

# Progress Report 2017

**Ministry of Fisheries and Aquatic Resources  
Development  
Maligawatta, Colombo 10.**



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## Overall progress of the Fisheries Sector in 2017

Sri Lankan fisheries sector mainly consists of 517,00km sea area with abundant fish resource and 489,000 hectares of lagoons, estuaries and reservoirs that show high potential of development. Also, the Sri Lankan fisher community whose livelihood was fishing since the time immemorial and the related indirect employees are the expertized human resources of the Sri Lankan fisheries sector.

It is noteworthy that these human, natural and physical resources coupled with Rs. 5626.12 Mn of monetary provisions that has been allocated up to now to the Ministry and the allocations to the affiliated Institutions by the budget and the supplementary estimates of 2017, were utilized to the effect that the programmes identified on priority-basis were implemented successfully by the Ministry and the Institutions, overcoming numerous challenges emerging within the fisheries industry.

Especially, the total fish production during January- September 2017 was marked as 389,500 mt showing an increase of 2.3% in contrast to the fish production during the same period of the previous year. For such increase, the marine and inland sectors within the said period have made a contribution of 335,750 mt and 53,750 mt of fish production respectively.

Fish consumption is paramount as a source of protein required in developing the nutrition level and good health of the public. Even though per capita fish consumption in 2016 was 43.4g per day, the amount has been increased up to 44.5g in 2017. This amount is expected to be increased in coming times.

Taking in to consideration the fisheries sector's increased contribution to the national income, the contribution of fish exports proves to be remaining at an appreciably high level. From January to August 2017, the total amount of fish and fishery product exports was reported to be 18,262 mt amounting to an export value of Rs 28,685 Mn. Further, ornamental fish exports within the said time span, has earned an income of Rs 1678 Mn. Moreover, subsequent to the lifting of EU fish ban on 16<sup>th</sup> June 2016 , 5187 mt of fish has been exported and it marks the tendency of fish exports getting stable in an orderly manner.



*Wewak Samga Gamak*, the housing and livelihood development programme implemented in 2017 with a view to developing the living standards of the fisher community, has proved to be producing desirable outcomes. From January to September 2017, 177 projects on infrastructure development have been executed in every district of the island. Measures have been taken to provide housing facilities to 71 beneficiaries while awarding financial assistance for housing repairs and electricity supply for 1727 beneficiaries and sanitary facility development of 1419 beneficiaries. These desirable results contribute hugely to the development of the living standards of the fisher community. The programme to restore the livelihoods of the fishermen who were deprived from fishing industry due to the war and natural disasters is also significant. Resettlement of such affected fishermen has been initiated in 2017 in the villages of Kallarawa, kokilai and Punnakuda.

Measures have been taken to amend the rules at national level and empower the legal provisions against illegal fishing, in compliance with the conventions formulated by regional and international organizations to deter the Illegal, Unreported and Unregulated (IUU) fishing. Also, the illegal Indian fishing activities on Northern Sri Lankan waters have lessened as a result of the continuous bilateral discussions between Sri Lanka and India. In addition, formulation of a national fisheries policy with technical assistance from Norway, is underway which will pave way for a sustainable fisheries sector that is capable of meeting future economic trends of the international industry based on policies appropriate to Sri Lankan context.

With the partnership of the private sector, the fisheries sector is implementing plans to bestow its maximum contribution to support the current government's programme proposed in 2015 to generate 100 000 employment opportunities. Accordingly, out of the 21 private investment proposals submitted within January to September this year, 11 appropriative proposals have been granted with approval in order to promote private investments in the fisheries sector. Through the implementation of such projects NAQDA and DFAR have created 8665 of new employments in the fisheries industry during the time period from January to September in 2016 and 2017 and it is expected that the amount be

increased up to 49,380 by the year 2020. Further, the increased opportunities to earn foreign exchange that will emerge in line with the realization of the said objective through enhancing the capacity of value added products under high technological standards and promotion of exports will undoubtedly benefit the development of the national economy.

Likewise, NARA has pointed out that the post-harvest losses in fisheries remain at a level between 40% - 60% according to their studies and they have also recommended relevant strategies to minimize such post-harvest losses. In this regard multiple measures are being taken such as awareness raising of fishermen, manufacture and modernization of fishing vessels with cutting edge facilities, use of quality water and ice, systematic harvesting and landing of fish and operation of fishery harbours equipped with cold rooms and hygienic water facilities. These factors were given given much emphasis in the construction of new harbours, anchorages and at the same time in the renovations of existing avenues to make them technologically advanced.

Positive results emerging from the effective implementation of all these programmes will enhance the maximum-level contribution of the fisheries sector to the progress of the national economy. In view of the current progress of all the implemented programmes and the progress of export details, it is obvious that the contribution made to the national economy within the first six month of 2017 according to the current prices will undoubtedly take a higher rate by the end of the year.

Over all, these positive outcomes and achievements will be supporting the social and economic development of the enter country in line with the fulfillment of incumbent government's Blue Green Economy national policy, His Excellency's Food Security Programme and United Nations Sustainable Development Goals.





# Vision, Mission, Policy Objectives and Development Strategic Plan of the Ministry

## Vision

Sri Lanka to be the leader of conservation and sustainable utilization of Fisheries and Aquatic Resources in the South Asian Region

## Mission

Managing the utilization of Fisheries and Aquatic Resources for the benefit of the present and future generation

## Targeted Trust Areas

- Increased contribution from the Fisheries Sector to the development of the national economy
- Enhanced living standards of the fisher community
- Sustainable development of the fisheries resources
- Generation of employment opportunities in the fisheries sector
- Minimized post-harvest losses

## Desired Outcomes

- High contribution to the GNP
- Improved living standards
- Ensured sustainability of the fisheries industry
- Increased employment opportunities in the fisheries sector
- High quality fish products



## Institutions coming under the purview of the Ministry and their objectives

 <p><b>Department of Fisheries &amp; Aquatic Resources (DFAR)</b></p>	<p><b>Desired objective</b> - Management, Development and Conservation of Fisheries and Aquatic Resources of Sri Lanka  <b>Responsibilities-</b> Introduction of the Fisheries and Aquatic Resources Act No2, 1996 and updating the fisheries management activities and legal provisions in compliance to the regional and international conventions and regulations</p>
 <p><b>National Aquatic Resources Research &amp; Development Agency (NARA)</b></p>	<p><b>Desired objective</b> - To conduct researches on Aquatic resources and development, conservation and management of the same  <b>Responsibilities-</b> NARA, having been established in terms of the National Aquatic Resources Research &amp; Development Agency Act No 54 of 1981 is responsible for aquatic resources and aquaculture, fisheries technology, fish and post-harvest technology and environmental, oceanographic and hydrographic studies</p>
 <p><b>National Aquaculture Development Authority (NAQDA)</b></p>	<p><b>Desired objective</b> - Development and Management of culture - based inland fisheries and aquaculture  <b>Responsibilities-</b> NAQDA having been established in terms of the National Aquaculture Development Authority Act No 53 of 1998, is responsible for supply of fish seed in aquaculture and extension services for inland fisheries and aquaculture, shrimp culture monitoring and aquaculture training faculties</p>
 <p><b>Ceylon Fishery Harbours Corporation (CFHC)</b></p>	<p><b>Desired objective</b> -Planning, construction and operation of Fishery harbours and Anchorages  <b>Responsibilities-</b> CFHC, having been established in terms of the State Industrial Corporations Act No 49 of 1957, is responsible for the operation of 20 fishery harbours and 58 anchorages.</p>
 <p><b>Ceylon Fisheries Corporation (CFC)</b></p>	<p><b>Desired objective</b> - Intervention in fish marketing providing the best advantage to both the supplier and the consumer  <b>Responsibilities-</b> CFC, having been established in terms of the State Industrial Corporations Act No 49 of 1957, is responsible for purchasing and sale of fish and ice, operation of cold room facilities and sale of fishery by-products.</p>
 <p><b>Cey-Nor Foundation Ltd., (CNFL)</b></p>	<p><b>Desired objective-</b> Supply of fisheries inputs and gears  <b>Responsibilities-</b> Cy-Nor, having been registers under the Companies Act No 7 of 2007, is responsible for manufacture and sale of fiberglass boats and supply of fishing nets and gears</p>





*01.  
Increased contribution of the  
Fisheries Sector to the development  
of the national economy*



## **Increased contribution of the Fisheries Sector to the development of the national economy**

The fisheries industry, ensuring once again its importance as a sub-section that contributes to the development of the national economy, has bestowed a considerable contribution to the production, national export income, employment generation and nutrition supply of the country.

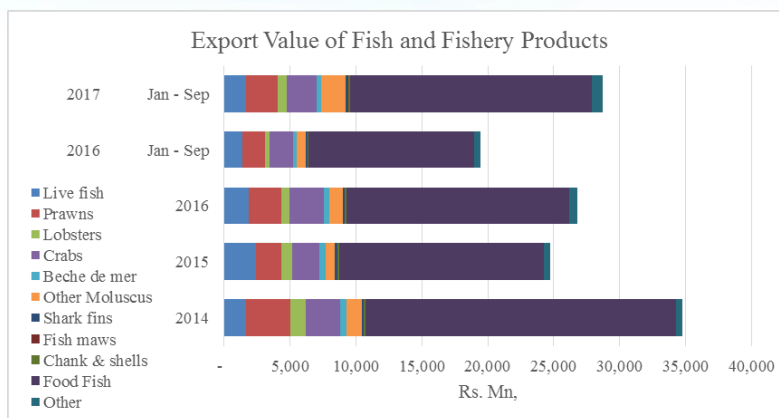
The reports of the Department of Census and Statistics evinces the fact that the fisheries sector, amidst unfavorable climatic conditions prevalent in previous year, has successfully given a 1.4% contribution to the GDP under current market prices in compliance with the international rules and management policies.

It is a positive tendency that this rate of 1.4% was able to be maintained continuously within the first six months of the year 2017. The fisheries sector contribution to national export income which happened to decrease from 2.4% to 1.8% due to the European Union fish ban has again risen up to 2.2%.

### **1.1 Increase of the annual fish production**

The total fish production of the country is 389,500 Mt from January to September of 2017 and this shows an increase of 3% in contrast to the fish production of the same period in 2016. Contribution for this increase comes from main sub sections of the fisheries sector i.e. 82.6% from marine fisheries and 13.8% from inland fisheries and aquaculture.

Duagram 1.1.1: Total annual fish production – with sub sections (2012 to September 2017)



source: Statistical Unit, MFARD

## 1.2 Marine Fish production (coastal, offshore/deep sea)



Inspection of FAD in Kaluthara

A total marine fish production of 335,750 mt has been witnessed from January to September in 2017 which shows an increase of 1.2% in contrast to the same period in previous year. Even though coastal fisheries fish production shows 4% depletion due to the adverse climatic changes, the highest contribution to the total fish production has been given by the Coastal fisheries industry which amounts to a rate of 49.5%.

In view of the same period in previous year, deep sea fish production shows a progress of 9.2% in 2017 and it has contributed 36.7% to the total fish production.



### 1.3 Inland and Aquaculture production



Releasing fish of Batticaloa Hatchery



Inauguration of fish breeding centre in Kalarawa, Trincomalee on 10.10.2017



Establishment of Polonnaruwa fish breeding centre



Construction of stage II and fish stocking in Udawalawa Aquaculture Centre



Construction of stage II in Muruthawela Aquaculture Hatchery

From January to September 2017, the total inland and aquaculture fish production reports a 9.7% progress in contrast to the same duration in 2016.

Taking in to account the sub sections of inland and aquaculture fisheries, the production of inland fisheries shows 9.5% progress and aquaculture 17.8 progress. However, shrimp farming reports a decrease of 1.1%.

MFARD has taken measure throughout the period to implement multiple effective programmes and projects to increase export-oriented products through the promotion of aquaculture in mariculture, brackish water and inland fisheries.

Accordingly, with a view to increasing the domestic fish production in 2017, NAQDA and DFAR have implemented projects for nutrition enhancement, employment generation, promotion of exports, and rural economy development. The projects of non-traditional fish farming such as sea-bass farming, fattening of crabs, fattening of Sea-Cucumber in Cages and Milkfish farming in abandoned

shrimp farms have been implemented in Gampaha, Batticaloa, Mannar, Galle, Trincomalee and Kilinochchi districts.

The progress of such projects is reflected by the overall progress of this year. It is praiseworthy that the production has been increased notwithstanding the adverse weather conditions.

### 1.3.1 Production of fish fingerling and post-larvae

Measures have been taken increase fish and fish fingerling production by ranching reservoirs and ponds with fish fingerling, fresh and brackish water shrimp and post-larvae produced in NAQDA and private sector breeding centers.

Table 1.3.1.1 : Production of fish fingerling and post-larvae, Mn ( until 30<sup>th</sup> July 2017)

	Production in NAQDA breeding centers	Private sector production	Total production
Fish fingerling	21.27	29.81	51.08
Freshwater shrimp post larvae	24.05	11.54	35.59
Brackish water shrimp post larvae	16.95	284.76	301.71

source: Statistical Unit, MFARD

Accordingly, private sector contribution remains to be 29.81 Mn in fish fingerling production, 11.54 Mn in Freshwater shrimp and post larvae production and 284.76 Mn in Brackish water shrimp and post larvae.

## 1.4 Increasing the fish production from lagoon fisheries

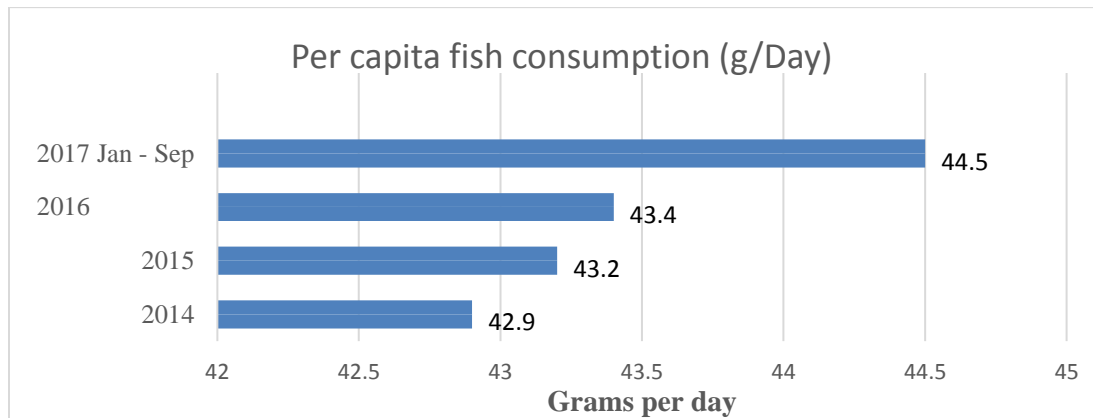
DFAR has taken measures to increase the fish production from lagoon fisheries under sustainable management, develop tourism and lagoon conservation activities with the participation of the private sector. 19 lagoons out of the 116 lagoons islandwide have been identified by DFAR and scheduled to be mapped out and gazetted, upon establishment of participatory committees.

## 1.5 Increasing per-capita fish consumption

Fish consumption has proved to be the main source of animal protein since it gives a 53% contribution to the overall animal protein supply.

Per capita fish consumption in the year 2016 was 43.5g per day and the amount has increased up to 44.5 g within the time period from January to September 2017.

Diagram 1.5.1: Per capita fish consumption (from 2014 to September 2017)



source: Statistical Unit, MFARD

## 1.6 Value Added Fish Products

Production of canned fish, dried fish, sprats and Maldive fish supports employment generation and increasing of Per capita fish income. The total consumption of canned fish per day amounts to a number of 124,000.00. Canned fish factories with a per day production capacity of 95,000 cans have been established for the fulfillment of domestic canned fish requirement. The total production of those factories per day is 23,396 cans.

The total dried fish production including Sprat was reported to be 43,960 Mt in Jan – Sep, 2016. However, the same has been decreased to 43,150 Mt within the same period in 2017. In order to satisfy the consumer needs 25,325 Mt of Sprat and dried fish have been imported in January – September 2017.



## 1.7 Import of Fish and Fishery Products

Dry fish, Maldivian fish, Canned fish and food fish are the main commodities of imported fish and fishery products. From January to September 2011, such imports show a decrease of -7.5% in amount and -2.4% in import expenditure.

The considerable drop in imported wet fish (30% in amount and 16% in value) is the main cause for this decrease. The government policy decision to increase import tax with a view to protecting the small-scale fisherman, has resulted in a control in wet fish imports.

Even though dried fish has become the main commodity among wet fish and fishery products of 2017, canned fish due to its rapid increase, has become the major import commodity giving a contribution of 37% in amount and 28% in value to the total imports.

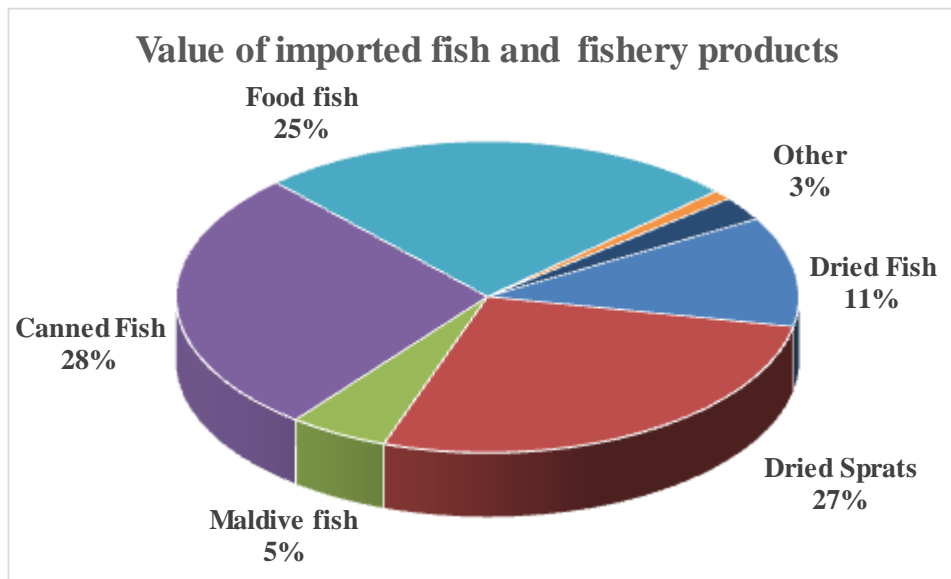
**Table 1.7.1 : Import amount and import value January to September in 2016 and 2017)**

Item	Import amount (Mt)			Import value (Rs)		
	January to September 2016	January to September 2017	Difference	January to September 2016	January to September 2017	Difference
Dry fish	7,674	7,955	3.7	2,441	2,952	20.91.2
Dry Sprat	18,916	17,370	-8.2	6,976	7,062	1.2
Maldivian fish	1,936	2,181	12.7	1,431	1,333	-6.9
Canned fish	26,845	30,638	14.1	7,196	7,130	-0.9
Wet fish	31,654	22,135	-30.1	7,721	6,470	-16.2
Ornamental fish	89	124	39.5	153	261	70.3
Other	1,244	1,328	6.8	587	653	11.2
Total	88,358	81,731	-7.5	26,505	25,862	-2.4

source: Statistical Unit, MFARD



Diagram 1.7.1 : Import value of fish and fishery products



source: Statistical Unit, MFARD

## 1.8 Supply of fish at an affordable price



Opening of Moratuwa fish sales center

CFC being the key governmental body in fish marketing, maintains its marketing network in islandwide for the distribution of fresh and quality fish to the public at an affordable price. In competition to the price hikes of fish in the local market, CFC fulfills the duty of selling fresh fish at affordable prices through their fish sales points and mobile fish selling services with a view to reducing the increasing cost of life.

Accordingly, from January to September 2017, 16 new fish sales points have been opened by CFC and the number of fish sales points currently in operation has been increased up to 100. It has been planned to inaugurate 50 new sales points in 2018.

In addition, the Peliyagoda fish market complex and the Trincomalee fish market complex give considerable assistance in strengthening the fish distribution network.

## 1.9 Supply of infrastructure to obtain an increased marine fish production



Sanitary facilities of Mirissa Fishery Harbour

The CFHC and the Fishery Harbours and Anchorages Project facilitate the fisher community to deploy an efficient and productive fisheries industry through the construction of fishery harbours, fish landing sites, ice factories, cold rooms and other basic infrastructure to the effect that required avenues are newly constructed and developed to the level that the target

of producing quality fish can be achieved through minimized post-harvest losses. Currently, development of 14 fishery harbours is underway out of the existing 21 fishery harbours

Table 1.9.1: Progress of construction and renovation of Fishery Harbours, Anchorages, Jetties, Breakwaters (January to September in 2017)

(Projects implemented on budgetary provisions)

project	Total allocation (Rs. Mn)	Allocation for 2017 (Rs. Mn)	Year 2017		Total physical progress
			Financial progress	Physical progress	
Kalamatiya fishery harbour constructions	1025.13	240	56%	40%	82%
Construction of the jetty of Kapparatota	564.39	33	0%	-	100%
Pereliya anchorage constructions	281.51	180	44%	55%	60%
Construction of Galle	97.56	70	17%	26%	30%

fishery harbour jetty					
Re-development of Hambantota fishery harbour (stage I)	105.18	15	-	-	100%
Re-development of Negambo lagoon( stage I, packages I, II)	1000	170	17%	19%	(stage I, package I)
					(stage I, package II)
Renovation of Suduwella fishery harbour breakwaters	175.26	100	76%	100%	
Upgrading Kirinda Fishery harbour	16	16	0%	-	Award of contract
Construction of the jetty of Kudawella fishery harbour	142	100	22%	80%	82%
Dredging the Puranawella harbour basin	109.8	35	100%	100%	100%
Construction of Chilaw fishery harbour	101.7	45	71%	58%	60%
Construction of Mirissa fishery harbour jetty	350	120	23%	54%	57%
Construction of Karainagar boatyard	283.39	150	32%	54%	60%
Preliminary feasibility studies of Gandara fishery harbour	20	20	39%	90%	Preliminary feasibility studies and detailed plans



Out of the aforementioned projects, Kapparatota jetty has been completed and opened by now. First stage of re-developing Hambantota fishery harbour has been completed along with the first stage of the Negambo lagoon. Apart from that, renovation of breakwaters in Suduwella fishery harbour and dredging of Puranawella harbour basin have also been completed.

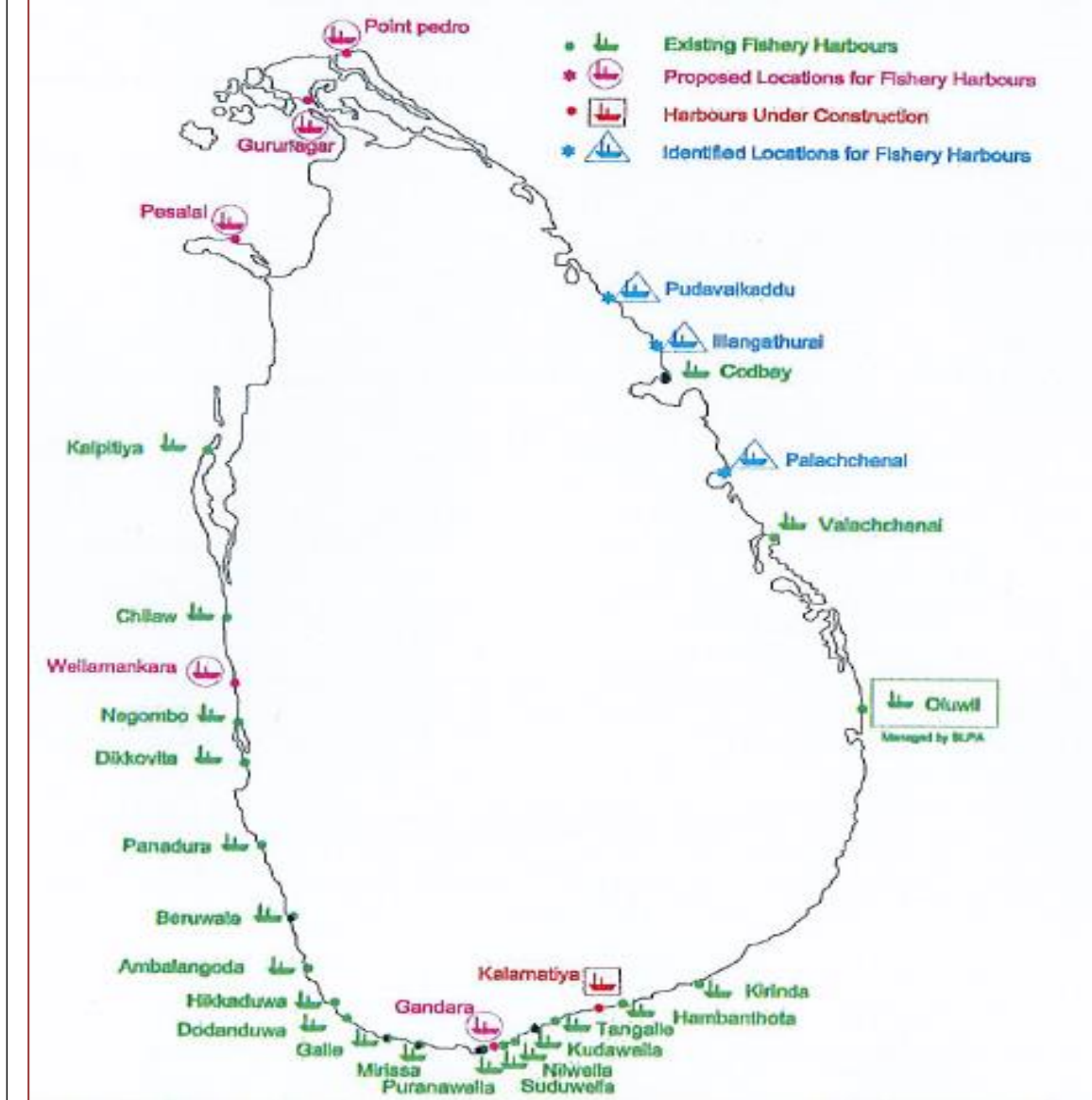
The Dikkowita access road project funded by Netherlands has been initiated and the current physical progress is 77%. The northern provincial sustainable development project funded by 32 million rupees of the Asian development Bank, schedules to establish 02 harbours, 07 anchorages and 21 landing sites in Point Pedro and Pesalai, of which the designing of detailed plans are underway. In addition, harbours are planned to be built in 2018 in the Northern provincial areas of Chalai, Madagal, Udappuwa and Delft. Preliminary surveying and detailed plans in this regard are in process. Further, a central observation unit which will support the application of advanced technology to research and development activities is scheduled to be established in NARA

The Ceylon Fishery Harbour Corporation that plays a vital role in providing fisheries infrastructure has taken measures to develop infrastructure for whale watching in the Mirissa fishery harbour. This has resulted in income generation development of the communities engaged in tourism. The said institution has also taken development measures in this year to mechanize the fish landings, introduce high - speed fueling machines and grant a 50 ton crane to the Galle fishery harbor.



## FISHERY HARBOURS IN SRI LANKA

( EXISTING / UNDER CONSTRUCTION / PROPOSED & IDENTIFIED LOCATIONS )





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**1.10 Provision of fishery infrastructure for the development of inland fish harvest**

NAQDA has taken measures to develop the fishery infrastructure for the fish seedling production in aquaculture development center with a view to enhancing culture based fisheries industry.

NAQDA is functioning freshwater breeding centers with high capacity in Dambulla, Inginiyagala, Udawalawa, kalawewa, Iranamadu, and Muruthawela. The Udawalawa breeding center was newly established and set in to motion in 2017. Also, the Sewanapitiya aquaculture development center is scheduled to be initiating its production in 2018. Further, actions were taken to upgrade the hatcheries and increase the number of fattening ponds in Dambulla, Inginiyagala, Udawalawa and Kalawewa aquaculture centers. Therefore, a production of 150 million fish fingerling is expected to be produced by the year 2020

**1.11 Fish Exports**



Hon.Minister observing fish processing

Fish exports which had dropped during the European Union fish ban, has reported to be 18,262 Mt in quantity during January-December 2017, leading to an export value of Rs 28,685 Mn. This shows 45.9% increase in export income in contrast to the previous year.



The fisheries sector through the exports of fish feed, ornamental fish and sea weed contributes considerably to the growth of national economy. Necessary measures have been taken to improve fish exports sector by providing proper guidance and assistance to the stakeholders in order to export high-quality and healthy fish products adhering to the regulations of the import countries.

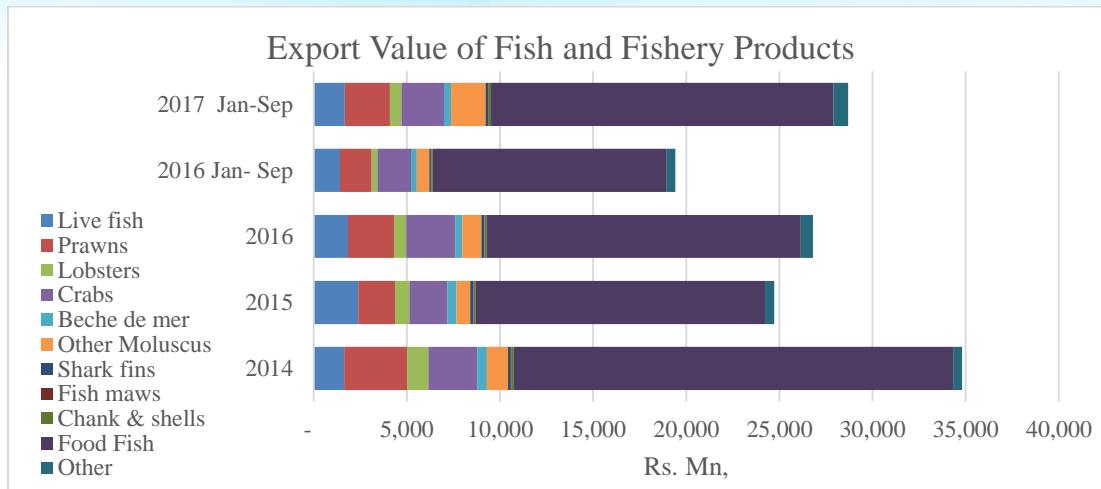
A number of 52 fish processing factories including the 33 approved by EU, and the 16 packetting centers perform an important duty in increasing fish exports.

Table 1.11.1: Export quantity and Export value from January to September 2016, 2017

Item	Export Quantity (mt)			Export Value (Rs. Mn)		
	January to September 2016	January to September 2017	Difference	January to September 2016	January to September 2017	Difference
Live fish	-	-	-	1,410	1,678	19.0
Prawns	1,200	1,442	20.1	1,700	2,415	42.1
Lobster	83	174	108.4	316	625	97.8
crabs	1,468	1,324	-9.8	1,795	2,274	26.7
Sea Cucumber	110	104	-5.2	310	378	21.8
Other Mollusca	995	2,296	130.7	678	1,856	173.9
Shark fins	24	40	65.9	88	144	64.1
Fish maws	1	6	652.3	11	33	192.7
Chank & shells	213	301	41.3	84	118	41.1
Wet fish	8,047	11,913	48.0	12,552	18,384	46.5
other	375	661	76.2	477	779	63.2
Total	12,518	18,262	45.9	19,421	28,685	47.7

source: Statistical Unit, MFARD

Diagram: 1.11.1 Export value of fish and fishery products



source: Statistical Unit, MFARD

### 1.11.1 Lifting of European Union Fish Ban

Export of fish and fishery products were devastated due to the impose of EU fish ban which prevailed nearly one and half year (January 2015- June 2016)

With the revocation of the fish ban, fish exports are proved to be again increasing with the expansion of export market.

Table 1.11.1.1 : Impact of EU fish ban to the total fish exports

Duration	Quantity ( Mt)		Value (Rs Mn)	
	Total	Monthly average	Total	Monthly average
2014	26,320	2,193	34,797	2,900
18 months of fish ban (January 2015- June 2016)	26,129	1,452	37,861	2,103
15 months subsequent to the lifting of fish ban (July 2016- September 2017)	27,187	1,812	42,342	2,823

Prior to the impose of fish ban, 32% of the total export quantity and 40.6% of the total export income were made to the European Union countries.

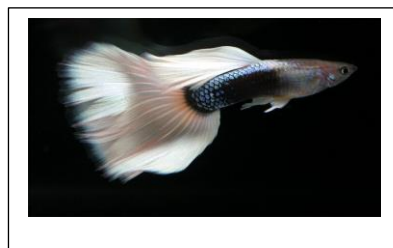
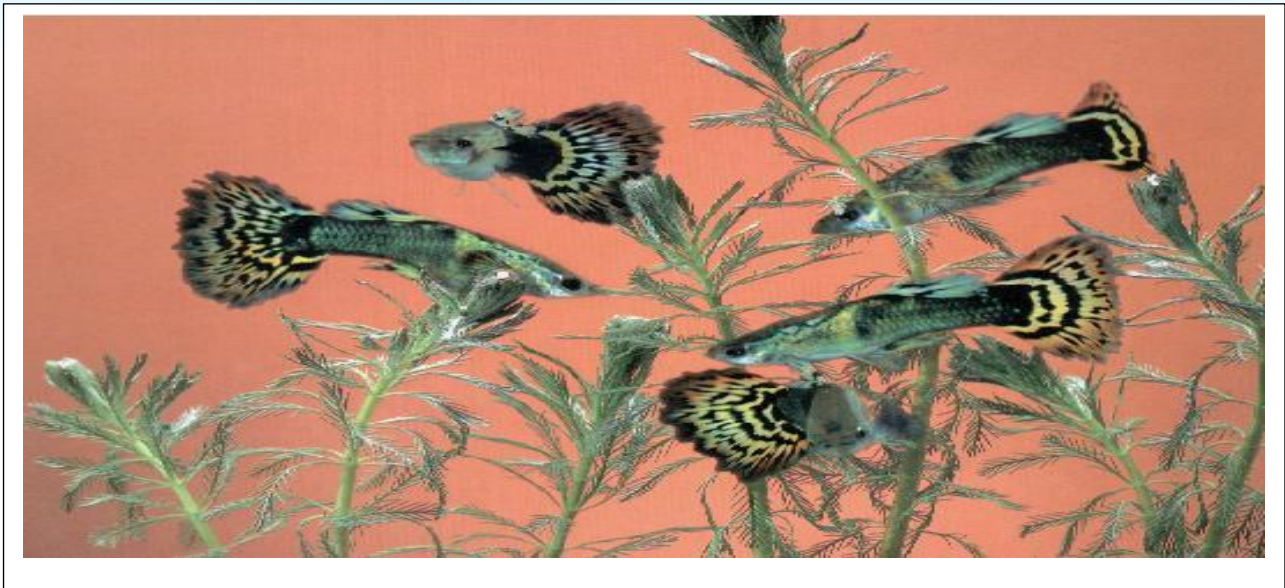
These rates plummeted more than half since the impose of fish ban. At present a systematic increase can be witnessed in the exports made to EU countries.



Table 1.11.1.2 : Export quantity and value made to EU relatively with the total exports

	Export Quantity ( Mt)			Export value (Rs Mn)		
	Total Exports Quantity	European Union	percentage	Total Exports value	European Union	percentage
2014	26,320	8,448	32.1	34,797	14,138	40.6
2015	17,461	2,065	11.8	24,716	4,774	19.3
2016	17,593	2,542	14.4	26,802	5,239	19.5
2017 (ja - sa)	18,262	4,012	22.0	28,685	7,853	27.4

### 1.11.2 Export of Ornamental Fish



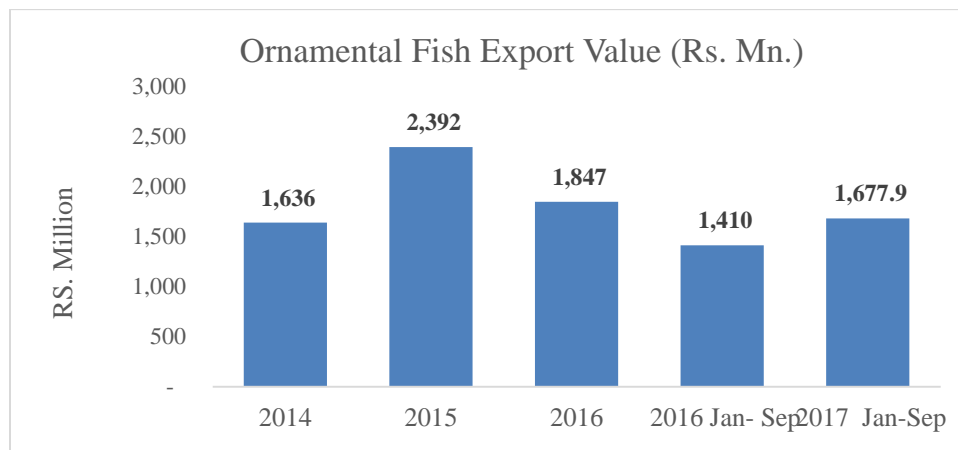
Rs 1,678 Mn of foreign exchange has been earned from ornamental fish exports showing an increase of 19% than the previous year. Accordingly the ornamental fish exports will exceed Rs 2 billion by the end of this year.

NAQDA has taken measures to encourage ornamental fish exports via the strategies such as the introduction of new ornamental fish species, raising awareness of trained cultivators on fish breeding, prevention of disease transmission and supply of quality fish feed, breeding of new species in collaboration with NARA, technical development, fish disease treatments and assisting cultivators to get concessionary loans.

A large number of small and medium scale cultivators conduct ornamental fisheries in Polonnaruwa district. Accordingly, establishment of an ornamental fish breeding centre was initiated in Sewanapitiya, Polonnaruwa in this year and

tenders have been invited for the construction of the marine ornamental fish breeding centre in the Puttalam district.

Diagram : 1.11.3.1 Export value of ornamental fish ( 2014- September 2017)



By September 2017, ornamental fish exports have earned Rs 1678.5 Mn. The total export value in 2016 was Rs 1847 Mn.

#### 1.11.4 Export of ornamental aquatic plants

Aqua Agri Pvt. Ltd has entered in to an agreement for the purchase and export of ornamental aquatic plants cultured by the tissue culture unit of Rambodagalle ornamental fish breeding centre. By August 2017, aquatic plants amounting to 339,048 have been cultured and 26,400 out of them have been exported.

Table 1.111.4.1: Export of Fish and other Ornamental Aquatic Plants

	Export amount Mt.	Export value Rs. Mn
Aquatic Plants	<b>52</b>	<b>5.36</b>
Brackish water prawn	<b>1156</b>	<b>1931</b>
Freshwater prawn	<b>60</b>	<b>154</b>

During January to August 2017, brackish water prawn and fresh water prawn exports have earned an export income of Rs 1931 Mn and Rs 154 Mn respectively. Also, sea weed exports have generated an income of Rs 5.36 Mn.







02

**Enhanced life  
standards of the fisher  
community**



## **Enhancement of the quality of living Standard of Fisher Community**

Numerous activities have been expedited by way of opening up new avenues with the objective of ensuring qualitative and improved living standard for fisher community. The set of issues which entails attention in the sphere of safe environment and knowledge of human rights, inclination to good governance, strong social connectivity, improvement of physical and mental health, employment productivity, ownership of a house with adequate facilities, good food habits, reflects the achievement of objective goals to attain prosperity together with benefits acquired through the programmes of Wewak samaga Gamak and improvement of livelihood and sanitary facilities.

### **2.1. Programme of Wewak SamagaGamak (Village with a lake)**

The Ministry of Fisheries & Aquatic Resources Development has launched a programme associated with A Lake/ A Lagoon and sea as a comprehensive programme which joins in hands with the development of fisher village activities. Attention has been drawn to improve the areas of generating new employment opportunities to enhance the living standard of fisher community, infrastructure development, introduction of technology advances, skill development, empowerment of women & youths, enhancement of social welfare activities, enhancement of educational skills of children, with the view of realizing the conceptual vision of a village filled with happiness from amongst selected villages under the programme associated with A Lake/ A Lagoon and sea. With the foremost objective of producing a generation of fisher community equipped with better living facilities, total number of 177 projects has been launched under this programme including 142 projects in 48 villages in 18 Districts in fresh water sector together with 35 projects in 13 villages in 13 Districts in marine sector respectively.





Inauguration of Wewak Samaga Gamak in Kawdulla, Polonnaruwa under the patronage of His Excellency



Opening of Batticaloa Multi Purpose fishery center



**2.1.1 TABLE: The program of Wewak SamagaGamak -No. of Projects in Operation (Jan-Sep 2017)**

(Jan-Sep 2017)

<b>PROJECT</b>	<b>PROJECTS IN OPERATION - DISTRICT WISE</b>	<b>NO. OF PROJECTS</b>
Road Development	Puttlam 7, Kalutara 1, Batticaloa 6, Trincomalee 7, Hambantota 32, Matara 3, Mannar 1 Kilinochchi 2, Mullaitivu 1, Polonnaruwa 3, Kandy 2, Badulla 5, Kurunegakla, 1, Moneragala 8, Matale 3, Nuwaraeliya 6, Anuradhapura 1, Amparai 3, Ratnapura 3	96
Erection of Security Fence	Galle1, Batticaloa 1, Hambantota 1	3
Erection of Shoulders	Hambantota 4, Matara 1	5
Sun Shades	Puttlam 1	1
Excavation of Channel	Hambantota	1
Provision of Electricity	Trincomalee 1, Hambantota 1, Nuwaraeliya 1	3
Provision of Sanitary Facilities	Hambantota 1, Puttlam 2, Nuwaraeliya 1	4
Provision of potable water	Kilinochchi 1, Puttlam 2, Batticaloa1, Kurunegala 1,Vavuniya 2, Trincomalee 1	8
Erection/Renovation of Community Centres/	Matara 1, Hambantota 3, Nuwaraeliya 1, Puttlam 1,Matara 1	7
Development of Drainage System	Hambantota 5, Batticaloa 1 Puttlam 1, Amparai 1, Kurunegala 1 Mullaitivu 1	10
Development of Landing sites	Puttlam 4, Hambantota 2, Jaffna 1, Matale 1	8
Construction of building for multiple activities	Batticaloa 2, Puttlam 1, Hambantota 1, Kurunegala 1	5
Children's Park	Puttlam 1	1
Restoration of Lakes	Hambantota1, Kurunegala 1	2
Erection of Service Shelter	Hambantota1, Badulla1	2
Erection of Gates for entry	Hambantota 2	2
Preparation of Fence net	Hambantota1	3
Fish Stalls	Kandy 2, Matara1	3
Erection of Bridges	Hambantota1	1
Preparation of Spillway	Hambantota1	1
Construction of Rest Rooms	Kandy 2 Hambantota 1	3
Renovation of Tailoring		1

Training Centres	Batticaloa 1	
Complete construction of balance work at School theatre	Puttlam 1	1
Construction of a Maternity Clinic	Anuradhapura 1	1
Construction of a pre school building	Anuradhapura 1 ,Matle 1, Kurunegala 1	3
Erection of a shelter for Passengers	Badulla 1	1
Construction of a School building	Mulaitvu1	1
Construction of a building for Fisheries Co-op Society	Mulaitvu 2	1
Total No. of Projects in progress		177

## 2.2 Provision of Houses with full facilities together with the Programme of Livelihood

A comprehensive programme has been launched with the objective of providing stable livelihood opportunities and conferment of home ownerships equipped with complete & proper sanitary facilities. Utilizing the budgetary allocation of Rs. 1200 Million in 2017, programmes to provide sanitary facilities together with livelihood opportunities are in progress.

### 2.2.1 Project for provision of Fisher Houses and Sanitary facilities



Awarding donation for fishermen

Initiative has been taken to provide an aid of Rs. 300,000/= among selected fisher families of 200 who are below the extreme poverty line and deprived of ownership of a house. This new Housing programme has benefitted 71 fishermen and it is expected that another 50 & 21 fishermen, will be provided with houses under the

housing programme of Kirimundala in Puttlam and SagaraPura in Trincomalee Districts respectively.

Grant of sum of Rs. 100,000/=each has been disbursed among 1400 Fisher families to complete partly built houses together with fulfilling the facilities of water, electricity and sanitary of another 1000 fisher families benefitting total number of 1727 personnel under this programme.

The Districts in which the programme of renovation of houses & provision of electricity facilities are under way and the No. of Beneficiaries

DISTRICT	NO. OF BENEFICIARIES
Batticaloa	92
Hambantota	759
Amparai	07
Colombo	58
Kllinochchi	25
Gampaha	39
Puttlam	191
Matara	118
Mullaitvu	200
Jaffna	108
Kalutara	24
Galle	106
Total No. of Beneficiaries	1,727

Under the programme of provision of financial assistance worth of Rs. 30,000/= each, among 1,300 selected power stricken families for fulfilling the requirement of toilet facilities, 1419 personnel have been benefitted.



The District in which the programme of providing sanitary facilities in operation and No. of Beneficiaries (As at 30<sup>th</sup> September)

DISTRICT	COMPLETE	PARTIALLY COMPLETED	NO. OF BENEFICIARIES
Batticaloa	114	9	123
Trincomalee	131	-	131
Colombo	10	-	10
Kilinochchi	-	8	8
Puttlam	97	8	105
Matara	97	36	133
Hambantota	376	164	540
Mullaitivu	12	04	16
Mannar	-	49	49
Jaffna	-	158	158
Kalutara	24	12	36
Galle	52	43	95
Amparai	14	-	14
Gampaha	01	-	01
Total	928	491	1,419

The number of recipients, who has been provided with economic benefits in full for improvement of sanitation, constitutes 928 by September and the number of recipients who have been partly benefitted stands at 491. The total number of 1419 beneficiaries has improved their sanitary facilities through this Housing scheme.

A project is underway to construct mobile toilets with the objective of providing sanitary facilities for transitional fishers who are engaged in fishing in the Districts of Mullaitivu, Trincomalee and Jaffna.



## 2.2.2 Livelihood facilities project



Sea Bass fish farming in Batticaloa

Modha, Sea weed, Ornamental fish, Fattening of crabs, centres for Fish massaging, Centres for foot massaging by fish, Amalgamated fish cultivation and cultivation of fish in ponds for consumption. Similarly the projects which are involved with post harvest technology such as Maldivian fish and dried fish have been financially benefitted.



Awarding fishermen with financial Aid made by the Port City project for Livelihood development

The objective of this project is to provide opportunities for youths and fisher women to draw their focus on new avenues to meet with livelihood activities, disengaging themselves from the traditional vocations. This programme has been expedited with the aim of implementing projects based on Aquatic Development activities such as cultivation of

In addition to the major programmes as mentioned above, 68 number of catamaran together with 68 outriggers has been distributed as a measure of capacity development to engage in fresh water fishing among fisher community. The Ceynor institute is presently engaged in producing another 150 craft along with 225 outriggers.

Similarly, tender has been awarded to North Sea Institute to supply fishing gear and accessories for fresh water fishing with the aim of distributing during the course of next three months among 4800 beneficiaries and in addition, the Ministry of Fisheries & Aquatic Resources Development has initiated measures

to replace harmful fishing gear used for marine fishing, with echo friendly harmless fishing gear among 170 beneficiaries.

Moreover, a tender has been awarded to Ceynor institute to supply 10 fish boxes and 85 smaller size fish boxes to be distributed among beneficiaries. Similarly, orders have been placed to supply 117 number of fish container boxes for improvement the growth of fingerlings together with distribution of 135 fish pens.

In addition to that, six programs relating to enhancement of nutritional status of fisher community, have been conducted in the Districts of Gampaha, Rathnapura, Galle, Kalutara, Kegalla, Moneragala, Badulla, Vavuniya, Polonnaruwa an Batticaloa

Similarly, with the execution of all such projects initiated by NAQDA in a bid to intensify fresh water fish farming sector, Creation of attractive landing sites, Modha Cultivation, Sea weed cultivation, Small scale ornamental fish farming, Fresh water fish farming in Mud ponds at back yards, small scale Agriculture, amalgamated fish farming, intensification of ornamental fish farming, crab farming, Milk fish farming for baits and Cluster ponds system in surroundings of estates contribute immensely towards fostering lively hoods development activities of fisher community.

### 2.3 Concessionary Loans and insurance scheme for Fisher Community



Compensation for fishing families affected from distress



Compensation for fishing families in 39<sup>th</sup> Anniversary of Beach seine fishermen family members passed away while engaged in fishing



In order to achieve a qualitative improvement from their engaged vocation, necessary security is ensured by providing coverage under an insurance scheme and concessionary loans.

Through the Concessionary Loan scheme of 'DiyawaraDiviya'' operated by Bank of Ceylon has issued loans for 67 recipients worth of Rs. 171.52 Million and 40 million has been reserved for concessionary loan interest in this year.

The total number of craft insured this year amounts to 17831 together with registration of 49848 fishers under the said insurance scheme. Compensation to the amount of Rs.1 Million each for 11 recipients has been awarded under the National Security Fund and 132 recipients were benefitted under 'DiyawaraDiviya' insurance scheme.

#### **2.4 Fisheries Federation**

The Fisheries Federation which has been established on 17-08-2010 by Fishermen themselves engaging in marine & fresh water fishing to fulfill their welfare issues together with the foremost objective of strengthening their capacity to protect their rights, constitutes a membership of 98,347. At present 15 District organizations relating to marine sector are in operation in 15 districts consists of 86,347 members, together with rural organization of 807 and similarly 12 District organizations relating to fresh water sector are in operation in 12 districts together with the affiliated rural organizations of 320.





**03**

**Sustainable Development of  
Fisheries Resources**





## **Sustainable Management of Fish Resources**

Ministry of Fisheries & Aquatic Resources Development along with its affiliated institutions functioned under the scope of the Ministry, bears the responsibility of ensuring the Ocean resources which are on the verge of decline, to preserve for the future generations by formulating proper measures and adequate strategies for sustainable utilization.

Similarly special emphases have been laid on formulation of a National Fisheries Policy in order to arrest the issues in relation to illegal, Unreported and IUU (Illegal Unreported & Unregulated) fishing, by establishment of vessel Monitoring System together with initiating stringent actions and strictly enforcing the law.

### **3.1. Cooperation with international & regional Countries**

The Government has established direct cooperation with international and regional organizations such as European Union and Indian Tuna commission towards the development and sustainability of the industry in Sri Lanka in compliance with the decisions based on the objective of achieving a sustainable development in fisheries industry while reserving the rights for expressions of dissent views diplomatically for the decisions which present adverse impacts to the progress of the trade and sustainability of the resources, to ensure positive response.

Sri Lanka has fulfilled over 76% of its requirements, out of 50 regulations imposed by the Indian Tuna Commission and is determined to maintain the requisite standard.

Sri Lanka has assured to the member countries of European Union that the Fish produced, destined for export market are of consistent with the regulations of the EU and our commitment in fulfilling the majority of recommendations paved way for revocation of sanctions. Similarly, measures are being taken to introduce electronic Log Books system which keeps records on the issues relating to legality of the fish catch and report of reliable data of fish, to bring the system to effective and efficient standard.

Similarly, The Government has reached an agreement with the Diego Garcia assuring that necessary measures are taken to prevent the instances of violating the maritime border regulations of the country by our fishers. Our Government was praised by the fact that no such incident has been reported since April 2017.

### **3.2. Action against illegal Fishing Practices**

The Ministry of Fisheries & Aquatic Resources Development is taking measures to enact requisite rules and Regulations and bring about necessary amendments through the legislative with the objective of establishing a responsible fisheries industry, conforming to rules and regulations of European Union.

The Ministry of Fisheries & Aquatic Resources Development in close coordination with the Department of legal Draftsman engaged in formulation of legal drafts for strengthening the existing provisions in the form of enactments, regulations and amendments, against illegal activities. Steps have been taken to impose stringent legal measures for the offences such as Dynamiting, use of proscribed fishing gear together with catching, possessing and transporting of live fish which has economic value and utilization of unregistered Vessels for fishing as per the Fisheries & Aquatic Resources Development act No 2 of 1996 and subsequent amendment in 2015.

Under mentioned draft are scheduled to be approved by the parliament in year 2017

- Amendment to the Act No. 59 of 1979 (Regularization of special fishing craft)

To empower authorized Fisheries Officers to institute legal action at a Magistrate Court against the illegal fishing vessels which trespass Sri Lankan territorial waters.

- Amendment of Fisheries & Aquatic Resources Development act No 2 of 1996

This draft which has mainly drawn attention relating to the issues of imposing penalties and penalizing for the offences of obstructing the duties of authorized official, has been submitted to the Department of Attorney General to obtain the certificate of the Attorney General before presenting to the Parliament.

### **3.4 The dialogues relating to the issue of prevention of maritime border violations committed by Indian Trawlers**

String of discussions took place relating to the issue of encroachment of maritime border of Sri Lanka and indulged in poaching by use of harmful fishing practice of bottom trawling by Indian Fishers in Northern part of Sri Lanka.

Conducting these discussions further, another round of discussions took place with the participation of respective Ministers of two Countries on 07<sup>th</sup> of April in Colombo and on 17<sup>th</sup> of October in New Delhi in this year , enabled arriving at decisions inclusive of conducting joint operations by Coast Guards of two Countries, strengthening communication net work, Indian Government to take steps to encourage fishers for deep sea fishing, Releasing of hired labourers employed on board and to release of 42 fishing trawlers upon the agreement of Northern Fishers.

Similarly, the amended Act No. 59 of 1979 (regularization of foreign Fishing Vessels) awaits the approval of the legislature. This Act will enable intensify the legal provisions inclusive of arresting fishing vessels engaged in poaching within our territorial waters.

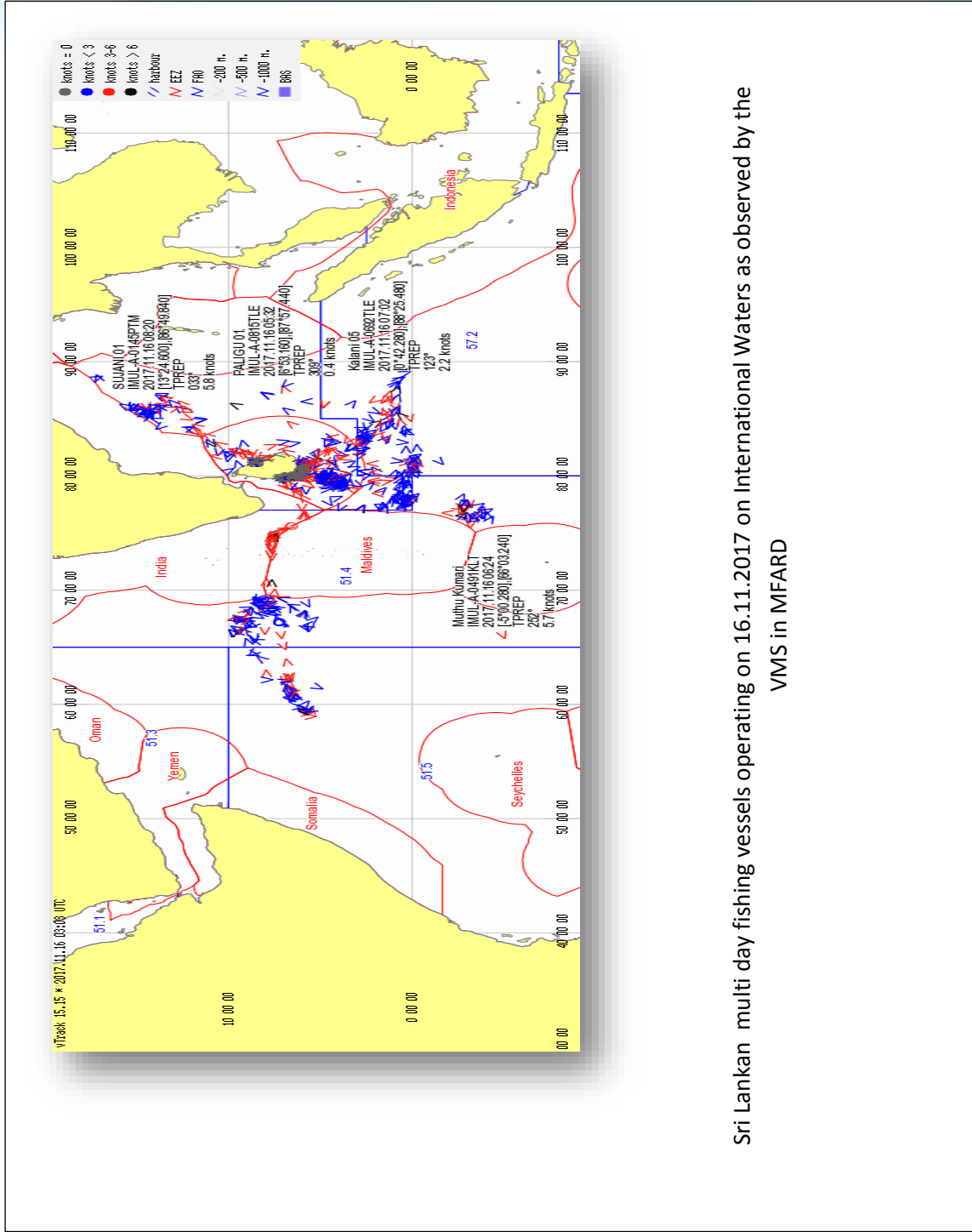


### 3.5. Vessel Monitoring System

This system which is operative in 24 hrs, was established in year 2016 with the objective of monitoring all the vessels engaged in deep sea fishing and to identify and to prevent the illegal fishing practices in the form of illegal, unreported and unregulated fishing (IUU), committed by fishers, operative in 1500 multi day fishing vessels by August 2017 has helped control the situation effectively.

In year 2017, having received 39 IUU signals through this network in relation to violation of rules of sea and investigations have confirmed that 22 of them are IUU related offences. 13 incidents of them have been directed to the board of Supervision and were imposed fined and remaining cases are under legal process.

Introduction of this system has shown gradual declining trend of committing IUU related illegal fishing practices and this situation reflects that the fisher community of Sri Lanka has realized the importance of conforming to the obligations of international organizations such as European Union and India Ocean Tuna Commission.



Sri Lankan multi day fishing vessels operating on 16.11.2017 on International Waters as observed by the VMS in MFARD

### 3.6. Formulation of National Fisheries Policy in Sri Lanka

Formulation of a Suitable National Policy on Fisheries for Sri Lanka is underway with technical collaboration of Norwegian Government. Preparation of a draft of a White Paper is in progress based on consultation with key stake holders such as fisher community, Organizations engaged in fisheries, other institutions and interested individuals. The white paper along with the related policy paper is scheduled to be presented to the Parliament in year 2018.

Strengthening the area of fish resource management in a sustainable manner with the foremost objective of fulfilling the aspirations relating to preservation of resources for the benefit of future generations together with minimizing post-harvest losses, empowerment of fisher community, formulation of policies to prevent illegal fishing practices, conservation of environment and formulation of policies for fisheries activities have been emphasized.



Hon. Minister and Secretary with Norwegian delegates giving technical assistance to the formulation of National Fisheries Policy of Sri Lanka



04

**Expansion of employment  
opportunities in the  
fisheries sector**



## Expansion of employment opportunities in the fisheries sector

The Ministry of Fisheries & Aquatic Resources Development together with its affiliated institutions has planned to contribute towards the programme of the Government declared in 2015 in generation of one Million employments.

However, new employment opportunities of 2120 for men and 570 for women have been generated as a result of launching of projects which relate to value added products, expedited in the month of September in years 2016 and 2017, notwithstanding the fact that fish resources are in dwindling state in our waters together with the signs of deceleration of the area of employment generation in



Training Programmes conducted with Marine University and CINEC on Advance Technology, Quality control and

marine sector due to our commitment in compliance to the rules & regulations imposed by the European Union. Similarly the Ministry of Fisheries & Aquatic Resources Development has launched plans and projects to generate new employment opportunities of 5530 for fishermen and 6840 for fisherwomen during the period from 2017 to 2020. It was proved that more direct and indirect employments can be

generated by engaging in Fresh water fishing and internal Aqua Culture farming than marine fisheries sector. With the implementation of plans in accordance with NAQDA in September of 2016 and 2017, generation of new employments of 5645 for men and 330 for women was realized. Similarly during the period from 2017 to 2020 it is expected to create another employment opportunities for 18,100 men and 18,910 women.

The programmes which related to Housing and Livelihoods launched through the projects of NAQDA have helped creation of numerous employment opportunities for men and women together with offering aids.



**Table 4.1 Livelihoods projects (as at 30<sup>th</sup> September 2017)**

Livelihoods Housing Project

Name of the Project	District	Expected no. of Beneficiaries	Reserved Allocation	Present State
Improvement of Fresh water related farming	Galle,Matara, Hambantota, Puttlam, Gampaha Colombo, Kalutara, Batticaloa, Jaffna, Trincomalee and Mannar	100	22.5	First installment for 65 beneficiaries has been paid
Attractive landing sites project	Amparai, Anuradhapura, Polonnaruwa, Puttlam, Kurunegala, Ratnapura, Moneragala, Badulla, Trincomalee, Hambantota, Matale, Kilinochchi, Vavuniya, Mullaitivu, Batticaloa	5000	50	Plan for landing site has been prepared. Purchased 30 computers and 30 tabs to establish information system. Bills worth of Rs. 4.7 relating to constructions need to be paid
Modha Fish Farming	Batticaloa, Puttlam, Gampaha	125	37.5	First installment for 141 beneficiaries has been handed over
Sea weed farming	Kilinochchi, Jaffna ,Mannar	100	06	First installment for 19 beneficiaries has been handed over
ornamental fish farming (Small scale)	Gampaha, Colombo,Kautara	100	7.5	First installment for 26 beneficiaries has been handed over
Fresh water farming in muddy ponds of homestead	Galle,Matara,hambantota, Puttlam, Gampaha,Colombo, Kalutara, Batticaloa, Jaffna, Trincomalee, Mannar	125	12.5	First installment for 39 beneficiaries has been handed over
Small Scale Fish Farming amalgamated with agriculture	Galle,Matara,hambantota, Puttlam, Gampaha,Colombo, Kalutara, Batticaloa, Jaffna, Trincomalee, Mannar	125	6	First installment for 20 beneficiaries has been handed over
Improvement of ornamental fish	Gampaha, Colombo,Kautara	100	25	First installment for 20

farming	Hambantota, Puttlam,			beneficiaries and the second installment for 8 beneficiaries has been handed over
Project of crab farming	Hambantota, Puttlam	40	12.5	
Vekkaya fish farming for baits	Puttlam , Mannar	10	20	
Set up of ponds under cluster system in estate sector	Kandy, Nuwaraeliya	400	50	30% of an advance has been provided for 7 estates, Construction works expedited. (Carolina, Wigton, Shanon, Mitshill, Dunsil, Nayapana Strathedon)

Source- Social Development Division- Ministry of Fisheries & Aquatic Resources Development

Similarly, the Department of Fisheries & Aquatic Resources Development has launched similar kinds of numerous employment generation projects in different districts.

**Tables 4.2**

District	Project	No of. Beneficiaries
Mannar	Modha Farming	12
Mannar	Sea weed Farming	10
Batticaloa	Fattening of Crabs	25
Matara	Pen culture relating to fattening of small crabs	14
Galle	Establishment of foot massaging centre by using fish	02
Kalutara	Modha Farming	02
Kalutara	Maldivian fish Production	10
Kalutara	Expanding the method of catching fish by aggregated fish devices	Members of Fisheries Society at Kalutara North

Source- Ministry of Fisheries & Aquatic Resources Development



Providing training and distribution of equipment on dry fish and Maldive fish production (Kaluthara)

In addition, plans are afoot to launch numerous programmes scheduled to commence during the course of this year and expected to be executed by next year with the aim of expansion the area of employments together with the improvement of living standard of fisher community, strengthening of rural economy and improvement of the export trades.

- Construction of an Aqua Culture Development Centre in Polonnaruwa

With the aim of satisfying the fish fingerlings requirement in the reservoirs of Polonnaruwa, 55% of construction work has been completed and expected revenue from the production is Rs. 15 Million.

- Construction of Sea Cucumber breeding Centre in Mannar



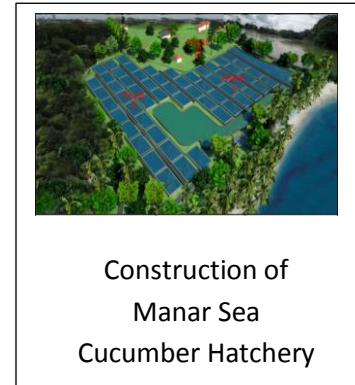
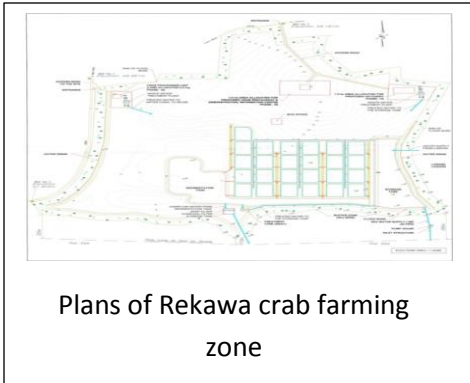
Construction of Mannar Sea Cucumber breeding centre

It is expected to provide necessary sea cucumber requirement through this breeding centre with the aim of promoting Sea cucumber farming in Sri Lanka. The construction is taking place at Oleithuduwa in Mannar and 10% of work has been completed.



- Construction of Crab farming Zones

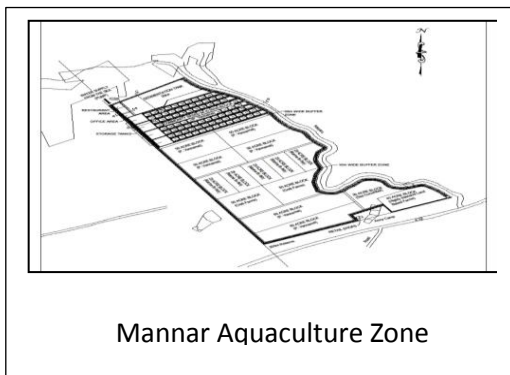
Tender has been called for construction of Crab farming Zones at Rekawa and Galmulla in Hambantota and Mankerni in Batticaloa. Projected volume of production is 435 M.T with creation of 335 jobs opportunities.



- Cultivation of Modha under intensify system

This project is underway conjoining with 20 Norwegian Companies for production of 22000 M.T of Modha ( Sea Bass) in the Districts of Puttlam and Trincomalee with an investment worth of Dollar 133 Million and sum of Dollars135 million of annual foreign exchange is projected.

- Construction of Aqua Culture industrial Park



A land area of 1000 Acres in Manthai-West of Mannar District has been identified with an aim of increasing the volume of Aqua Culture production up to 5550 and thereby creating employments opportunities of 4500.

- Aqua Culture Development centre in Udawalawa

Opened on 27 of August 2016 and projected annual production capacity of fish fingerlings stand at 15 Million.

- Construction of a Prawn breeding ( Fresh Water) centre in Trincomalee

80% of construction has been completed and expected volume of production is 40 Million.

- Sea Fin breeding Centre- Batticaloa

Established on 29<sup>th</sup> of June in 2016 for production of fish & fish eggs.

- Construction of Aqua Culture Development centre in Muruthawela ( Phase 11)

60% of construction work has been completed & expected annual production of fish fingerlings remains at 10 Million.

Similarly, the projects involved with the partnerships of private Sector and foreign investments would lead to expand the avenues of employment opportunities and therefore the Ministry of Fisheries & Aquatic Resources Development took measures to establish a separate unit in year 2017, with the objective of promoting investments within the fisheries sector.

In this context, the Cabinet of Ministers has approved 11 projects inclusive of Expansion of caged fish culture in Trincomalee District, Construction of Boat yard in Welipatanwila, Vannamei Prawan culture ( Penaeue Vannamei) and Deep sea fishing in collaboration with Fisheries Corporation, while 5 projects have been approved with conditions and rejecting 01 due to inconsistency with investment regulation during the period from January to September in year 2017.

Moreover, the National Aquatic Resources Research & Development Agency which has engaged in research activities in search of fishery resources with the foremost objective of expansion of the avenues of employment opportunities while aiming to achieve the desired goals through accelerating exports, sustainable management of resources and increasing income of fisher community, was able to bring the following projects to a practical platform in

2017 and expected to execute with the participation of fisher community during the course of next couple of years.

- Installation of fish aggregating devices in coastal area of the sea to improve the growth of fish resources and thereby enhancing the opportunities of fish harvest of small scale fishers.
- Improvement of the status of breeding centres of Squids with the objective of improving the volume of breeding capacity through uplifting the state of ecosystem of the ocean creatures.
- Feeding practices for Improvement of immunization state of Shrimps
- Fish meal for consumption of Sea Cucumber as an alternative.
- Distribution of filtered breeding system which was identified suitable for high valued exotic ornamental fish, among 40 beneficiaries in Southern province.
- Inculcating sea moss culture among 25 selected beneficiaries in Southern Province.
- The benefits of the caged oyster farming survey have been distributed among 25 families with the participation of women in Kandakuliya, Anawasala and Kalpitiya.

Accordingly, the sectors of marine and fresh water of the Fisheries industry will be able to generate numerous employment opportunities directly and indirectly ensuring enhancement of the living standards of the fisher community along with other segments of the society in next couple of years in line with the envisioned program of generation of employments.





Awarding Canoes and Fishing Gear for Inland Fishes

**05**  
**Minimized Post-Harvest  
Losses**





## Minimized of Post-Harvest Losses

Emphases has been stressed on the issue of gradual mitigation of post-harvest losses with the view of providing qualitative and safety fish for consumption of the masses

In accordance with the research conducted by the NARA reveals that the entire post-harvest loses remain in the range between 40%

and 60%, by year 2017.

This rate remains much higher in marine sector in comparison with Inland fisheries sector which is relatively at a very low state

Post-Harvest Losses result in degradation of the quality and nutritional state of fish together with reduction of monetary value. This situation leads to cause adverse impacts to the income of the fishers and the discarding process of by-catch or non targeted fish causes largest threat to generation cycle of fish population.

### 5.1 Improvement of Ice production

Steps have been taken to increase production volume of Ice with a view to redress the issues relating to mitigation of post-harvest losses and the lack of knowledge among fisher community with regard to natural and human related activities are contributive factors to create this situation.

Table 5.1.1: Ice Production during the period from 2013 to 2017

	2013	2014	2015	2016	2017
No .of Ice Factories	90	90	119	123	125
Volume of Ice Production (on daily basis)	2658	2788	3819	3949	4012

Accordingly, by September 2017, 125 No. of Ice plant centres are available in the country & Daily production capacity remains at 4012 M.T.

## 5.2 Steps taken to minimize post-harvest losses

Following initiatives have been taken to mitigate post-harvest losses by the Ministry of Fisheries & Aquatic Resources Development together with NAQDA in year 2017.

- In order to expand the knowledge on qualitative fish production practices among fisher community, the Ministry of Fisheries & Aquatic Resources Development has conducted 36 programs in different Districts.
- Modernization of 100 vessels equipped with facilities of long lining and RSW by the Ceynor Institute
- Building of 10 Fishing vessel fitted with novel equipment to enable minimizing post-harvest losses by the Ceynor Institute
- Make it mandatory to include relevant requirements to minimize post-harvest losses when designing
- The vessels fitted with necessary equipment to mitigate post-harvest losses will only be issued per mission for fishing.
- To discontinue provision of subsidy for nets and refrain from granting permission to use pieces of gill nets over 25 ft in length for fishing,
- Development of Mirissa fishery harbour to maintain the requisite sanitary standards of fishery harbours in line with green harbour Concept.
- To ensure the qualitative state of Water and Ice
- Mechanization of Fish offloading system
- To arrest fishers engaged in Illegal fishing practices particularly in Dynamiting.
- Distribution of heat exhausts boxes to store fish with ice among 220 beneficiaries of small scale fishers before the end of year 2017 in the district of Jaffna, Tangalle, Kalmunai, Kalutara.
- Promote establishment of Ice factories for production of qualitative Ice.
- Encourage fishermen to purchase fishing vessels over 55 ft of length under the “Dheewara Diriya” Concessionary Loan Scheme.

- Improve the production of value added products of Marine & Fresh water foods. (Products of Maldivian Fish, Smoked Fish, Marinette fish, Fish ball )
- Taking measures to dispatch fish to distant areas as Nuwaraeliya during the period of surplus of fresh water fish harvest, with the coordination of fresh water cooperative Societies.

### 5.3 Researches and Recommendations of Post Harvest Losses

Laying emphasis on the issue of Post harvest losses of multi day fishing vessels, the NARA Institution has conducted a research recently under the instruction of Ministry of Fisheries & Aquatic resources Development. The research revealed that storing of excessive fish, Lack of heat exhaustion facilities, lack of quality of ice, resulted in for post harvest losses. In addition the capacity of the vessel together with the duration of the engagement would lead to aggravate the situation.

The NARA institute has recommended following remedial measures to be adopted by Multi day fishing vessels to prevent this situation.

- Modification of fish holds (37 ft -44 Ft) in existing fishing fleet. Promote installation of mechanical Cold system on board and to make it mandatory.
- To determine the maximum storage capacity of fish with Ice or with water in fish holds according to the weight of fish.
- Make arrangements to off load fish at least 5 days before the expiry date
- No permission is granted to offload fresh fish at the same place where expired fish are offloaded.
- Allow permission for fishers to bring fish as salty fish on vessels which do not have adequate storing facilities, when an extended engagement takes place out at sea as an alternative measure to minimize losses.
- Give due attention to the issues in relation to training of the fishers and criteria in respect of cold room facilities at annual registration of multi day fishing vessels.



- Provision of pure water for the places where fish auction takes place, fish hold of vessels, offloading places and cleansing of fish marketing deck.
- Setting up of a fish silage unit and a washing stand for cleansing of fish transport boxes.

The Ministry of Fisheries & Aquatic Resources Development together with the institutions functioned under its scope have focused their attention to expedite adequate measures to mitigate post harvest losses. Steps are being taken to streamline the process already launched by the Department of Fisheries & Aquatic Resources and other affiliated institutions. Suitable adaptation to the recommendations forwarded, based on researches conducted by the NARA, would help mitigate post harvest losses and ensure sustainability of fish resources and food security by next year.

**06**  
**Fisheries sector related  
Statistics**

<b>3. Annual Fish Production</b>		<b>Unit</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 (Jan-Sep)</b>
3.1	<b>Marine Sector</b>	<b>Mt.</b>	<b>459,300</b>	<b>452,890</b>	<b>456,990</b>	<b>335,750</b>
	Coastal Waters	Mt.	278,850	269,020	274,160	192,620
	Offshore/Deep Sea Waters	Mt.	180,450	183,870	182,830	143,130
3.2	<b>Inland and Aquaculture Sector</b>	<b>Mt.</b>	<b>75,750</b>	<b>67,300</b>	<b>73,930</b>	<b>53,750</b>
	Inland Capture Fisheries	Mt.	68,820	57,060	58,410	42,860
	Aquaculture Fisheries	Mt.	1,780	3,150	9,490	7,140
	Shrimp Farms	Mt.	5,150	7,090	6,030	3,750
3.3	<b>Total Production</b>	<b>Mt.</b>	<b>535,050</b>	<b>520,190</b>	<b>530,920</b>	<b>389,500</b>

<b>4. Contribution to GDP</b>		<b>Unit</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 1st half</b>
4.1	Contribution to GDP <sup>(1)</sup> at Current Market Prices	%	1.6	1.4	1.4	1.4
	a. Marine fishing	%	1.4	1.3	1.3	1.3
	b. Inland fishing	%	0.2	0.1	0.1	0.1
4.2	Contribution to GDP <sup>(1)</sup> at Constant Prices (2010)	%	1.5	1.3	1.3	1.3
	a. Marine fishing	%	1.3	1.2	1.2	1.2
	b. Inland fishing	%	0.2	0.1	0.2	0.1
4.3	Growth Rate of Fisheries Contribution to GDP (at Current Market Prices)	%	4.6	2.5	7.0	6.3
	a. Marine fishing	%	3.1	3.3	8.4	5.8
	b. Inland fishing	%	19.2	(4.6)	(6.5)	14.8



4.4	Growth Rate of Fisheries Contribution to GDP (at Constant Prices-2010)	%	3.1	(2.6)	1.2	5.3
	a. Marine fishing	%	1.9	(1.5)	(0.6)	4.5
	b. Inland fishing	%	13.2	(11.2)	(9.9)	15.1
4.5	Fisheries Contribution to Agriculture at Current Market Prices	%	19.0	18.0	19.0	18.6
4.6	Fisheries Contribution to Agriculture at Constant Prices (2010)	%	19.0	17.0	18.0	18.4

5. Fish supply and consumption		Unit	2014	2015	2016	2017 (Jan - Sep)
5.1	Per capita fish production	Kg/year	25.8	24.8	25.0	18.2
	a. Marine fishing	Kg/year	22.1	21.6	21.6	15.7
	b. Inland fishing	Kg/year	3.6	3.2	3.5	2.5
5.2	Percapita fish consumption	g/day	42.8	43.2	43.4	46.7
5.3	Fish Contribution to Animal Nutrition Intake <sup>(5)</sup>					
	a. Calorie Intake	%	35.2	na	na	na
	b. Protein Intake	%	53.1	na	na	na
	c. Fat Intake	%	22.2	na	na	na

## Fisheries sector related Statistics

### Summary Statistics at a Glance

1 Maritime Zones		Unit	
1.1	Territorial Sea	Nautical Miles	12
1.2	Contagious Zone	Nautical Miles	24
1.3	Exclusive Economic Zone (EEZ)	Nautical Miles	200
1.4	Length of Coastal Shore-line <sup>(1)</sup>	Kilometers	1,585
1.5	Historic Waters	Sq. Km.	21,500
1.6	Continental Shelf	Sq. Km.	30,000
1.7	EEZ	Sq. Km.	517,000

2. Inland & Aquaculture Resources (Potential Area)		Unit			
2.1	Lagoons <sup>(2)</sup> & Estuaries	Hectares	158,000		
2.2	Mangrove Zones, Mud Flats & Salt Marshes	Hectares	71,000		
2.3	Total Extent of Fresh Water Bodies	Hectares	260,000		
	Perennial Reservoirs	Hectares	155,000		
	Seasonal Tanks	Hectares	100,000		
	Villus	Hectares	5,000		
6. Fishing Fleet (Operating Boats)		Unit	2014	2015	2016
6.1	Multy-day Boats (Offshore Vessels) - IMUL	Numbers	4,447	4,218	3,996

6.2	Inboard Single Day Boats - IDAY	Numbers	876	719	786
6.3	Outboard Motor FRP Boats - OFRP	Numbers	23,982	24,028	24,282
6.4	Motorized Traditional Boats - MTRB	Numbers	2,720	1,872	1,839
6.5	Non-motorized Traditional Boats - NTRB	Numbers	21,963	19,501	19,766
	<b>Total Marine Fishing Fleet</b>	Numbers	53,988	50,338	50,669
6.6	Beach Seines (Madel)	Numbers	1,174	1,688	1,913
6.7	Inland Fishing Fleet	Numbers	8,640	8,778	9,661

<b>7. Infrastructure Facilities (Marine sector)**</b>		<b>Unit</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
7.1	Major Fishery Harbours <sup>(3)</sup>	Numbers	20	22*	22*
7.2	Functioning Major Fishery Harbours <sup>(4)</sup>	Numbers	na	21	21
7.3	Proposed Fishery Harbours for upgrading <sup>(5)</sup>	Numbers	7	6	6
7.4	Proposed New Fishery Harbours <sup>(6)</sup>	Numbers	11	8	8
7.5	Anchorage	Numbers	58	58	58
7.6	Minor Fish Landing Centers	Numbers	890	890	890
7.7	Improved Landing Centers	Numbers	61	61	61
7.8	Proposed landing sites for improvement	Numbers	73	73	73
7.9	Active Ice Plants	Numbers	90	104	
7.10	Ice Production Capacity	Mt/day	2,788	3,781	
7.11	Cool Rooms	Numbers	43	81	
7.12	Cool Rooms Capacity	Mt/day	2,112	4,264	
7.13	Boat Manufacturing Yards (Registered)	Numbers	42	39	
7.14	Fishing Gear Factories	Numbers	8	11	



<b>8. Social Information**</b>		<b>Unit</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
8.1	Fisheries Inspector Divisions (Marine)	Numbers	148	148	148
8.2	Marine Fishing Households	Numbers	190,780	190,960	188,690
8.3	Inland Fishing Households	Numbers	46,200	48,900	49,450
8.4	Marine Fishers (Men & women)	Numbers	221,350	221,560	218,830
8.5	Inland Fishers (Men & women)	Numbers	50,790	54,450	54,520
8.6	Marine Fishing Household Population	Numbers	825,120	830,560	827,480
8.7	Inland Fishing Household Population	Numbers	198,660	207,410	210,160
8.8	Direct and Indirect Employments (Marine & Inland)	Numbers	560,000	575,000	580,000
8.9	Fishing and Related Livelihoods	Million	2.6	2.7	2.7
8.10	Fisher Organizations (FO) - Marine	Numbers	925	927	802
8.11	Fisher Organizations (FO) - Inland	Numbers	337	337	287
8.12	No. of Memberships in FO - Marine	Numbers	85,323	86,410	85,208
8.13	No. of Memberships in FO - Inland	Numbers	19,415	19,306	12,155

<b>9. International Trade of Fish and Fishery Products</b>		<b>Unit</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 (Jan-Sep)</b>
9.1	Fish Processing Plants (EU Approved)	Numbers	28	28	28	33
9.2	Fish Processing Plants (Other)	Numbers	9	6	6	19
9.3	Fish Packing Centers	Numbers	na	na	na	16
9.4	Annual Export Earnings	Rs.Mn	34,797	24,716	26,802	28,685
		US\$ (million)	267	182	184	189

9.5	Annual Export Volume	Mt	26,320	17,461	17,593	18,262
9.6	Annual Import Expenditure	Rs.Mn	18,860	30,729	35,172	25,862
		US\$ (million)	145	226	242	170
9.7	Annual Import Volume	Mt	78,712	120,046	115,693	81,731
9.8	Balance of Fish Trade	Rs.Mn	15,937	(6,013)	(8,370)	2,823
		US\$ (million)	122	(44)	(57)	19
9.9	Volume of Tuna Export	Mt	15,375	9,845	8,863	9,825
		Percentage	58.4	56.4	50.4	53.8
9.10	Value of Tuna Export	Rs.Mn.	19,799	13,688	13,611	14,824
		Percentage	56.9	55.4	50.8	57.3
9.11	Total Fish and Fishery Products Export to EU	Mt	8,448	2,065	2,542	4,012
		Percentage	32.1	11.8	14.4	22.0
9.12	Tuna Export to EU	Mt	6,367	1,491	1,739	2,962
		Percentage	41.4	15.1	19.6	30.1
9.13	Contribution to National Exports earnings	Percentage	2.4	1.8	1.8	2.2

<b>10. Spply of Fishery Products</b>		<b>Unit</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 (Jan-Sep)</b>
10.1	Supply of Dried fish	Mt	107,090	90,503	99,698	68,475
	Imported volume	Mt	35,280	33,053	34,978	25,325
	Domestically produced volume	Mt	71,810	57,450	64,720	43,150
10.2	Supply of Canned fish	Mt	21,077	51,098	39,030	33,260
	Imported volume	Mt	19,591	49,016	37,089	30,638
	Domestically produced volume	Mt	1,486	2,082	1,941	2,622
	Domestically produced volume	Millions of cans (425 g)	2.7	4.9	4.6	6.3

source: Statistical Unit, MFARD