about 19 kg. Increased in marine fish production, especially in Northern and Eastern provinces which resulted increased in market supply and increased in prices of substitutes, especially chicken, at the markets were major divers for increasing in per capita fish consumption of the country in 2011.

6. Benchmark with South Asian countries

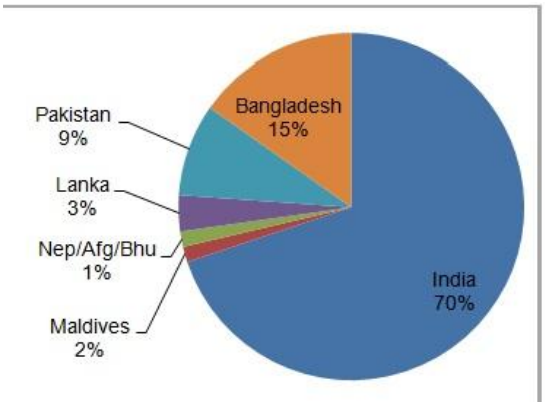
South Asian region has become an important fish producing region in the context of world fisheries. India, Bangladesh, Pakistan and Sri Lanka were among the main 35 fish producing countries in 2010. Especially, India has became 3rd dominant fish producer in the world in 2010 which recorded 4,694,968 tones. Further Bangladesh and India were the 2nd and 3rd dominant inland fish producers in the world.

India had contributed 71% while Bangladesh (15%), Pakistan (9%), Sri Lanka (3%) and Maldives (2%) to the total regional fish production in 1990. Bangladesh has gradually increased its share to the regional fish production and has contributed 22% in 2010. As a result of that, share of India and Pakistan to the regional fish production has declined

to 69 and 5% respectively in 2010. However share of Sri Lanka to the regional fish production has remained stable as 3% in last two decades. Figure 19 shows fish production of South Asian countries since 1990.

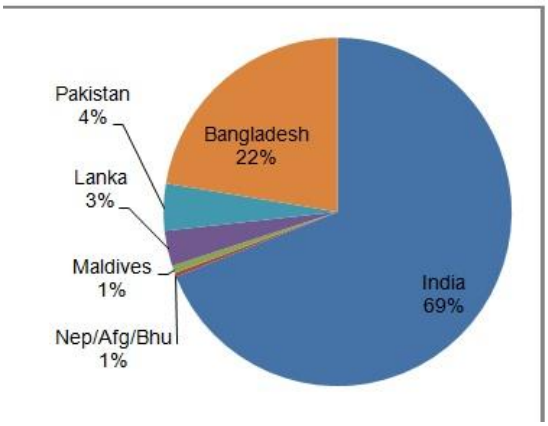
Figure 19 Fish production of South Asian Countries - 1990 and 2010

1990



Source: FAO

2010



Source: FAO

Asian countries also play a significant role in the world aquaculture sector. India was the dominant aquaculture fish and shrimp producing country in the region contributing around 75% to the regional aquaculture production in 2005. Bangladesh was the second in the region and has contributed 22% to the regional aquaculture fish and shrimp production in the same year. Likewise, Pakistan and Nepal have contributed 2 and 1% while other countries contributed less than 1%. In 2010 India contributed 97% while the rest by Bangladesh to the regional aquaculture production.

Table 01 Food balance sheet of fish and fishery products in live weight and fish contribution to the protein supply of South Asian countries - 2009

Country	Production	Non food use	Imports	Exports	Total production	Population	Per Capita supply	Fish protein	Animal Protein	Total Protein	Fish/Animal Protein	Fish/Total Protein
	Tones in live weight					Thousand	Kg	per capita/g/ day			%	%
Afghanistan	1000	0	–	–	1000	30578	0	0	10.5	56.2	0.1	0
Bangladesh	2885864	28090	15917	95618	2778073	147030	18.9	5.3	9.4	57.9	56.5	9.2
Bhutan	226	0	0	0	226	714	0.3	0.1	10	57.5	0.9	0.2
India	7858676	419311	15346	808143	6646568	1207740	5.5	1.6	11.1	56.6	14.6	2.9
Maldives	143597	0	1742	102676	43363	312	139	43.4	16.6	99.5	70.5	43.7
Nepal	48230	0	5135	9	53356	29433	1.8	0.5	9.4	61.8	5.7	0.9
Pakistan	584461	92950	1774	151241	342044	170494	2	0.6	25.5	63.5	2.4	1
Sri Lanka	317988	5400	145083	26266	431405	20669	20.9	7.4	14.2	60.4	52.6	12.3

Source: Food and Agriculture Organization

According to the FAO food balance sheet in 2009, Maldives was the dominant fish consuming country which has the highest per capita fish consumption (139 kg) in the region. Sri Lanka and Bangladesh were second and third and recorded nearly 21kg and 19kg. Fish and fishery products contribution to the total animal protein intake was nearly 71% in Maldives, 57% in Bangladesh while 53% in Sri Lanka. Moreover, Maldives, Pakistan, Nepal and Sri Lanka were the dominant for protein consumption within the Asian region in 2009.

Abbreviations and Acronyms

Asian Development Bank (ADB)

British Retail Consortium (BRC)

Ceylon Fisheries Cooperation (CFC)

Department of Fisheries and Aquatic Resources -DFARD,

European Union (EU)

Everything But Arms (EBA)

Fish Aggregate Device (FAD)

Fish Enhance Devise (FEN)

Food and Agriculture Organization (FAO)

Generalized System of Preferences - Special incentives (GSP +)

Generalized System of Preferences (GSP)

Government Organizations (GOs)

Gross Domestic Product (GDP)

Hazard Analysis Critical Control Point quality standard (HACCP),

Inboard Day boat (IDAY)

Inboard Multi- day boat (IMUL)

Marine Biological Resources Division (MBRD)

Ministry of fisheries and aquatic resources development (MFARD)

National Aquaculture Development Authority NAQDA,

National Aquatic Resource Research and Development Agency -NARA,

National Institute of Fisheries and Nautical Engineering NIFNI

Non Government Organizations (NGOs)

Outboard Fiber reinforced boat (OFRP)

Refrigerated sea water (RSW)

Rural Fisheries Organization (RFO)

Vessel Monitoring System (VMS)