



**2017 ප්‍රගති වාර්තාව සහ 2018 ක්‍රියාත්මක සැලැස්ම**  
**PROGRESS REPORT 2017 & ACTION PLAN 2018**  
**விருத்தி அறிக்கை 2017 மற்றும் செயற் திட்டம் 2018**

PROGRESS REPORT 2017 & ACTION PLAN 2018



**මහවැලි සංවර්ධන හා පරිසර අමාත්‍යාංශය**  
**Ministry of Mahaweli Development and Environment**  
**மகாவலி அபிவிருத்தி மற்றும் சுற்றாடல் அமைச்சு**

**PROGRESS REPORT 2017  
AND  
ACTION PLAN 2018**



**MINISTRY OF MAHAWELI DEVELOPMENT  
AND  
ENVIRONMENT**



## **MINISTRY OF MAHAWELI DEVELOPMENT AND ENVIRONMENT**

**HE. THE PRESIDENT MAITHRIPALA SIRISENA**  
Minister of Mahaweli Development and Environment

**Hon. MAHINDA AMARAWEEERA M.P.**  
State Minister of Mahaweli Development

**Hon. ANURADHA JAYARATHNA M.P.**  
Deputy Minister of Mahaweli Development and Environment

### **PRINCIPAL OFFICERS OF THE MINISTRY**

**Mr. ANURA DISSANAYAKE**  
Secretary to the Ministry of Mahaweli Development and Environment

**Mrs. Shantha Wijayarathne**  
State Secretary

**Mr. R A R R Rupasinghe**  
Additional Secretary (Administration)

**Mr. M.G.W.M.W.T.B. Dissanayake**  
Additional Secretary (Environment policy and Planning)

**Mr. M.P.D.U.K. Mapa Pathirana**  
Additional secretary (Environment Projects & Educational Training)

**Mr. W M A P B Wanninayake**  
Additional Secretary (Natural Resources)

**Eng. N A Sisira Kumara**  
Additional Secretary (Water Resources Planning)

**Mrs. C.H. Devendra**  
Additional Secretary (Technical)

**Mr. D Abesooriya**  
Chief Finance Officer



## **Heads of Agencies**

### **Mahaweli Authority of Sri Lanka**

Mr. Gotabhaya Jayatathna - Director General

### **Central Engineering Consultancy Bureau (CECB)**

Eng. G. D.A Piyathilake - Chairman

### **Mahaweli Consultancy Bureau (MCB)**

Dr. Harsha Samaraweera - Chairman

### **Department of Coast Conservation and Coastal Resource Management**

Mr. Prabhath Chandra Keerthi - Director General

### **Central Environmental Authority**

Prof. Lal Marvin Dharmasiri - Chairman  
Mr.P B Hemantha Jayasingha - Director General

### **Marine Environment Protection Authority**

Rear Admiral (Rtd) Rohana Perera RSP, VSV, USP - Chairman  
Dr. P. B. Terney Pradeep Kumara - General Manager

### **National Gem & Jewellery Authority**

Mr.Anura Gunawardhana - Chairman  
Mr.M.L Gammanpila - Director General

### **State Timber Corporation**

Mr. P.Dissanayaka - Chairman  
Mr. K.sirinivasa - General Manager

### **Geological Survey & Mines Bureau**

Dr.D.M.D.O.K.Dissanayake - Chairman  
Dr. W.K.B.N.Prame - Director General

### **Gem & Jewellery Research & Training Institute**

Mr. Nawarathna Bandara Alahakonn - Chairman  
Dr. Prashan Francis - Director General

### **Uma Oya Multipurpose Development Project**

Eng. Dr. Sunil De Silva - Project Director

### **Dam Safety & Water Resources Planning Project (DSWRPP)**

Eng. S. R. K Arruppola - Project Director

### **Moragahakanda & Kaluganga Development Project**

Eng. R. B. Thennakoon - Project Director



## **MAJOR FUNCTIONS OF THE MINISTRY OF MAHAWELI DEVELOPMENT AND ENVIRONMENT**

- *Creating an optimal water management and agricultural development in the Mahaweli Development projects.*
- *Improve the livelihood of the people of Mahaweli settlements by improving irrigation and agricultural practices.*
- *Secure the land ownership of the people of Mahaweli settlements*
- *Conservation and Protection of Mahaweli Water sheds.*
- *Implement and Monitoring of Renewable electricity generation encompassing all tribute canals of the Mahaweli River basin.*
- *Introduction of proper water management system that is resilient to the Climate Change under the Mahaweli Water Security and Investment Programme.*
- *Use the excess water of Mahaweli river basin to increase the livelihood of people who lived in dry areas in Wellawaya in Monaragala District by the multipurpose development project of Uma Oya.*
- *Agricultural and Social development in Walawa scheme centering Walawa River basin.*
- *Identification /analysis of problems in environment and natural resources sector through Stakeholder consultation to enable policy formulation.*
- *Development of environment and natural resources policies, policy dissemination and Ensuring Implementation.*
- *Undertake Strategic Impact Assessment of environment and natural resources related Policies.*
- *Take measures to ensure compliance with international commitments arising out of MEAs for which Sri Lanka is a signatory.*
- *Development of strategies, master plans and action plans to implement the environment and natural resources related policies and execute pilot projects related to sector policy initiatives..*
- *Develop and formalize environment and natural resources sector wide monitoring system. Comply with monitoring requirements, reporting and take remedial actions.*
- *Carry out policy research, analysis and dissemination of results of policy implementation and evaluation to the general public.*
- *Create enabling environment for public and political commitment towards sound Environmental Management.*
- *Create environmental education and awareness at national level in relation to the Environment and natural resources policy reforms and other major environmental Initiatives.*





## Message from the Hon. Minister of Mahaweli Development and Environment

I am pleased to send this message for the “Progress Report 2017 and Action Plan 2018” of the Ministry Of Mahaweli Development and Environment which serves as an advisory document and a guideline to maintain a balance between protecting natural resources and the rapid economic development taking place in Sri Lanka.



At present, we are looking for alternative energy sources to face the challenge of possible shortage of resources in the future due to the imperative requirement to satisfy the needs of increasing population.

The contribution of the parties is a must to achieve the sustainable development goals as well as the new economic development goals through initiatives such as Blue-Green economy.

Already, under the Ministry, various policies, strategies and action plans are being implemented for the conservation of environment and natural resources and for the sustainable development. Through these plans, steps have been taken to minimize environmental hazards such as pollution, deforestation, soil erosion, damages to biodiversity and climate change, which have effects both nationally and internationally.

I believe that we were able to fulfill the responsibilities towards following International Conventions on Environmental Conservation in an appropriate manner through the programmes implemented Island-wide under the “Punarudaya” national programme for environmental conservation (2016-2018). According to the adoption of agreements at the 21 st Conference of the Parties to the UNFCCC(COP21) in Paris under our contribution, strategic policies and plans have been prepared and implemented under 13 main subject fields to prevent globale warming by reducing emissions. Furthermore, I am pleased to inform that the activities undertaken at globally and regional level are at a highly satisfactory level.

Maithripala Sirisena

Minister of Mahaweli Development and Environment



## Message from the Hon. State Minister of Mahaweli Development



Recognizing the releasing of Last Year's Progress Report and the Action Plan of 2018 is a key occasion in the Ministry of Mahaweli Development and Environment, it is my pleasure to include this message as the State Minister of Mahaweli Development in this report of vital importance to the nation.

The role played by the Ministry of Mahaweli Development and Environment, under the direction of His Excellency the President of Sri Lanka, and also for development of people who live in Mahaweli Development areas are excessively commendable. Various Developments projects and programs implemented under this Ministry, including number of development programs fallen under my purview, like Moragahakanda, Uma Oya, and other multi scheme development projects excel an immense service towards the socio economic benefits and wellbeing of people in those areas. In addition to the countless service offered by the Ministry of Mahaweli Development and Environment through various Mahaweli Development projects to the Nation, the progress achieved by the Central Environment Authority by means of agriculture, Livestock development and other services are very imminent. Further, issuing land permits, restoration irrigation systems, and other programs implemented towards the social, cultural and economic welfare of the people are praiseworthy.

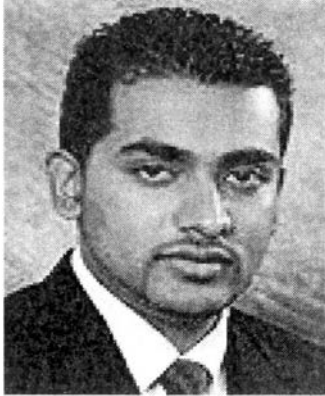
Development Projects like Moragahakanda, Uma Oya, Dam Safety and Water Security Investment etc., implemented by means of the funds offered by the World Bank, Asian Development Bank and the Japan International Cooperation Agency (JICA), with their especial emphasis on the environmental conservation and Protection are greatly admirable, and the benefits those programs exceeded for wellbeing of the people are uncountable.

I take this opportunity to commend the efforts made by His Excellency the President Maithripala Sirisena and his Ministry and the offices and Institutes functioning under it introducing strong Green Economic Initiatives in the country to create a strong economy and a society which is in good spirit.

**Mahinda Amaraweera**  
**Minister of Fisheries and Aquatic Resources**  
**And**  
**State Minister of Mahaweli Development**



## Message from the Hon. Deputy Minister of Mahaweli Development and Environment



Last Year's Progress Report and the Proposed Action plan of 2018, being the most important annual document brought out by the Ministry of Mahaweli Development and Environment, I am privileged to place this message in this report of vital importance to the Nation.

It should be appreciated that all the efforts made by the Ministry of Mahaweli Development and Environment to ensure sustainable use and management of natural resources with a view to ensure conducive environment to all living beings, and also to uplift the living conditions of the human beings

The initiatives taken by the Ministry towards environmental conservation via international treaties and conventions, under the leadership and guidance of His Excellency the President Maithripala Sirisena, was both locally and globally recognized and appraised.

Accordingly, I will take this opportunity to appreciate the contribution made by this Ministry towards sustainable development of the country through environmental conservation and sustainable management programs and the infrastructure development activities under Mahaweli Development programs, and I also wish to express my sincere gratitude to all the employees in the Ministry and the agencies under it for their dedication towards the attainment of the goals set up by the Ministry.

Attorney at Law, Anuradha Jayarathna, M.P.  
Deputy Minister of Mahaweli Development and Environment.



## Message of the Secretary, Ministry of Mahaweli Development and Environment



I am delighted to place a message in the Progress Report 2017 and the Proposed Action plan 2018 related to the Ministry of Mahaweli Development and the agencies under it. This report entails the progress achieved by the Ministry and its agencies together during July 2016 to June 2017 via implementation of programs related to the Environmental Conservation, Mahaweli Development and Multi-scheme Development, and other activities, together with the proposed action plan aimed at year 2018.

The Ministry of Mahaweli Development and Environment, being the sole organization responsible for ensuring environmental conservation in the country, could achieved a satisfactory progress, especially during the year ended June 2017. The Ministry could implement a number of programs encompassing bio-diversity conservation, “Wanaropa” aiming at escalating forest cover, the climate change mitigation, the interventions for terrestrial and marine pollution control, and minimizing the damage caused by mining and quarrying industries; and could achieve a substantial progress in them.

Further, I greatly appreciate uncountable service rendered by the Ministry towards the socio-economic wellbeing of the people living in Mahaweli Development areas, through various Mahaweli Development Programs such as Moragahakanda, Uma Oya, Dam Safety, Mahaweli Water Security, and Multi-Schemes programs.

In addition, the Ministry could accomplish a number of programs during last year, including the updating of National Environmental Policy, coordinating with the line Ministries and the agencies under them to implement “Haritha Lanka” action plan, and also the “Punarudaya-three year-Environmental Conservation program” which has been implemented under the guidance of His Excellency the President.

The responsibility of the Ministry, in relation to the conservation of environment, has not limited only to Sri Lanka, but its commitments penetrate across international boundaries to ensure that global environmental conservation is in right path, being signatory to international treaties and conventions. Accordingly, this report entails briefly the activities implemented by this Ministry during past year, and the Ministry could achieve a satisfactory progress during the period under review.

In particular, the leadership and the guidance provided by His Excellency the President to this Ministry is gratefully acknowledged, and I am also indebted to the Honorable State Minister of Mahaweli Development and Honorable Deputy Minister for their commendable leadership rendered to this Ministry. I also wish to express my sincere thanks to all the employees in the Ministry and the agencies under it for their commitments towards goals of the Ministry that we all achieved together.

Anura Dissanayake  
Secretary  
Ministry of Mahaweli Development and Environment



## ABBREVIATIONS

Air Mac	- Air Resource management Center
BAQ	- Better Air Quality
BCRC	- Basal and Stockholm Convention Regional Center
BDS	- Bio Diversity Secretariat
BES	- Biodiversity and Eco-system Services
CANSA	- Climate Action Network in South Asia
CBO	- Community Based Organizations
CDM	- Clean Development Mechanism
CEA	- Central Environmental Authority
CEB	- Ceylon Electricity Board
CETRAC	- Construction Equipment Training Center
CGTTI	- Ceylon German Technical Training Institute
DNA	- Designated National Authority
FD	- Forest Department
FPIC	- Free Prior Informed Consent
GEF	- Global Environment Facility
GIS	- Geological Information System
GJRTI	- Gem & Jewellery Research and Training Institute
GSMB	- Geological Survey & Mines bureau
HLP	- Haritha Lanka Programme
HCFC	- Hydro Chloro Fluoro Carbon
HPMP	- Hydrochlorofluorocarbon Phaseout Management Plan
IAS	- Invasive Alien Species
IDB	- Industrial Development Board
ITI	- Industrial Technology Institute
IUCN	- International Union for Conservation of Nature
KP	- Kyoto Protocol
LPFN	- Landscapes for People, Food and Nature
MEA	- Multilateral Environment Agreements
MEPA	- Marine Environment Protection Authority
MMDE	- Ministry of Mahaweli Development and Environment
MOU	- Memorandum of Understanding
MLF	- Multilateral Fund Secretariat
NAMA	- Nationally Appropriate Mitigation Actions
NAP	- National Action Programme
NCCAS	- National Climate Change Adaptation Strategy
NCCP	- National Climate Change Policy
NCPC	- National Cleaner Production Center
NCSD	- National Council for Sustainable Development
NECCC	- National Expert Committee on Climate Change Mitigation
NGO	- Non Government Organization
NGRS	- National Green Reporting System
NIE	- National Implementing Entity
NIP	- National implementation Plan
NOU	- National Ozone Unit
NSC	- National Steering Committee
NGRS	- National Green Reporting Systems
ODSs	- Ozone Depleting Substances

OES	- Office Employment Service
OUSL	- Open University of Sri Lanka
PCB	- Poly Chlorinated Biphenyl
PGIAR	- Post Graduate Institute of Archeology
POPs	- Persistent Organic Pollutants
RAC	- Refrigeration and Air Conditioning
ROP	- Registrar of Pesticides
SAICAM	- Strategic Approach to International Chemical Management
SBI	- Subsidiary Bodies for Implementation
SABSTA	- Subsidiary Bodies for Scientific Technologies Advice
SEA	- Sustainable Energy Authority
SLCF	- Sri Lanka Carbon Fund
SLIDA	- Sri Lanka Institute of Development Administration
SLFI	- Sri Lanka Foundation Institute
SLAAS	- Sri Lanka Association for Advancement of Science
SLM	- Sustainable Land Management
TEV	- Total Economic Value
TNA	- Technology Needs Assessment
TOR	- Terms of Reference
TOT	- Train of Trainee Programme
UN	- United Nations
UNCCD	- United Nations Convention to Combat Desertification
UNDP	- United Nations Development Programme
UNEP	- United Nations Environment Programme
UNFCCC	- United Nation Framework Convention on Climate Change
VET	- Vehicle Emission Testing
VTA	- Vocational Training Authority
WFP	- World Food Programme
WHO	- World Health Organization
WLE	- Water Land and Eco Syst



## Content

Introduction	01
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## PART I

### Progress of State and Statutory Institutions in the Ministry of Mahaweli Development and Environment, 2016 / 2017

1	Mahaweli Authority of Sri Lanka.	05
2	Department of Forest Conservation .	15
3	Department of Coast Conservation and Costal Resource Management.	21
4	Central Environment Authority.	30
5	National Gem and Jewellery Authority.	40
6	Gem and Jewellery Research and Training Institution.	47
7	Marine Environment Protection Authority.	53
8	State Timber Cooperation.	61
9	Geological Survey and Mines Bureau.	65
10	Central Engineering Consultancy Bureau.	77
11	Mahaweli Consultancy Bureau.	81

## Part II

### Progress of Multipurpose Development Projects.

1	Moragahakanda – Kaluganga Development Project.	89
2	Uma Oya Multipurpose Development Project.	98
3	Dam Safety and Water Resources Planning Project.	104
4	Mahaweli Water Security Investment Program.	110
5	Ecosystem Conservation and Management Project.	118
6	An addressing Climate Change impact on marginalized communities Living in the Mahaweli river basin of Sri Lanka.	122

## PART III

### Progress of Environment Sector 2016 / 2017

Mission 1	Activities carried out to address the Clean Air – Everywhere.	127
Mission 2	Activities carried out to address the Saving the Fauna and Flora and Ecosystem.	134
Mission 3	Activities carried out to address the Meeting the Challenges of Climate Change.	140
Mission 4	Activities carried out to address the wise use of Coastal Belt and the Sea around.	148
Mission 5	Activities carried out to address the Responsible Use of the Land Resources.	149
Mission 6	Activities carried out to address the doing away with Dumps.	154
Mission 7	Activities carried out to address the water for everyone – water forever.	156
Mission 8	Activities carried out to address the Green Cities for Health and Prosperity.	157
Mission 9	Activities carried out to address the Greening the Industries.	159
Mission 10	Activities carried out to address the Knowledge for Right Choices.	165
11	International Cooperation.	166
12	Legal Division.	168
13	Cabinet Memoranda.	169

## PART IV

2018 Action Plan – Mahaweli Development and Environment.	173 -212
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## **1. Introduction**

Ministry of Mahaweli Development and Environment being the main policy making body in the field of Mahaweli Development and Environment management and Natural Resources present this Report Namely. “Progress Report 2017 and Action Plan 2018” to the Parliament, for budgetary discussion.

This report is organized under four major Section as follows.

Part I of the report details the progress with regard to State and Statutory Institutions fallen under the Ministry of Mahaweli Development and Environment.

Part II of the report provides information on the progress achieved by the Multipurpose Development Project implemented by the Ministry.

The third part of the report consists of the success achieved under the Ten Missions on Environment Management and Conservation carried out by the Ministry of Mahaweli Development and Environment in line with the National Environmental Action Plan (Haritha Lanka).

And, the fourth part includes a summary of Proposed Action Planned to be implemented in 2018.



# **PART I**

## **Progress of State and Statutory Institutions in the Ministry of Mahaweli Development and Environment**



## 1.1. SRI LANKA MAHAWELI AUTHORITY

### 1.1.1 Development Activities carried out in year 2016 and 2017

#### Cumulative Financial Progress

Capital budget (Revised) for the financial year 2016 was amounted to Sri Lankan Rs. Million (SLRM) 2,000 whereas for 2017 is SLRM 1,575.40. In addition, donor funded projects such as Moragahakanda Kaluganga Development Project (OPEC, KUWEIT, CHINA), Dam safety and Water Resources Planning Project (World Bank), Umaoya Multipurpose Development Project (IRAN) and Climate Resilient Improvement Project (World Bank) are being implemented covering Mahaweli development areas. Financial progress for the period is given below.

Description	Budget Provision		Expenditure (June 2016 - June 2017.)
	2016	2017	
<b>Mahaweli Projects</b>	<b>44,621.0</b>	<b>36,518.0</b>	<b>37,598.51</b>
Mahaweli Consolidated Project (CF)	500.0	500.0	396.48
System B Maduru oya RB Development project (CF)	225.0	200.0	186.82
Redemaliyadda Integrated Development Project (CF)	120.0	110.0	97.96
Rambakenoya Integrated Development Project (CF)		115.0	20.96
Welioya Integrated Development Project -System L (CF)	605.0	400.0	543.97
Implementing a mechanism to protect river bank of Mahaweli – Gatambe (CF)	125.0	50.0	32.76
Rehabilitation of Major and Medium Irrigation Schemes including emergency infrastructure rehabilitation works (CF)	200.0	165.0	164.87
Agriculture & Livestock Development Project (CF)		220.0	54.63
Kiuioya Development Project (CF)		50.0	5.51
*Moragahakanda Kaluganga Development Project (FL,RF,FF)	22,500.0	19,950.0	21,376.32
*Dam Safety and Water Resources Planning Project (Mahaweli Portion) (FL,FF)	709.0	1,307.0	1,066.25
*Umaoya Multipurpose Development Project (FF)	19,176.0	13,000.0	13,280.18
**Climate Resilience Improvement Project (Mahaweli Portion) (FL,FF)	461.0	451.0	371.8
Administration and Maintenance (CF)	2,000.0	1,575.4	1,484.97
<b>Total</b>	<b>46,621 .0</b>	<b>38,093.4</b>	<b>39,083.48</b>

\*These projects are being implemented in the Mahaweli development areas and is directly supervised by the Ministry of Mahaweli Development and Environment. At the successful completion, all the projects will be handed over to MASL.

\*\*This project is being implemented directly under the Ministry of Irrigation and Water Resources Management and partially implemented in the Mahaweli areas.

CF – Consolidated Funds. FL – Foreign Loans. RF – Reimbursable Foreign Loans. FF – Foreign Funds

## 1.1.2 Mahaweli Projects

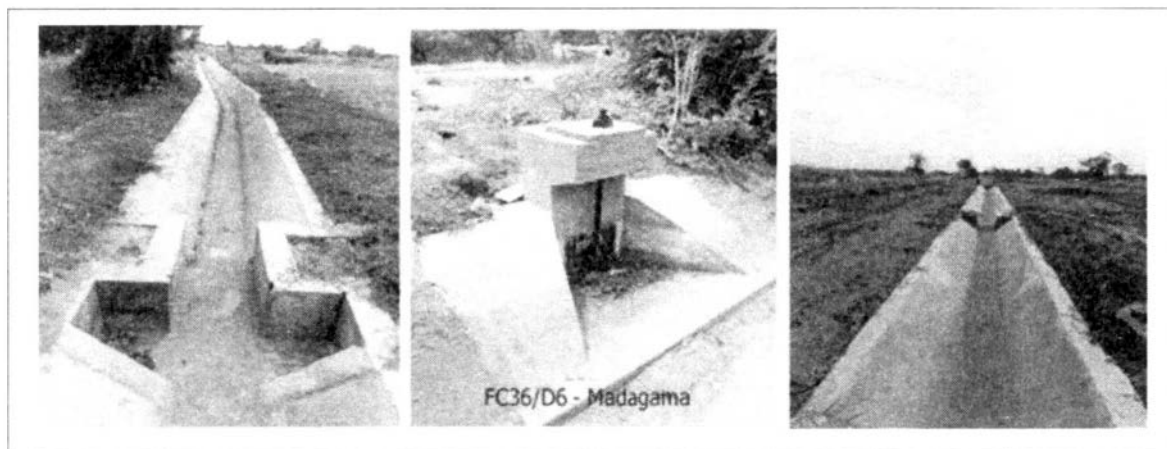
### 1.1.2.1 Mahaweli Consolidated Project

Source of Funds : Domestic Funds  
 Total Estimated Investment : SLRM 4,910 (Revised Budget)  
 Project Period : 2007-2018

Mahaweli Consolidated Project has been commenced with the objective of increasing income levels of rural communities settled in the Maduru Oya Left Bank area assuring irrigation water supply for their agriculture. Project activities include rehabilitation of irrigation network that was built during 1982-1986. (a) Maduru Oya Left Bank for improving water management including 52km of main channels, 65km of branch channels, 459km of distributary channels, 1,138km of field channel, 54km of drainage channels, 80km of operation and maintenance of rural roads, and small tanks (b) Improve selected water supply schemes built under the Village Self-Help Project, (c) Supporting agricultural development and strengthening farmer organizations (d) Implementation of appropriate environmental conservation programmes.

Financial allocation for the 2016 was SLRM 500 and allocation for the 2017 was SLRM 500 out of which SLRM 396.47 has been effectively utilized during 2016 Jun. – 2017 June.

No	Activity	Unit	Physical progress 2016 June. – 2017 June.
01	Construction and Rehabilitation of Field Channels	Km	116.4
02	Construction and Rehabilitation of Distributary Channels	Km	8.8
03	Construction of Drainage Channels	Km	30.1
04	Agriculture Enhansment	Proj.	01



### 1.1.2.2 System B Maduru Oya RB Development Project (Malwenna and Mahawelithanna)

Source of Funds : Domestic Funds  
 Total Estimated Investment : SLRM 935.49  
 Project Period : 2014-2018

The Mahawelithanna and Malwenna Mahaweli system Units are falls within the upper part of the Singhapura Block of the Mahaweli System B covering Polonnaruwa and Batticaloa administrative Districts are being developed under the Project. Due to the internal conflict situation during last few

decades within this area, most of the settlers were internally displaced. As a result, there were approximately 1200 families left for their original native places from the settlement areas.

Once the conflict was being over, resettlement & rehabilitation work of the area has once again commenced under this special project in 2014. It is proposed to develop 859 homesteads and 859 irrigated land plots within the area of Mahawelithanna and Malwenna Units in Singhapura Block. Major activities of the project are, (a) Resettle 859 displaced families in Singhapura block and reestablishment of the settlements (b) Develop 521 ha of existing underutilize lands for irrigated agriculture purpose and 174 ha of homesteads (c) Construction of Mahawelithenna Tank and related irrigation channels.

Financial allocation for the year 2016 was SLRM 225 and allocation for the 2017 was SLRM 200 out of which SLRM 186.82 has been effectively utilized during 2016 Jun. – 2017 June.

No	Activity	Unit	Physical progress 2016 June. – 2017 June.
01	Construction and Rehabilitation Channels (Field / Distributery / Drainage )	Km	15.21
02	Construction of Roads	Km	2.5

### 1.1.2.3 Redeemaliyadda Integrated Development Project

Source of Funds : Domestic Funds

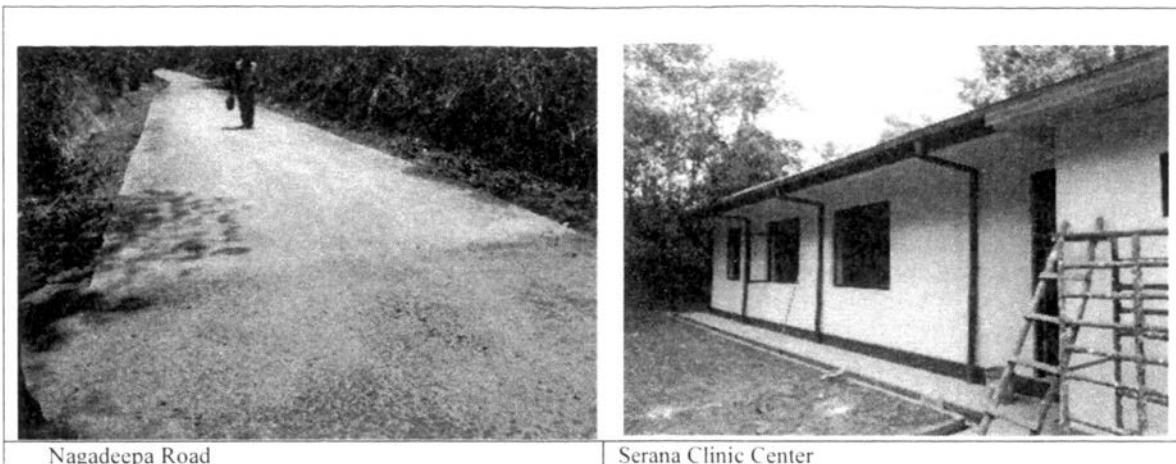
Total Estimated Investment : SLRM 1,100

Project Period : 2012-2018

Redeemaliyadda Divisional Secretary's Division in the Badulla Administrative District has been identified as one of the most remote and poorest DS division's in the country as per the Household Income and Expenditure Survey of the Department and Census and Statistics. Therefore, five-year investment plan has been prepared to development this DS area by the Mahaweli Authority. Main objectives of this project are to develop infrastructure facilities and to open up agriculture based production and sustainable income avenues for the families in the area. Thus this project mainly focuses on (a) Development of commercial crop production (b) Livestock development and (c) Entrepreneurship development.

Allocation for the year 2016 was SLRM 120 and allocation for the 2017 was SLRM 110 and were able to utilized SLRM 97.95 during 2016 Jun. – 2017 June.

No	Activity	Unit	Physical progress 2016 June. – 2017 June.
01	Construction of Roads	Km	9.3
02	Community & Skill development programmes	Prog	60
03	Construction of Agro wells	Nos	38
04	Construction of Latrine	Nos	300
05	Construction of drinking wells	Nos	90
06	Agriculture extension service	Prog	08
07	Construction of clinic center	Nos	01



Nagadeepa Road

Serana Clinic Center

#### 1.1.2.4 Rambakenoya Integrated Development Project

Source of Funds : Domestic Funds  
 Total Estimated Investment : SLRM 1,086  
 Project Period : 2012-2019

Rambaken Oya integrated Development Project is implemented within the Ampara District covering Mahaoya and Padiyathalawa DS Division focusing of reservoir and irrigation development in the area. Main objectives of the project are (a) Rehabilitation of small and medium tanks and anicut (b) Rehabilitation of 70 km of village roads (c) Increased agriculture production of the project area by 50% (d) Provision of Drinking water through construction of wells and (e) Sanitary healthcare improvement programme (Construction of toilets)

Allocation for the year 2017 was SLRM 115 and were able to utilized SLRM 20.96 during 2016 Jun. – 2017 June.

Activity (Major)	Sub Activity	Unit	Physical Target Jan.-June 2017	Physical Progress Jan.-June 2017
Irrigation and Infrastructure Rehabilitation Works	Motor grading of rural roads	Km	40	55
Institutional Development	Participatory sanitary prog	Prog	17	17
	Community Development	Prog	96	62
Business Development	Skill and technology transfer programme	Prog	4	3
Agriculture Enhancement	Agriculture enhancement programme	Prog	15	9
Livestock Development	Animal husbandry development programme	Prog	10	8
Environment	Plant production	Nos	2000	20000

### 1.1.2.5 Welioya Integrated Development Project -System L

Source of Funds : Domestic Funds

Total Estimated Investment : SLRM 3,957

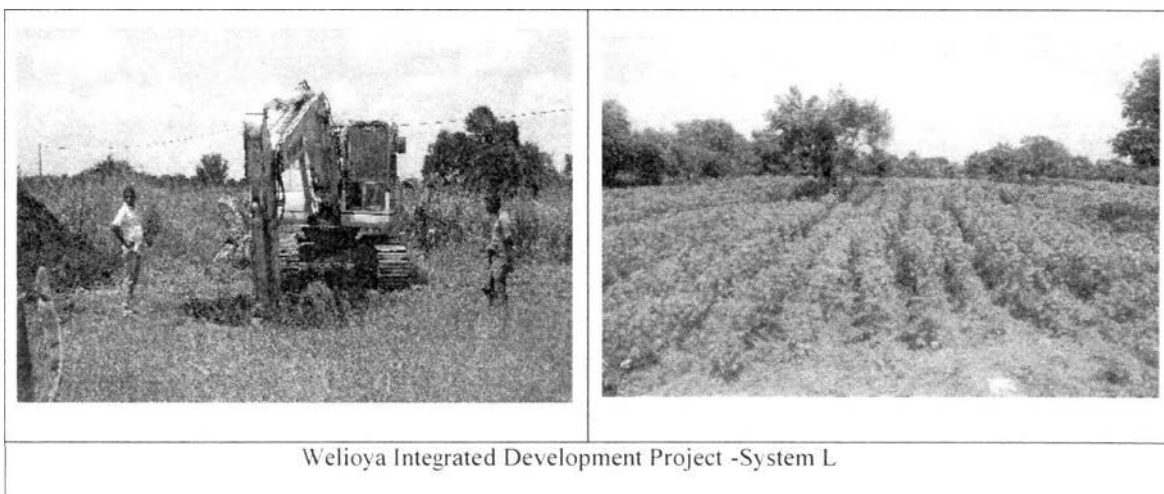
Project Period : 2012-2018

This project is implemented focusing the development in Mahaweli system “L” covering administrative districts of Anuradhapura, Vavunia, Mullative and Tricomalee. This project is aimed to provide homestead, irrigated lands and necessary physical and social economic infrastructure for 6,788 displaced families.

Major project activities are (a) Resettle 6,788 farmer families within 11 villagers (b) Development of 4,187 ha. of agriculture lands (c) Construction and improvement of market and hamlet road network and (d) Improvement of social infrastructure facilities.

Financial allocation for the year 2016 was SLRM 605 and allocation for 2017 was SLRM 400 out of which SLRM 616.51 utilized during 2016 Jun. – 2017 June.

No	Activity	Unit	Physical progress 2016 June. – 2017 June.
01	Jungle clearing and rough leveling	Lots	573
02	Community & Skill development programmes	Prog	45
03	Construction of channels (Field / Distributery )	Km	11.71
04	Construction of Latertrine	Nos	607
05	Construction of Agro wells	Nos	30



### 1.1.2.6 Implementing a mechanism to protect river bank of Mahaweli – Gatambe

Source of Funds : Domestic Funds

Total Estimated Investment : SLRM 698.97 (Revised)

Project Period : 2013-2017

This project has been commenced since 2013 for the construction of 499 m long gabion retaining wall with the height of 15 m along the Mahaweli River Bank beginning from the premises near Department of Animal production and Health up to Mahinda Rajapaksha ICT Center premises in Gatambe, Peradeniya in the Administrative District of Kandy due to severe erosion of the river banks in geological section.

Financial allocation for the year 2016 was SLRM 125 and allocation for 2017 was SLRM 50 of which SLRM 32.76 has been utilized during during 2016 Jun. – 2017 June. No physical progress has been report during the period of January – June 2017 due to the environment issue occurred the project and currently IEE in progress.

No	Activity	Unit	Physical progress 2016 June. – 2017 June.
01	Construction of Gabion wall	m	217

### 1.1.2.7 Rehabilitation of Major and Medium Irrigation Schemes including emergency Infrastructure Rehabilitation Works

Source of Funds : Domestic Funds

Total Estimated Investment : SLRM 825

Project Period : 2015-2018

The project focuses for (a) Repair and maintenance of major head works and reservoirs, (b) Rehabilitation of irrigation infrastructure and (c) Construction and rehabilitation of roads along the irrigation distribution channels in Mahaweli Systems B, C, H, L, Huruluwewa, Udawalawa and EIC units under Head works and Maintenance Division of MASL.

Financial allocation for the year 2016 was SLRM 200 and allocation for 2017 is SLRM 165 of which SLRM 164.87 has been effectively utilized during 2016 Jun. – 2017 June.

### 1.1.2.8 Agriculture & Livestock Development Project

Source of Funds : Domestic Funds

Total Estimated Investment : SLRM 220

Project Period : Annual (01.01.2017 – 31.12.2017)

The project has been initiated to entire enhancement of local food crop cultivation and livestock production which will lead to reduce agricultural imports to the country thus establishing country's food security in line with National Food Production Programme.

Agriculture priorities in 2017 are. Crop diversification, Identification of chili varieties suitable for the Mahaweli L Zone. Programs for producing quality seeds. Rehabilitation programs for fruit trees, increasing use of organic fertilizers. Construction and renovation of agricultural wells in face of drought weather. Programme for domestic economic development and Program to increase water efficiency. Awareness programmes and workshops were held on improved Dairy production, poultry production, inland and ornamental fish production activities were conducted under the livestock development programme.

Financial allocation for the year 2017 was SLRM 220 out of which SLRM 51.20 utilized during January – June 2017

#### ❖ Agricultural Crop Cultivation

Extent of paddy cultivation in Mahaweli areas recorded 56,310 ha with approximately production of 337,861 mt of paddy production were recorded in 2016/2017 Maha season. The average yield in terms of paddy was 5.8 mt/ha in Mahaweli areas. The extent of paddy cultivation in 2017 Yala season were approximately 42,409 ha with approximately production of paddy were recorded as 245,969 Mt. The total paddy production for 2016/2017 Maha and 2017 Yala were approximately 583,830 Metric Tons.

The extent of Other Crop Cultivation (Other Field Crops, Fruits, Vegetables and Perennial crops) were approximately 43,315 ha consist 5,893 ha of Soya Bean, 3,362 ha of Maize, 1,203 ha of Big Onion, 587 ha of Chili, 1,571 ha of Black Gram, 590 ha of Cowpea, 629 ha of Ground Nuts. Further 13,130 ha of Fruits and 6,322 ha of Perennial Crops were also cultivated.

According to the Department of Agriculture data, MASL plays an active role in local agriculture production and development of the country while it accounts to 24% of Paddy, 88% of Soya bean, 92% of Big Onion and 24% of Black gram production during this period.

#### ❖ Dairy Development Programme

Dairy farming is promoted in Mahaweli areas as an additional income generation source and supported to provide high nutrient level among Mahaweli settler community. Livestock Development Division of MASL is responsible for the implementation and monitoring of dairy development programmes in the Mahaweli systems.

It was recorded as 110,830 Cattle population in the Mahaweli areas while produced 14.5 million liters of milk during January – June 2017.

During the period, 32 cattle sheds were built and upgrade while 09 breeding centers were established to upgrade genetic potential of dairy cattle population in the systems., 06 mobile milking machines were distributed for the demonstrate farms and further 4 animal clinics and vaccination programs were held. During this period 07 programmes were conducted about animal husbandry development for the school children and school leavers while conducting 21 training programmes for the dairy farmers.

#### ❖ Inland Fisheries and Ornamental Fish Culture

Inland Fishery Development within Mahaweli reservoirs was a key initiative implemented which helped farmers to increase the income levels and to upgrade the nutrition consumption level among Mahaweli Settlers. 9,100 Metric Tons of inland fish production reported during this period of 2017. In order to improve the fish production, capacity enhanced in 356,000 fish tanks. Further, for the improvement of ornamental fish production 18 mud ponds were constructed and 3 breeding units were established. Furthermore, to strengthen the fishery communities 11 Fisheries Societies were established during January – June 2017.

### 1.1.3 Maintenance and Development

Mahaweli Authority of Sri Lanka responsible for the Operation and Maintenance of approximately 10,925 km. of irrigation channel network, 449 large, medium and minor reservoirs to ensure the efficient irrigation water management and supply for 105,522 ha. of agriculture land area in its 10 Systems for the purpose of agriculture enhancement in line with the country's National Food Production Programme. Maintenance and rehabilitation of road network and other infrastructure facilities in the Mahaweli areas coming directly under the purview of MASL for the benefit of approximately 298,000 families.

Further, effective land management, entrepreneurship development, environment conservation and institutional development and facilitation of cultural and sports development activities in Mahaweli settlement areas for the benefit of current and future generations of Settlers areas also key activities of MASL. The budget allocation for the year 2017 is SLRM 1,575.40 of which SLRM 547.10 (35%) effectively utilized during this period.

#### 1.1.3.1 Irrigation System Maintenance

Secondary growth clearing, de-silting, repairs and improvement of irrigation systems and structures, graveling roads etc. are coming under Mahaweli irrigation systems maintenance tasks. The allocation in the year 2016 was SLRM 337.09 and for the 2017 allocation is SLRM 370.81, of which SLRM 315.61 effectively utilized to perform above activities successfully this period.

1,007 registered farmer organizations are operating in the Mahaweli areas and operation and maintenance of distribution channel network has already been handed over among 10 highly efficient farmer organizations during this period and amounting to total no of 799 farmer organizations up to end of June 2017. Further, upgrading 08 farmer organization up to demonstration level and 36 farmer organizations to the commercial level during this period under the guidance of Institutional development division.

#### **1.1.3.2 Land Alienation**

During this period, land survey and blocking out were carried out in 15,859 new lots and 11 grant awarding programmes were held while issuing 116,938 land grants/permits among the settlers to ensure their land ownership. SLRM 178.43 of lease income has been collected during June 2016 – June 2017.

#### **1.1.3.3 Institutional Development**

Upgrading socio – economic conditions of Mahaweli settlers through providing entrepreneurship opportunities, capacity building, institutional strengthening, women empowerment, social and cultural development were major initiatives implemented as post settlement programme of MASL. Accordingly, Institutional Development Division of MASL has organized series of programmes and workshops covering above subject areas for the betterment of second and third generations of Mahaweli settlers. It was able to conduct 2,595 institutional development programmes, 818 Community development programmes and 83 programmes related to women development during this period.

### **1.1.4 Forest & Environment**

#### **Forest & Environment Conservation**

Environment Division continues to manage and co-ordinate all environmental activities within Mahaweli areas. Assigning priorities for the “Punurudhaya (පුනරුදය)” the three-year action plan under the national environment programme with the Environment Ministry for the implementation of green concepts practically in all Mahaweli areas.

Annual allocation for the forest & environment conservation activities in 2016 SLRM 50 and 2017 was SLRM 61.85 of which SLRM 44.67 utilized during June 2016 – June 2017. During this period under the natural resource conservation for the soil conservation awareness programmes and training programmes were completed in 15 GNDs and establishment of soil conservation structures has started in selected fields. During the period, 918,891 plants were produced under the nursery management and plant production programme while 128 nos of Environmental Education and Awareness programmes were conducted with the participation of school children. To control and manage the intensive alien species programme was in carried out in 08 tanks in Mahaweli areas. For the reduction of human elephant conflict 20.2 km of live fence were constructed.

#### **1.1.4.1 Renewable Energy Production Enhancement (Mini Hydro Power Projects)**

Letters of intents have been issued for the construction of 20 mini hydropower stations in Mahaweli areas with a total capacity of 57.3 MW of hydropower. Environmental approval has been given for 16 projects of which 10 projects have been already commenced for commercial operation up to end of June 2017 with the capacity of 30.1 MW.

#### **1.1.4.2 Business Development**

Renovation of 07 circuit bungalows with modern furniture has already been completed. It is supposed to complete the renovation of 05 circuit bungalows (Digana, Buwalikada, Nochchiyagama, Nuwara Eliya and Rathkinda) at the end of 2017.





### Investments opportunities for Private Sector in Mahaweli Areas

Approvals were granted to 13 new commercial agriculture and other development projects in Mahaweli lands during January - June 2017.

<i>Infrastructure facility</i>	<i>1</i>	<i>Agriculture Projects</i>	<i>1</i>
<i>Tourism Projects (Eco Boat)</i>	<i>3</i>	<i>Industries (Rice / Salt)</i>	<i>2</i>
<i>Renewable Energy Projects</i>			
<i>(Solar / Dendro)</i>	<i>6</i>		

#### 1.1.4.3 Promotion of Small and Medium Scale Enterprises (SME's)

SME programmes organized with the support of Regional Development Bank (RDB) were able to assist 88 entrepreneurs in Mahaweli areas amounting to SLRM 16.02 under the “Mahaweli Saviya (මහවැලි සවිය)” special loan programme. Under the “Mahaweli Diriya (මහවැලි දිරිය)” special loan programme it was able to assist 16 farmer organizations for their business development accounted SLRM 25.8 during June 2016 – June 2017.

### 1.1.5 Facilitate the Convenient Working Environment

#### 1.1.5.1 Human Resource Development / New Recruitments / Staff Promotions

To provide efficient and effective service the authority was able to complete most of its carder recruitments in line with revised SOR.

Number of Vacancies Fulfilled		Promotions	
Senior Management (HM)	01	Senior Management (HM)	01
Middle Management (MM)	86	Middle Management (MM)	86
Junior Management (JM)	12	Junior Management (JM)	12
Management Staff (MA 3, MA 2-2, MA 1-2)	290	Management Staff (MA 3, MA 2-2, MA 1-2)	290
Primary Level (PL)	30	Primary Level (PL)	30
<b>Total</b>	<b>419</b>	<b>Total</b>	<b>419</b>

### 1.1.5.2 Training

To improve the strengthen of the employee while bringing them to the higher level of skills and knowledge several training programmes were conducted under varies subject by the training division of the authority.

<b>Training Programmes Conducted Jan. – June , 2017</b>		
	<b>Programmes</b>	<b>Participants</b>
Senior Management (HM)	01	40
Middle Management (MM)	05	94
Junior Management (JM)	01	40
Management Staff	07	340
<b>Total</b>	<b>14</b>	<b>514</b>

### 1.1.5.3 Legal Enforcement

During January – June 2017. 92 court cases were follow up by the legal division under the guidance of Attorney General Department while the head works division involved in 21 case hearings. 08 legal discussions were conducted to solve some of the pending legal cases of MASL.

### 1.1.5.4. Water Management

The Water Management Secretariat (WMS) ensured the efficient utilization of the water resources of Mahaweli reservoirs. While coordinating with CEB, Water Board, Dept. Irrigation, and Metrology Dept. to meet the countries` Agriculture, Hydro energy, Drinking and water requirements. WMS also provided information and recommendations to the Water Management Panel to assist it in reaching its operational policy decisions.

### Water Storage Capacity of MASL Reservoirs

<b>Reservoirs</b>	<b>Maximum Capacity Level (MCM) 2017</b>
Kothmale	172.9
Polgolla	4.1
Victoria	721.2
Randenigala	861.4
Rantambe	7.0
Bowatenna	23.5
Uda Walawa	278.2
Dambulu Oya	11.7
Kandalama	33.8
Kalawewa	123.7
Ulhitiya/ Rathkinda	145.3
Maduru Oya	596.6
<b>Total</b>	<b>2979.4</b>

## Power Generation Capacity of Mahaweli Reservoirs

Reservoir	Total Capacity (Approximately)  (MCM)	Maximum Power Capacity  (MW)	Power Generation 2016 (GWh)	Power Generation 2017 Jan. – June (GWh)
Kothmale	174	201	280.45	257.69
Polgolla	4	-	-	-
Victoria	722	210	589.37	563.12
Randenigala	860	126	324.15	304.94
Rantambe	7	49	142.80	134.79
Ulhitiya/Rathkinda	146	-	-	-
Maduruoya	596	-	-	-
Bowathanna	23	40	42.39	39.25
Udawalawa	268	6	15.54	15.54
Ukuwela (Power Station Only)		40	158.17	146.62
<b>Total</b>	<b>2,800</b>	<b>672</b>	<b>1,552.87</b>	<b>1,461.94</b>

### 1.1.5.5. Internal Audit

To ensure the effectiveness of the functions of the authority under the Internal Audit division issued 06 audit reports and 13 investigation reports during January – June 2017.

## 1.2 FOREST DEPARTMENT

### 1.2.1 Progress Report - 2016/2017

Forest Department (FD) was established in 1887 under the provisions of the Forest Ordinance with a view to effectively and efficiently manage the forest resources for the benefit of the present and future generations. Functions of the FD has been organized under seven technical divisions viz.

1. Social Forestry and Forestry Extension
2. Forestry Research, Education and Development
3. Silviculture and Forest Management
4. Forest Inventory and Geographic Information System
5. Planning and Monitoring
6. Protection and Law Enforcement
7. Environmental Conservation and Management

#### 1.2.1.1 Social Forestry and Forestry Extension Division

Social Forestry and Forestry Extension Division is responsible for the national level forestry extension and awareness programs development and supervision of all participatory and social forestry programs, planning and production of seedlings for extension programs, preparation of extension and training materials and planning and implementation of pilot level income generation projects for the forest adjacent communities.



Main Activities	Brief Description of Sub Activities	Performance	
		01.07.2016– 31.12.2016	01.01.2017 – 30.06.2017
Production of planting materials	<b><u>Seedling production</u></b>	Maintenance of 500,000 seedlings and use them for tree planting programs.	Production of 400,000 seedlings and use them for tree planting programs.
Education & Extension	<b><u>Forestry extension programs.</u></b>	Conducted 880 forestry extension programs ❖ Published two "Ruk" magazines and 2 News letters	Conducted 164 forestry extension programs
"Punarudaya " National Environmental Conservation Program		<ul style="list-style-type: none"> <li>• 1000,000 seedlings of forest tree species were raised in Forest Department nurseries.</li> <li>• 55,690 seedlings were issued for forestry extension programs and to the public.</li> <li>• 944, 310 seedlings are being maintained in nurseries as at end of June 2017.</li> </ul>	
	<b><u>Maintenance of Farmers' Wood lots (Old)</u></b> Farmers' woodlots that were established in 2014 & 2015 were scientifically managed.	Scientific management of 299.1 ha of Farmers' Woodlots that were established in 2014 and 2015.	Scientific management of 210.4 ha of Farmer's Woodlots that were established in 2015 and 2016.
	<b><u>Home garden development and tree management programs.</u></b> Tree management and home garden development programs were carried out by providing seedlings and technical assistance for households.	Conducted 100 tree management programs and developed 6,215 home gardens.	Conducted 50 tree management programs and identified 5,650 home gardens for development.

*Main Activities Performed by SF & E.*

### 1.2.1.2 Forestry Research, Education and Development

The research and education division of the Forest Department originated as the Silvicultural research unit which denoted the inception of formal forestry research sector in Sri Lanka in 1937. The division is responsible for administration of forestry research and planning and implementation of educational aspects of forestry sector within departmental jurisdiction.

## Research and Development

- ✓ 07 new trials were established and 2 vegetative propagation studies and tissue culture experiments for 5 species were conducted.
- ✓ Maintenance of 198.4 ha of research trials have been done.
- ✓ 16 kg of Eucalypts & 727 kg Teak seeds were collected.
- ✓ 3978 seedlings were raised.

## Sri Lanka Forestry Institute

- ✓ Thirty BOF s were trained under forest certificate course (NVQ 05 equivalent) for year 2016 and 06 one-week short term training courses were conducted.
- ✓ National vocational qualification (NVQ) activities were done at SLFI. Under this, lesson plan development, accreditation of SLFI course, quality management system (QMS), and training on NVQ 6 equal certificate for 159 diploma holders of SLFI were completed.
- ✓ Diploma (NVQ 6 equivalent) course for RFO s in Forest Department and 02 IAS residential workshops were conducted.

## Capacity building

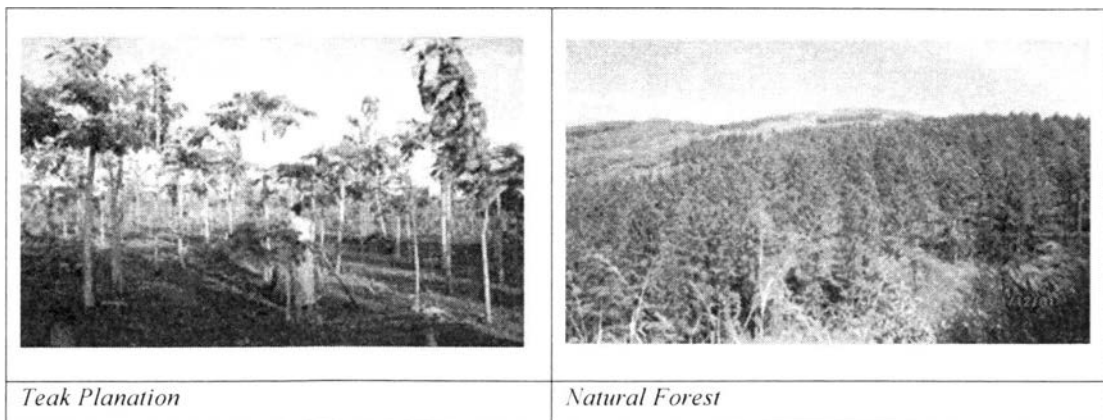
- ✓ 04 national forestry sector research committee meetings were held during 2016/2017 and 32 new research proponents were appraised and permission was granted to carry out research. In addition, extensions were granted for 16 ongoing research projects.
- ✓ One newsletter and Sri Lanka Forester journal were published and 150 books and 7 journals were purchased and IUFRO membership for year 2016 was obtained.
- ✓ Incidental allowance for 47 foreign trained persons was given and 10 locally organized courses were conducted.

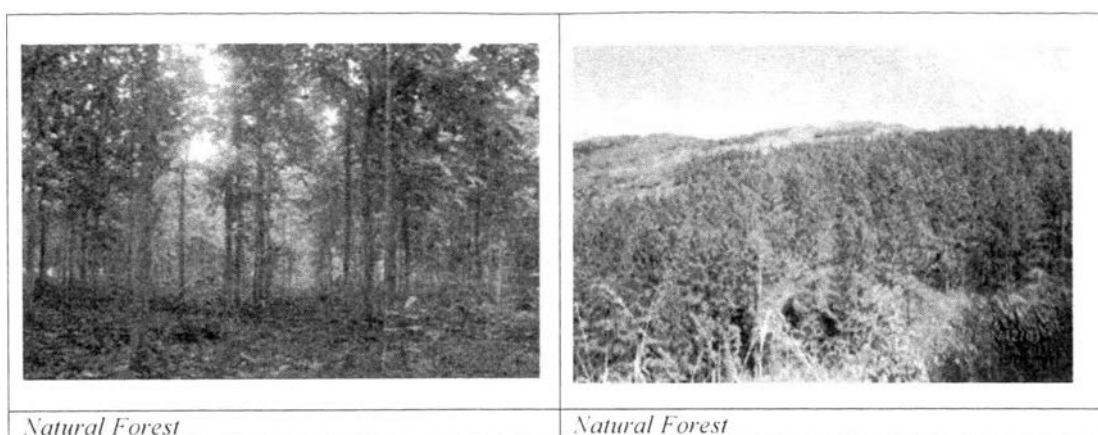
## Biomass energy project

- ✓ Pilot scale fuel wood plantations under FAO funded Biomass Energy Project was done. 50 ha were planted under department lands and 21 ha of community plantations were established

### 1.2.1.3 Silviculture and Forest Management

The Silviculture and Forest Management Division is mainly responsible for management of natural forests and forest plantations in sustainable manner to ensure provisioning of forest products and services. The main tasks of the division include establishment and management of forest plantations and enhancement of forest cover.





Main Activities	Brief description of sub activities	Performance	
		01.07.2016 – 31.12.2016	01.01.2017 – 30.06.2017
<b>Reforestation</b>	Reforestation of clear - felled plantations.	Established 884 ha of plantations in the clear-felled ....	Nursery preparation & rising 156,500 seedlings for planting in 921 ha of clear felled plantations are in program.
	Implementation of Private Sector Reforestation Program		
<b>Silviculture Operations</b>	Young plantation maintenance	613.5,657.3,1012.1 ha of forest plantations established during the years of 2013, 2014 and 2015 were maintained respectively.	884.6,613.5,657.3 ha of forest plantations established during the years of 2014, 2015 and 2016 were maintained respectively.
	Pre-commercial thinning	Young forest plantations of 211 ha less than 10 years old were thinned out.	Young forest plantations of 526.8 ha less than 10 years old, were thinned out.
	Post felling inventory Post felling inventory after pre-commercial and commercial thinning operations in the forest plantations.	395 ha of plantations were inventorized.	280 ha of plantations were inventorized.
	Coppice maintenance	40 ha of Eucalyptus plantations were maintained.	-
	Cleaning	Cleaning Operations in 420.1 ha of forest plantations were carried out.	Cleaning Operations in 107.6 ha of forest plantations were carried out.
<b>Forest cover Enhancement Programme</b>	This includes promotion of natural regeneration (Assisted Natural Regeneration), seed sowing, scattered tree planting and enrichment planting. The removal of disturbing and unwanted vegetation	600 ha of degraded forest lands were restored. The area of 8,741 ha which had been restored in 2015 and 2014 were	The area of 9,341 ha which had been restored in 2016, 2015 and 2014 were maintained. Under this activity, 420ha of

Main Activities	Brief description of sub activities	Performance	
		01.07.2016 – 31.12.2016	01.01.2017 – 30.06.2017
	that hinder the growth of the immature seedlings are creation of favorable conditions for seed germination and natural regeneration were planned. Prevention of occurrence of forest fire, cattle trespassing and protection of forests from other human interventions were these planned activities	maintained. Under this activity, 420ha of forest plantations were maintained.	forest plantations were maintained.
<b>Maintenance of Hilltop Plantations.</b>	Some plantations were established in degraded central highlands for the purpose of catchment area protection.	244.3, 75 and 42.5 ha of forest plantations established in 2013, 2014 and 2015 were maintained.	75 and 42.5 ha of forest plantations established in 2014 and 2015 were maintained.
<b>Conversion of Pine Plantations in to broad leaves plantations</b>	Selection and conversion of mature pine plantations established in the past for this program.	20.4 ha of pine plantations were converted in to broad leave plantations. 27 and 147.2 ha of converted plantations during 2015 and 2014 were maintained.	20.4,27 and 147.2 ha of converted plantations during of 2016, 2015 and 2014 were maintained.
<b>“Punarudaya” National Environmental Conservation Programme</b>		2,000,000 seedlings of forest and native tree species were raised in forest department nurseries. 578,786 seedlings were issued for plantation companies to establish industrial plantations. 1,141,214 seedlings are being maintained in nurseries until the planting season of 2017.	

*Main Activities Performed by S & FM*

### ❖ Forest Inventory & Geographic Information System

Forest Inventory and Geographical Information Systems Division (FI & GIS Division) is mainly bearing the responsibility of supplying the information which is required for protection and management of forest resources of the country. Surveying and mapping, boundary demarcation of forests, inventorying of natural and manmade forests, and managing database of forest plantation, forest cover mapping, preparation of digital maps for other divisions, preparation and checking the land schedules for declaration of forest reserves are the main activities of the division.

Main Activities	Brief Description of Sub Activities	Performance	
		01.07.2016 – 31.12.2016	01.07.2016 – 31.12.2016
Land and land improvement	<b>Enumeration of forest plantations</b>	-	486 ha
Survey and boundary demarcation	<b>Forest boundary conflict resolution meetings</b>	50 meetings	140 meetings
	<b>Forest boundary surveying</b>	70 km	50 km
	<b>Erection of posts</b>	70 km	300 km
	<b>Maintenance of forests boundaries</b>	35 km	1,000 km
	<b>Erection of name boards</b>	-	250

*Main Activities Performed by GIS*

### 1.2.1.4 Planning and Monitoring Division

Planning and Monitoring division is mainly responsible for the preparation of annual plans pertaining to different activities implemented by the Forest Department. Other major activities include, preparation of annual budget, progress monitoring and progress reporting of all the projects handled by the Forest Department, preparation of proposals for new projects, construction and maintenance of buildings and acquisition of furniture, office equipments machinery plants, machineries and equipments. In addition, forest land use matters related to permanent releasing or issuing on temporary basis are conducted including overall handling of vehicle fleet in terms of funding repairing and maintenance.

Main Activities	Performance 2017.06.30-2016.07.01	
	Construction of new buildings island wide.	DFO office – 01 Circuit Bungalow02 - BFO quarters – 24 RFO office - 04 DFO quarters – 02 Nursery building - 01 Circuit Bungalow – 02 RFO quarters - 08
Repairing and maintenance of forest buildings island wide.	DFO office – 05 DFO quarters – 07 RFO office – 25 RFO quarters – 22 BFO quarters – 57 Forester quarters – 03 Nursery – 03 Forest Field Assistant quarters – 02	
Purchase of Plant Machinery equipment	Purchased Plant Machinery equipments for regional offices Purchase water pump, glass cutter and chain saws.	

*Main Activities Performed by P & M*

### 1.2.1.5 Protection and Law Enforcement

The objective of the Protection and Law Enforcement Division is to ensure the provisions of legal protection to forest resources. The valuable natural forests, forest plantations, wildlife and other biodiversity resources, are protected and conserved and there by forests continue to provide environmental services while supplying forest products to the nation. The enforcement of the forest law is carried out by implementing the Forest Ordinance through head office and peripheral offices, forest law amendment where necessary and continues training vat forest offices on forest offences prevention and control.

### 1.2.1.6 Environment Conservation & Management

Main Activities	Performance	
	From 01.07.2016 to 31.12.2016	From 01.01.2017 to 31.07.2017
Environmental Management	5 sites were selected for making the payments of guides and 2 sites were selected payments for labours.	20 guides were selected for paying allowance for their services in 5 eco-tourism sites.
	Supplied consumable items and goods were provided for 15 sites.	Consumable items and goods were provided for 10 buildings.
	33 no of buildings were repaired and maintained.	04 buildings were repaired and maintained.



	2 sites were selected to a boundary maintenance and it was completed	20 km of boundary of Knuckles Conservation forest were completed
Eco tourism	12 nos of new buildings were constructed	8 no of new buildings were constructed
	8 km of new nature trails were established	7 km of new nature trails were established
	62.5 km of new nature trails were maintained	60 km of old nature trails were maintained
	11 no of trainings were completed	8 no of training programs were completed
“Punarudaya” National Environmental Conservation Programme	Construction of Knuckles Information Centre were completed.	Protection of the center ensured.

*Main Activities Performed by EC and M*

### 1.3 Department of Coast Conservation and Coastal Resource Management

#### 1.3.1 Major Activities performed:

**(from July 01, 2016 to June 30, 2017)**

#### Construction of coast protective structures

During the period in 2016, constructions of 2 nos. of 50m long breakwaters at Kappaladiya and 80m long breakwater at Egodaunya. Moratuwa have been completed. In the year 2017, constructions of 80m long breakwaters at Egodaunya, Moratuwa and Mandathive, Jaffna have been completed. Total Cost :Rs. 102,592,371.00

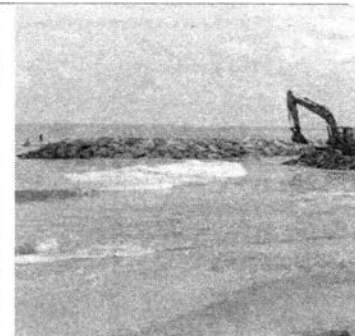
Construction of breakwaters at Kolinjadiya ( 100m & 50m), Mudukatuwa (80m), Marawila – Duwawatta (2 Nos.80m), Marawila (80m), Modarawella (80m), Mandathive (80m) are now being in progress.

Total expenditure up to June, 2017 –Rs.71,236,905.00

Construction of 100m Revetment at Patabadimulla, 140m Revetment at Koggala, 280 m Revetment at Dickwella, 200m Revetment at Dharmanwella have been completed in 2016. Total length of construction is 720m.

Total Cost is Rs. 48,769,412.61

Construction of 250m revetment at Hadiwatta- Habaraduwa is now in progress.



breakwaters at Kolinjadiya 50m.



100m Revetment at Patabadimulla

Gabion Revetments at Induruwa (150m), Matara (100m), Weligama (25m), Matara - Polhena (150m) and Kapparatota (80m) were completed. Total completed length is 505 m.

Total cost is Rs. 22,061,044.63



Gabion Revetments at Induruwa (150m).

Construction of 06 Nos 40m groynes at Thalawila north and 03 Nos of 20 m groynes at Muthupanthiya & 4 Nos of 45m groynes at Ambakandawila have been completed in 2016.

Construction of 02 Nos of 50m groynes at Kappaladiya has been completed in 2017.

Total Cost is Rs. 32,775,106.00

02 Nos. of 40m groynes at Kalutara, 40 m groyne series at Thalawila North, 20m groyne series at Muthupanthiya are now in progress.

Total expenditure up to June, 2017: Rs. 48,988,458.00



Groyne at Thalawila North

Constructions of Weligama Beach Park - Stage 3 & Wellamadama Beach Park have been completed

Total Cost is Rs. 45,775,346.00

Constructions of Weligama Beach Park - Stage 2 & 1200m Walkway at Akurala are in progress.

Total expenditure up to June, 2017: Rs. 37,910,264.00



Walkway at Akurala

Total expenses during the period under this program was Rs. 410,078,909.00

### **Emergency coastal protections**

Coast Conservation & Coastal resource Management Department handle with emergency coastal protection in coastal stretches where high erosion occur due to sudden change of weather condition with losing few meters of land.

Coastal stretches at Marawila-Thalawila, Muthupanthiya, Naguleliya, Illanthandiya, Patabandimulla, Paraliya, Hikkaduwa, Ambakandawila, Habaraduwa, Tangalle, Muthupanthiya south and Thalawila North were protected under emergency situation and sand bar removal at Nilwala river mouth. Unawatuna and Madu ganga out let were also been carried out in 2016.

Total Cost is Rs. 23,049,640.00

In 2017, coastal stretches at Illanthadiya, Muthupanthiya, Barudalpola & Norochcholai emergency work are in progress

Total expenditure up to June, 2017: Rs. 6,858,869.25



coastal stretches at Illanthadiya



coastal stretches at Alankuda

*Total expenses during the period under this program is Rs. 29,908,510.00*

#### **Maintenance of Coastal Protective Structures**

Conditions of existing coastal protective structures are being monitored and rehabilitation and necessary improvements are being carried out by the department.

Maintenance of 1km Revetment at Akurala, 860m revetment at Beruwala and 80m groyne at Bandaramulla have been completed in 2016. Total maintenance revetment length 1860m.

Total Cost is Rs. 25,316,988.00

In 2017, maintenance of gabion wall at Madilla has been completed. Repair work of 5 Nos. of groynes at Kalutara, 400m revetment at Marawila & a groyne at Mahamodara are in progress.







Maintenance of 1km Revetment at Akurala.




*Total expenses during the period under this programme is Rs. 25,316,988.00*

#### **Sand nourishment as soft solution for coastal protection.**

As per coastal engineering concept beach nourishment by offshore sand is considered as the best environmental friendly solution for the coastal erosion. When it is considered priorities related to economical activities such as fisheries, tourism, ports, power generation, other infrastructure developments and land values at the coastal zone in Sri Lanka, expenses for the sand nourishment (at one time or repeated nourishments) is feasible to compare the values of protecting lands and properties.

<p>According to the cabinet decision, sand nourishment at Marawila beach has been completed in two stages with 800.000 m<sup>3</sup> of offshore sand.</p>	
<p><i>Total expenses during the period under this programme is <u>Rs. 692,401,454.49</u></i></p>	
<p><b>Coastal Engineering Investigations</b></p> <p>Main objective of this programme is to initiate solutions where coastal problems take place. Relevant studies and investigations, specially for coastal structural designs of coastal engineering projects and coastal protective schemes, monitoring programs for environmental pollution control in sea water and sea connected inland water bodies, updating of coastal data and web are the major activities under this programme. in addition, programmes and workshops for refreshing, sharing knowledge and experience in coastal engineering are also conducted under this programme.</p>	
<p><b>Coastal Engineering Investigations</b></p> <p>Bathymetric survey at Koggala coastal stretch &amp; sand sampling in east coast were completed in 2016.</p> <p>Sediment transport study in East coast consultancy work awarded.</p> <p>Total expenses was Rs. 3,632,677.51</p>	
<p><b>Coastal Designs In 2016,</b></p> <p>Coast protective designs for 2 coastal protective schemes at Koggala and Mandathive were completed.</p> <p>Shoreline investigations for Coastal Risk assessment project for East coast was carried out.</p> <p>Sri Lanka Environmental Sensitivity Index research project (phase II ) completed.</p> <p><u>In 2017,</u></p> <p>Marawila - Thalavila , Duwawatta, Muthupanthiya, Kappaladi, Mandathive, Hadiwatta, Alankaduwa &amp; Kalido coast of 8 coastal protective designs were completed.</p> <p>Department web site was updated in 2016.</p> <p><i>Total expenses was <u>Rs. 2,080,441.55</u></i></p>	
<p><b>Coastal water quality monitoring program</b></p> <p>Water quality monitoring were being conducted at 06 locations at Mount Lavinia, Nilaweli, Arugambay, Polhena, Unawatuna and Hikkaduwa</p>	

<p>coastal stretches till March 2017. Technical evaluation for this programme is now in progress.</p> <p><i>Total expenses was Rs. 930,150.73</i></p>	<p>water quality monitoring program</p>
<p>Coastal Engineering Symposium -2016 was held at Marawila in 16 December, 2016.</p> <p>A guest lecture on “Coastal Engineering Application” was conducted with the collaboration of University of East London.</p> <p>Global Positioning System training programme for Engineers. staff officers was completed at Survey Department, Diyatalawa.</p> <p><i>Total expenses was Rs. 566,435.00</i></p>	
<p><i>Total expenses during the period under this program is Rs. 7,209,704.79</i></p>	
<p><b>Coastal Zone Management Program</b></p> <p>Increasing the economic value of the coastal zone rapidly, demand for development activates in this zone are also being rapidly increasing. As a result of that. Environmental pollution. habitat degradation etc. are under threat. Coastal zone management program is implemented annually to balance the environment and the development activities within the zone.</p> <p>Implementation of green coastal belt, beach access program, demolition of unauthorised structures, permit procedure with environmental impact assessment procedure, identification of conservation and affected areas and identification of special management areas are being carried out under this programme.</p>	
<p><b>Implementation of Coastal Green Belt</b></p> <p>3.8 km green coastal belt has been implemented by planting coconut, phynus, mangrove in Hambantota/ Tangalle, Matara, Galle/ Hikkaduwa, Puttalam, Jaffna &amp; Ampara districts in 2016.</p> <p>In 2017, 3Km coastal stretch covered in Hambabtota/ Kirinda, Matara/ Dickwella. In addition, maintenance work of completed projects was done.</p> <p>(Total expenses were Rs. 564,002.00)</p>	

<p><b>Implementation of Beach Access</b></p> <p>435m beach access &amp; 2 culverts were constructed in Kalpitiya, Puttalam District. Initial investigation and identification of beach access roads were done in 2016.</p> <p>Field survey of identification of beach access in Hambantota has been completed &amp; Galle district has been started in June, 2017.</p> <p>Total expenses were Rs. 937,455.00</p>	 <p>435m beach access &amp; 2 culverts - Kalpitiya</p>
<p><b>Demolition of unauthorized Structures</b></p> <p>Implementation of this program is difficult due to social factors.</p> <p>184 demolition orders issued for unauthorised constructions. 7 permanent &amp; temporary unauthorised structures in Kalutara and Trincomalee districts were demolished in 2016.</p> <p>115 demolition orders issued. 20 unauthorized structures were Demolished in Matara, Hambantota in 2017.</p> <p>Expenses under this program was Rs. 409,334.00</p>	  <p>Unauthorized structures Demolished in Matara</p>
<p><b>Permit Procedure</b></p> <p>1324 permits had been issued for development projects in coastal zone. 9 Environmental Impact Assessment (EIA/IEE) has been completed in 2016.</p> <p>546 nos. of permits &amp; 2 IEE permit issued and demarcation of coastal setback in Galle district are in progress.</p> <p>Expenses under this programme was Rs. 1,477,849.35</p>	<p>Unauthorized structures Demolished in Matara</p>
<p><i>Total expenses during the period under this program is Rs. 3,388,640.35</i></p>	
<p><b>Environmental Education Program</b></p> <p>Main aim of this programme is to improve the awareness of the coastal zone management and its regulations to the stakeholders such as school children, government officers and public in the coastal zone in Sri Lanka. In addition to that, education programmes about coastal zone management are conducted in countrywide schools of Sri Lanka.</p>	

5000 nos. of booklets about corals & mangroves were printed. And awareness programme conducted for police officers & school children. Participated for “Sri Lanka next” exhibition in 2016.

Art and debate competitions among school children in Negambo & Southern province and 03 beach cleaning programs with participation of beach users were being held during 1st week of June in Cilaw , Kalutara targeting World Environmental day.

5 awareness programmes conducted for government officers, school teachers & children in Puttalam, Kinnaya, Kalutara, Ambalantota & Wattala. Public awareness boards were installed in Rakawa & Negambo in 2017.

*Total expenses under this programme was Rs. 1,677,206.75*



### **Participatory Coastal Zone Restoration and Sustainable Management in the Eastern Province**

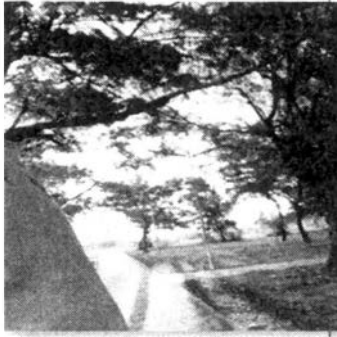
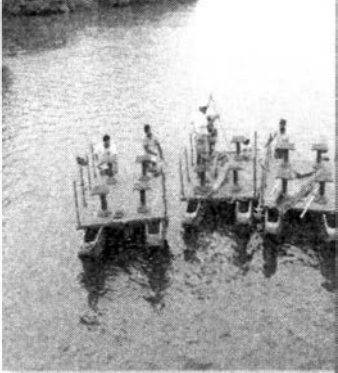

The donor agency of this project is Global Environmental Fund (GEF) and International Fund for Agriculture Development (IFAD). Project started in 2009 and Project Management Unit (PMU) is established at Coast Conservation & Coastal Resource Management Department aim of this project is to restore globally important ecosystem affected by Tsunami disaster in 2004. Considering the high vulnerability due to Tsunami project implementation was done in the eastern province. To achieve the goal, project activities were done in five theme, ecosystem restoration, conservation & management, climate change adaptation & disaster risk reduction, livelihood & ecotourism development and awareness, education & community coordination.

in addition preparation of CZ& CRM plan and capacity development of staff was also done by this project.

#### **Ecosystem Restoration**

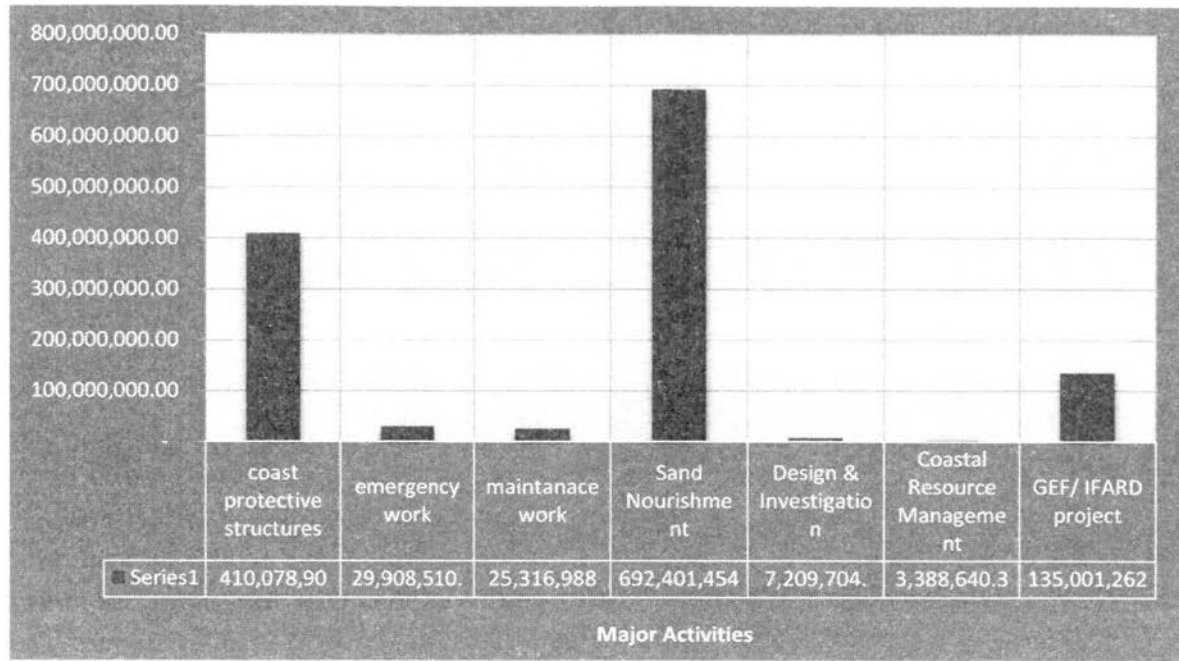
- Maintenance and improvement of existing Mangrove Learning Center in Nasivanthivu was completed
- Establishment of household level bio-gas units Batticaloa
- Improvement of Kallady Beach Park and planting trees
- Erection of demarcation pillars in Erakkandy lagoon
- Best practices on Solid waste management have developed by providing necessary equipment's to UC kinniya and Capacity building of the staff.
- District level environmental coordinating mechanism has strengthened.
- Community members engaged in Eco-tourism activities in eastern province were educated with English language
- Sand dune barrier wall in Manmalai was extended
- Fisheries sales huts at Panichchankerny were constructed for women headed families



<ul style="list-style-type: none"> <li>• Pigeon Island research &amp; information Centre with facilities are now being constructed.</li> <li>• Plans/reports of researches done by the project were printed &amp; disseminated.</li> <li>• Bathymetric survey was done to provide data to CC&amp;CRMD for preparation of Coastal Risk Profiles in Eastern Province</li> </ul>	 <p>Mangrove Learning Center in Nasivanthivu Improvement of Kallady Beach Park</p>
<p><b>Climate Change Adaptation</b></p> <ol style="list-style-type: none"> <li>1. Beach access road in Panama was constructed.</li> <li>2. Maintenance work was done in established forest plantation in Pottuvil, Komari &amp; sand dune area in Panama</li> <li>3. An eco-tourism video Documentary for the Ampara SAM area was produced in compliance with the overall project goals and objectives.</li> <li>4. Eco Restoration, Adaptation and Information Unit was established in all District Secretariats.</li> <li>5. Economically important plant species like coconut &amp; fruit plants were planted in Ampara Special Management area</li> <li>6. Continuation of Livelihood support program at vakarai.</li> <li>7. Boat safari site was improved by providing boats &amp; safety equipments, infrastructure facilities and landscaping.</li> <li>8. Local fishermen were encouraged by introducing crop production as an alternative income through construction of Agro-wells.</li> <li>9. Maintenance work of established green belt was completed in Kallady, Palchenai and Salliivu</li> <li>10. Compost yard with necessary equipment was handed it over to Kuchchveli Pradashiya Saba.</li> </ol>	<p>Boat safari site</p>   <p>Compost yard</p>
<p><b>National Coastal Zone and Coastal Resource Management Plan (NCZ&amp;CRMP)</b></p> <p>public consultations was completed and reviewed for Draft report of NCZ&amp;CRMP-2017. Preparation of NCZ&amp;CRMP-2017 to foreword to cabinet approval has been completed</p>	
<p><i>Total expenses under this programme was Rs. 135,001,262.23</i></p>	



Financial performance of Major activities during the period of July 01, 2016 to June30, 2017



## **1.4 Central Environment Authority**

### **Progress Reporting from July 2016 to June 2017**

#### **1.4.1 ENVIRONMENTAL MANAGEMENT AND ASSESMENT**

##### **❖ Implementation of EIA/IEE Procedure**

As a regulatory function of CEA, Environmental Impact Assessment (EIA) is carried out for all prescribed projects with the intention of mitigating the adverse environmental impact of the projects. To enforcement the EIA/IEE procedures, EIA/IEE regulations are to be amended with new provisions for monitoring activities including a submission of an Environmental Management Plan (EMP) by the Project Proponent. The list of prescribed projects and the list of Project Approving Agencies have also been taken action to revise incorporating the concerns of stakeholder agencies and provincial officers of the CEA.

During the reporting period, two training programmes on Important Aspects relevant to Mining Sector in relation to the EIA and Waste Water Treatment & Safe Disposal were conducted to enhance the CEA officials' knowledge on implement the EIA/IEE procedure.

During the reporting period EIA approvals have been granted for 11 Projects and IEE approvals have been granted for 249 projects by CEA.

##### **❖ Implementation of Strategic Environmental Assessment**

Strategic Environmental Assessment (SEA) is the systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or programme and its alternatives. Although the emphasis is on examining environmental impacts, most SEAs may also identify significant economic and social impacts. In short, its purpose is to promote integrated decision making.

CEA in collaboration with the Western Region Megapolis Planning project initiated action to carry out a SEA for the Western Region Megapolis Plan. CEA assisted in drafting the ToR for this study. The SEA was conducted by a team of consultants and EIA Unit submitted comments / observations on draft report after reviewing. Apart from that, SEA for Water Resources Management & Development Plan was initiated with the collaboration of Ministry of Irrigation & Water Resources Management.

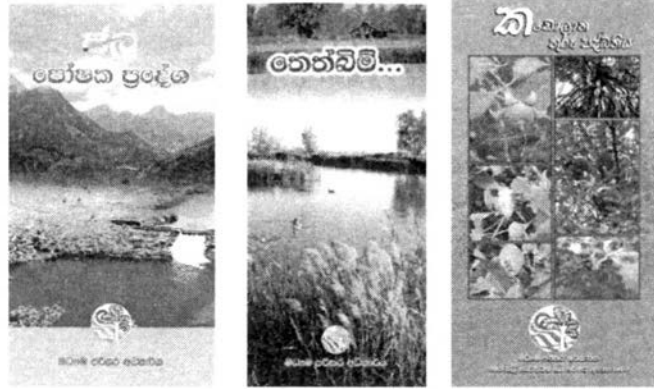
##### **❖ Natural Resource Management**

The CEA holds the responsibility of management of country's natural resources, in coordination with other relevant state agencies and the public.

Following activities were carried out during the reporting period.

##### **❖ Information booklets, leaflets and guidelines on Natural Resources Management.**

Three leaflets on conservation of mangroves, catchment areas, and wetlands were prepared, for use of general public, school community, stakeholder agencies with the purpose of enhancing their knowledge on conservation and management of natural resources.



❖ **Water sources protection in Horana and Ingiriya**

Preparation of a conservation and management plan for identified streams, reservoirs and the immediate catchments in Ingiriya Divisional Secretariat areas was completed with the support of Ingiriya Divisional Secretariat office.

❖ **Catchment protection in Badulla district**

Under this program, catchment areas situated within the Haliela Divisional Secretariat Division elected to be declared as environmental protection areas. Boundaries of these areas were mapped with the GPS points with technical assistance of the Land Use Policy Planning Department and final draft of the gazette notification prepared.

❖ **Conservation of Waterfalls in Sri Lanka**

Policy decision was taken not to grant approvals for mini hydro power generation projects on waterfall considering the direct and indirect threats and impacts on waterfalls in year 2011. A list of waterfalls was prepared including 547 waterfalls by the survey carried out through the service of Divisional Environmental Officers (DEOs) of CEA. It is planned to select the waterfalls which need conservation from the list and declare them by Gazette Notifications.

❖ **Declaration and Management of Environmental Protection Areas**

CEA operated with a wider view of protecting areas with unique ecosystems and environmentally sensitive areas with fragile ecosystems scattered throughout the country with no protection. CEA takes the initiative to declare such areas as Environmental protected under the provisions 24 C and 24 D of the NEA. Having declared them protected, CEA was responsible for planning and development within such areas.

During the reporting period, 06 declared EPAs were monitored and gazettes were drafted for Pansaltanna, Warathenna-Hakkinda, Kebithigollawa water spring & Gonumayiwa water bubble, Korakulam and Ginoya that to be declared as EPAs.

**World Wetland Day Celebration**

World Wetlands Day of 2017 was commemorated on 2<sup>nd</sup> of February 2017 at the Water's Edge Premises on the theme of "WETLANDS FOR DISASTER RISK REDUCTION".

Department of Wildlife Conservation was the focal point of this event in this year. They organized an island wide poster competition by among school children and Nandikadal – Nayaru lagoon was declared as a nature reserve under the provision FFPO.

Moreover, a video competition was held participating school children and adults. A puzzle competition based on wetlands was carried out through WIJAYA children news paper.



❖ **The Kelani River Basin Conservation Project**

Through identification of a need of focusing attention on the protection of Kelani River basin through a multi stakeholder approach, the CEA in association with the Ministry of Mahaweli Development & Environment and the United Nation Development Programme (UNDP) commenced a Kelani River Basin Management project.

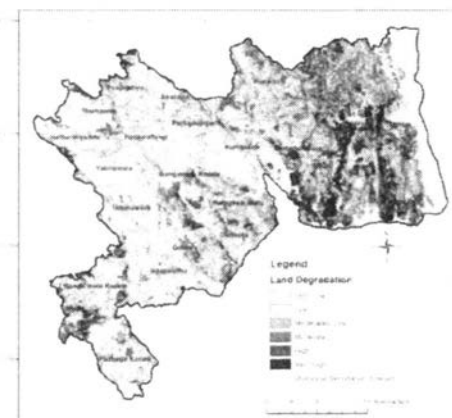
During the reporting period, A leaflet on protection of Kelani River was prepared and 2000 copies were printed for making aware the public on importance of the Kelani River Basin. Two school awareness programmes were conducted in association with the water board

❖ **Granting Environmental Clearance for Non IEE Projects**

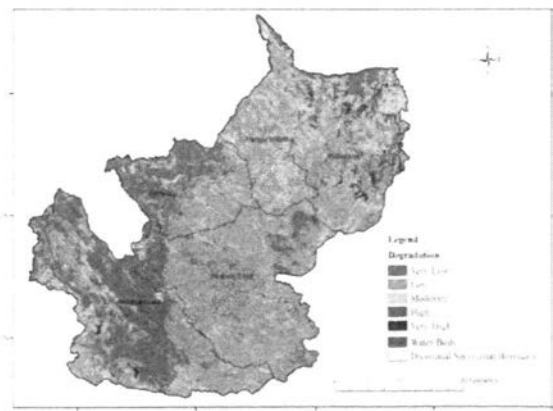
CEA continues granting approvals for development projects, which are classified as none IEE projects that have some impact on Natural Resources. This includes projects such as tree felling, establishment of telecommunication towers, mining (sand, gem, quarts etc.) blocking out of lands, land filing and earth excavation, reclamation of paddy lands and small-scale hotels. Total of 5298 such projects were granted recommendations by the provincial officers of CEA in consultation with the Head Office.

❖ **Identification of Degraded Lands in Kandy District Using Remote Sensing and GIS Technologies**

Degraded lands in the Nuwara-eliya and Kandy Districts have been identified using field sampling and remotes sensing techniques. Landsat OLI satellite images were used to calculate degraded land areas in each divisional secretariat divisions of both districts.



Degraded lands in Kandy



Degraded lands in Nuwara-eliya Districts

### ❖ **Building up of a Trans-Disciplinary Research Team**

Trans-Disciplinary Research Team was formed from the officers of the CEA. A workshop was conducted to improve writing and proposal formulation skills of the research team.

### ❖ **Development of GIS Based Environmental Information System**

This is a central environmental database of the country and assists in environmental planning, and management, monitoring, analysis, identification of suitable sites for development projects, preparation of disaster preparedness plans and awareness activities in Sri Lanka.

### ❖ **Preparation & Printing of Digital District Resources Profile CDs**

R&D unit of the CEA is maintaining and updating a centralized spatial data base on natural resources, administrative boundaries, socio economic, demographic, archaeological data and other information. Digital District Resources Profiles were produced by using existing data base for easy reference. Accordingly, maps in the CD have been developed at the level of Divisional Secretariat. The district resource profiles of Kandy, Jaffna and Ratnapura districts prepared and being copied to CDs.

## 1.4.2 ENVIRONMENTAL POLLUTION CONTROL

### ❖ **Implementation of Environmental Protection License (EPL) Scheme**

CEA implemented EPL scheme for prescribed activities as per the Gazette Notification No: 1533/16 published on 25.01.2008. All prescribed activities are divided into three lists in the gazette according to their magnitude of the pollution to the environment. Part "A" of the list consist higher level polluting activities, part "B" consists medium level polluting activities and part "C" consists of low level polluting activities. Implementation of the EPL process for A and B category industries are conducted by the Provincial Offices of the CEA and the list C has been delegated to the Local Authorities for implementation.

EPLs were issued during the period as of 01/07/2016 to 30/06/2017 is illustrated in the following table.

	<b>"A" Category EPL issued</b>	<b>"B" Category EPL issued</b>
<b>Fresh</b>	1034	858
<b>Renewal</b>	5,906	1568

### ❖ **Granting Environmental Recommendations to New Industries**

The CEA continued issuing the site recommendations and it is a tool available with us to prevent pollution before establishing new Industries. The number of Industries applied for such environmental recommendations and the performance for the period are given in the table below:

<b>No. Application received</b>	<b>Recommended</b>
2,163	1,348

### ❖ **Concurrences Granted to the BOI Projects**

The Board of Investment (BOI) grants EPL and site clearance to the prescribe activities with the concurrence of the Central Environmental Authority.

For the reporting period, CEA has granted concurrence to 303 Industrial sites under the purview of the BOI these accounted 152 new industrial sites, 27 New EPLs and 124 EPL renewals.

### ❖ **National Green Awards Programme**

"National Green Awards", the only award scheme implemented by the CEA on environmental concerns, was initiated with a view to recognize the public and private sector organizations which are functioning in an environmentally sustainable manner. The Green Award Scheme has been creating an

open forum among the different industrial sectors to apply the best practical options in the pollution abatement and greening the environment in Sri Lanka. This program has been embarked successfully for 2016 at the BMICH with the patronage of HE the President of Sri Lanka. At this program, 12 Presidential Environmental Awards, 03 "Harithabhimani" Awards, 03 Gold Awards, 13 Silver Awards, 16 Bronze Awards and 18 Merit Awards were awarded for the performance of categories under this programme.

#### ❖ **Chemical Accident Prevention and Preparedness Programme**

Most chemical disasters or accidents could be avoided if correct precautionary measures are taken at appropriate time with continuous monitoring. Under the international norms a programme was initiated by the UNEP and the programme was named as Chemical Accident Prevention and Preparedness programme.

During the reporting period, following awareness meeting were conducted.

1. Work shop held for Management & other relevant staff of Multilac Paint Industry.
2. Work shop held for Chemical accident prevention and preparedness Multilac Paint Industry.
3. Three Workshops conducted for CEA officers in Kalutara district, Colombo district and Anuradhapura district for Inspection procedure for chemical industries.
4. Conducted Awareness workshop for CEA officers for Wastewater treatment and chemical hazards.
5. Awareness workshop conducted for SEO and EO (provincial office) for greening.

#### ❖ **National Week on elimination of Polythene Plastic and Electronic waste**

Considering the importance of drawing public attention to management of electronic waste and to facilitate collecting Electronic waste stagnated in the house hold level the Central Environmental Authority has declared a National week on elimination of Electronic waste, plastic and polythene under the patronage of His Excellency the President Hon. Maithreepala Sirisena during 24th October to 30th October 2016. Nearly 427 tons of electronic waste and around 80,000 units of Compact Fluorescent Light Bulbs (CFL) were collected in drop off events during the National week. By implementing this event it was able to channel the collected Electronic waste and CFLs to an environmentally sound management mechanism. Directing 80,000 units of CFL to the recycling facility is also a great achievement as these contain 2-5 mg of mercury per bulb.



#### ❖ **Hazardous Waste Management**

As a part of implementing the Hazardous Waste Management regulations (No. 01 of 2008 by the extra ordinary gazette notification No 1534/18 dated 01.02.2008), 82 Nos. of Scheduled Waste Management Licenses has been issued during the period from 01/07/2016 to 30/06/2017.

#### ❖ **Implementation of the Thin Polythene Regulation**

Manufacturing, trading and usage of any kind of polythene or any polythene related product having the thickness of 20microns or less has been banned by the Gazette Extra Ordinary No. 1466/5 of 10th October 2006 published by the Honourable Minister of Environment and Natural Resources under the provisions of National Environmental Act. During the reporting period, Waste Management Unit and the regional offices conducted 1482 raiding thorough out the country and legal actions were taken for 199 numbers of polythene sellers who violate the regulation.

### ❖ Air Resource Management and Monitoring

Air quality monitoring is carried out at Colombo Fort monitoring station for Sulphur Dioxide (SO<sub>2</sub>) and Nitrogen Dioxide (NO<sub>2</sub>) gaseous pollutants using wet chemical methods.

During the reporting period, the ARM&M unit could be able to collect and analyze samples of SO<sub>2</sub> and NO<sub>2</sub>. In addition, monitoring site located at the Fort Railway was renovated and two air quality analyzers were supplied, and infrastructure for commissioning two analyzers and recommencing automated monitoring are being fulfilled.

As noise pollution containing multidimensional aspect the CEA decided to amend the existing noise regulations addressing modern requirement of noise pollution control, and in the CEA was able to determine scope of new regulation and the process of amending regulations is ongoing.

Addressing noise emanating from operation of toll pay high ways in Sri Lanka, the CEA has finalized a new set of regulations; the National Environmental (High Way Noise Control) Regulation and publishing of the gazette is pending.

### ❖ Water Quality Monitoring

CEA engages in monitoring, analyzing and reporting of industrial effluents throughout the country.

During the reporting period, the CEA laboratory collected and analyzed samples. These include industrial effluent collected for EPL. Commercial basis, regular monitoring and legal requirement and surface water and ground water sample from different water bodies.

The industrial inspections were made in order to collect industrial effluent throughout the country. Following table illustrate, the samples collected in the reporting period for various requirements.

Purpose of sampling	No. of samples During 01/07/2016 to 30/06/2017
For New or renewal EPL	91
For legal requirement	0
Investigate complain	22
Monitoring	275
Commercial basis	608
Other purpose	211
<b>Total</b>	<b>1207</b>

In addition to the industrial water quality monitoring, the surface water quality monitoring of Kelani River, Maha Oya, Bentota and Dandugam Oya have been carried out monthly and also surface water quality monitoring of Borelasgamuwa Wewa has been carried out once in three months.

### ❖ Environmental Complain Handling

A complain is an expression of dissatisfaction by member/members of the community on action or the standards of service provided by the CEA. actions were taken to complain handling process of the authority.

During the reporting period, CEA had received 2456 complaints. Out of these complains 588 number of complains had been solved, 160 complaints were referred to other institutions and others are being solved.

## 1.4.3 ENVIRONMENTAL EDUCATION AND AWARENESS

### ❖ Conduct Education and Awareness Programs on Contemporary Issues - CEA Auditorium.

Education and Awareness Programs on Contemporary Issues for school children and various stakeholders conducted in order to improve the consciousness on the Environment among various target groups. The topics of the lectures are directly related to the environment and the subjects are very much

tally with the school curriculum. During the reporting period, 17 programs have been done on relevant environmental issues.

#### ❖ **World Environmental Day 2016**

Although a national environmental day celebration program was organized on 5<sup>th</sup> June 2017, it was cancelled due to the flood situation prevailed in the country during that period. However, SRAMADANA campaign was carried out to help the flood victims to restore their lives instead.

#### ❖ **Awareness and educational Programs conducted for school children and other institutions.**

906 school awareness programmes were conducted in all over the country and 73 awareness programmes were conducted for other institutes.

### 1.4.4 **ACTIVITIES UNDER PUNARUDAYA NATIONAL PROGRAMME**

A national level environment conservation programme, “Punarudaya” for 2016-2018 have been initiated on five main themes by the Ministry of Mahaweli Development and Environment under the supervision of HE the president. CEA has been given the responsibility to initiate projects on Environmental Pollution Control.

Under “Punarudaya” National Programme, CEA has forwarded nine proposals as mentioned below.

1. Integrated Polythene and Plastic Management
2. Electronic Waste Management
3. Improvement of Indoor Air Quality
4. Enhance attitudes. Knowledge and skills on environment of Environmental Pioneers in Lunugamwehera divisional secretariat area
5. Under Pilisaru Project in 2016.
  - Constructed of recyclable waste storage centre at Rathnapura
  - Preparation of technical feasibility study and conceptual design for the sanitary landfill facility at Matale municipal council
  - School waste Management Programme
  - Constructed plastic recycle centre & two compost yards for integrated solid waste management project at Kanadola (Rathnapura)
6. Preparation of Land Use Zoning Map for Welioya
7. Strengthening The Environmental Pioneer Programme (Caps. Medals & Note Books)
8. Media Coverage for Environmental Programmes under Pilisaru Project
9. Development of District Environment School Libraries

Under the above programs, following activities can be highlighted for the respective duration.

#### ❖ **Awareness Program**

To enhance attitudes. Knowledge and skills on environment of Environmental Pioneers in Lunugamwehera divisional secretariat area. three awareness programmes were conducted.

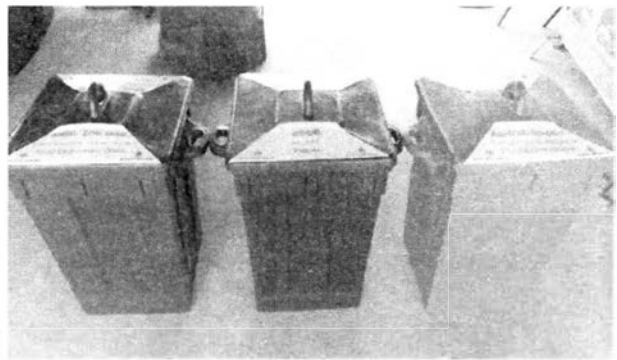




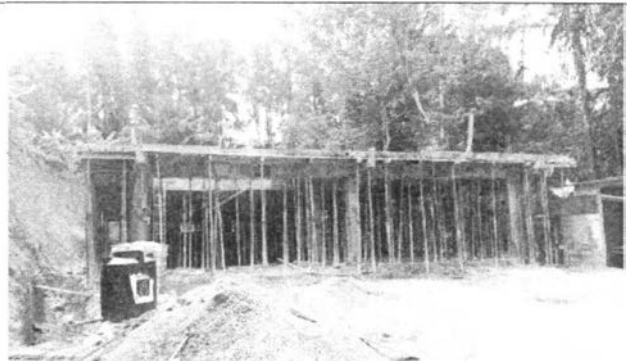
Awareness Programmes for Lunugamwehera Divisional Secretariat area

### ❖ Waste Management Programs

Pilisaru project of CEA conducted following four activities under Punarudaya Programme. These activities are, constructed of recyclable waste storage centre at Rathnapura, initiated preparation of technical feasibility study and conceptual design for the sanitary landfill facility at Matale municipal council, implementation of school waste Management Programme and constructed plastic recycle centre & two compost yards for integrated solid waste management project at Kanadola (Rathnapura).



Implementations of School Waste Management Programme



Constructions of integrated solid waste management project at Kanadola

## 1.4.5 PROJECTS IMPLEMENTED BY CEA

### ❖ “Pilisaru” National Solid Waste Management Project

The Pilisaru National Solid Waste Management Project was commenced in 2008 under the CEA to facilitate Local Authorities to develop and implement effective and efficient municipal solid waste management systems in Sri Lanka.

During the reporting period, following activities were carried out under Pilisaru programme.

#### ✓ **Provision of Equipment, Machineries and Waste Transport Vehicles for Local Authorities**

In considering several requests made to obtain equipment and machines the Pilisaru Project procured and distributed 04 Plastic Crushers, 04 Polythene Compactors, 03 Tractors, 03 Trailers, 02 Skied steer Loaders, 02 Garbage Compactors among local authorities.

#### ✓ **Study on Current Issues and Solution on Waste Management in Sri Lanka**

✓ The project has selected Research Center for Social Sciences, Faculty of Science, University of Kelaniya to conduct a study on current issues and solution on waste management in SL. The research team submitted the final report on the study.

✓ The main objectives of the study are to find ways and means to maximize efficiency of existing compost sites, to improve the potential market, to develop strategies to popularization of compost among the end users and to find alternatives to address the residual after composting. Sample survey was done by covering 21 numbers of LAs.

✓ In addition, 12 awareness and educational programs have been carried out for the stakeholders regarding the proper waste management and segregation.

### ❖ **Project of Strengthening of the CEA Laboratories**

The CEA has planned to establish provincial laboratories to cater the provincial level pollution control requirements. A decision was taken to establish provincial laboratory with the facility to measure the very basic parameters which are essential to control industrial pollution.

During the reporting period, laboratory was established in Gampaha providing the needs for testing basic water quality parameters achieving the task on setting of the laboratory network of the CEA. The Gampaha laboratory was assigned an officer who capable for sampling and analyzing environmental samples.

In addition, following equipment worth 28.5 million were procured for the Air Quality Monitoring and management Laboratory.

#### **Equipment acquired**

- B & K 2270 Sound Level Analyzer;
- Total Hydrocarbon Analyzer;
- Stack Emission Monitoring Equipment;
- Two High Volume Samplers
- Carbon Monoxide Analyzer
- Ozone Analyzer
- Ambient Air quality Monitoring System

### ❖ **Project on Monitoring of the Water Quality of Major Water Bodies Funded by JICA**

Most of the water bodies in Sri Lanka are moderately polluted. A Kelani River flows from Gampaha was one which was heavily polluted due to high population density living on the river basin and

withdrawal of industrial and household wastages. Although some isolated short-term studies have been performed by many researchers, but there was no systematic complete set of water quality data of the Kelani River. Therefore, it is a timely national issue in order to control and conserve the water quality of the river. CEA the main regulatory authority for the protection and management of the environment, obtained financial assistance from JICA to initiate better water quality monitoring and control in accordance with existing ambient and effluent standards.

The main functions of the project are classification of Kelani River based on the water quality, identification of pollution sources, preparation of Pollution Source Inventory (PSI) and capacity building of CEA staff on water quality monitoring.

During the reported period, following activities were carried out.

- ✓ One training programmes in Japan on Water Environmental System & Administrative Management was completed
- ✓ Preparation of guidelines on categorization in line with the ambient water quality standard in Sri Lanka is finished and waiting for approval of Legal Draftsman
- ✓ Development of PSI for the CEA has been completed and being installed into the server machines at the IT unit. Trainings on the PSI were given to officers in the provincial offices.
- ✓ Draft of Environmental report for Kelani river is being finalized

### ❖ **Construction of Solid Waste Disposal Facilities Project**

The main aim of the project is to construct a number of integrated waste management solutions in the form of scientifically proven sanitary landfills as final disposal facilities for municipal solid waste that is the currently being disposed of in a haphazard manner thereby causing a lot of environmental and health issues.

The solid waste treatment facilities of this project will help Sri Lanka build an infrastructure for keeping the relevant cities clean. Once the project is completed, it will help to enhance the national image, creating job opportunities, and promoting economic development. By properly disposing and managing municipal solid waste, the project will ensure better public health and hygiene, would in turn reduce the incidence of illness and thereby help save incomes.

It is planned to construct the sanitary landfills in Keerikkulama in Anuradhapura, Monroviawatta in Hikkaduwa, Yudaganawa in Medirigiriya and Keerimalai in Jaffna and would serve as the cluster based common final disposal facility to dispose residual waste generated in the respective Local Authority areas.

The project carried out following activities during the reporting period.

- ✓ Detail designs of Anuradapura (keerikkulama), Jaffna (keerimale) and Galle (Hikkaduwa/Monroviyawatta) and Madirigiriya (meegaswewa) have been completed and submitted by the consultant company
- ✓ Draft bidding documents were also prepared and submitted by the consultant company and forwarded to Exim bank
- ✓ Infrastructure developments in all four sites are being done

### ❖ **National Environmental Pioneer Programme (EPP)**

CEA is organizing several special environmental programs which are introduced to school children. EPP is a key programme in this regard. It helps to school children to appreciate the value of the environment, improve their environmental knowledge and bring about changes in their attitudes towards the environment. It is very important to have the participation of children for the environmental conservation programmes practically.

During the reporting period, following activities were carried out under the programme.

- ✓ National EPP Camp was conducted at National College of Education - Panideniya, Peradeniya with the participation of 223 environment pioneers & 45 teachers from 21st of September to 24th of September 2016

- ✓ A foreign training program was given to 24 participants including students and teachers at the Centre for Science and Environment, New Delhi, India
- ✓ Program on best schools in clean and green environment was conducted covering the whole island under the patronage of H/E the President Mithreepala Sirisena with the participation of 300 participants
- ✓ Five leadership programs were conducted in on 03.04.2017 Badulla, Hambanthota, Nuwara Eliya, Puttalam and Kilinochchi districts.
- ✓ Four principle training programs and 9 training programs were conducted for teachers

## 1.5 National Gem & Jewellery Authority

### Performance Report 2016.07.01 - 2017.06.30

#### 1.5.1 Land Division.

Following lands had been auction for green mining.

2016.07.01 – 2016.12.31	2017.01.01 – 2017.06.30
Palmadulla Watta Land Auction -2016.11.10	Lunugala Gem Gravel Tender – 2017.02.06
Bogawana Watta Tender – 2016.08.24	Laggala- Kajuwatta Gem Gravel Tender – 2016.02.21
Naula Gem Gravel Tender – 2016.07.22	Rakwana Gaga Panapitiya Tender – 2017.03.30
Naula Digannawa Tender – 2016.11.22	Kajuwatta Matuwagala Gravel Tender – 2017.04.03
Bagawanthalawa land Auction – 2016.12.05	Bagawanthalawa Kerkerswall Tender – 2017.04.21
Ginigathena Gem Gravel Tender – 2016.12.10	Eheliyagoda Gem Gravel Tender – 2017.05.24
Udawalawa Gem Gravel Tender – 2016.12.10	Tammannawa Sadungama Gravel Tender – 2017.06.02
Kelani Ganga Dumbukaduwa Tender – 2016.12.22	Koul ara Waththota ara – 2017.06.13
St.Jokimwatta Gem Land Auction – 2016.12.23	

Following special mining projects had been carried out with the direct involvement of the National Gem & Jewellery Authority to get the maximum economic value of gem mining resources berried in highly environmental sensitive areas without damaging environment. Following projects has been carried out from 01<sup>st</sup> of July 2016 to 30<sup>th</sup> of June 2017.

- Seetawaka Ganga
- Bagawanthalawa

Discussion has been conducted with the Afghanistan to provide green mining consultancy services. The National Gem & Jewellery Authority conducted rehabilitation programmes to ensure the environmental protection took in placed due to gem mining.

- ❖ Plants distributed among Bagawanthalawa school children to plant trees.

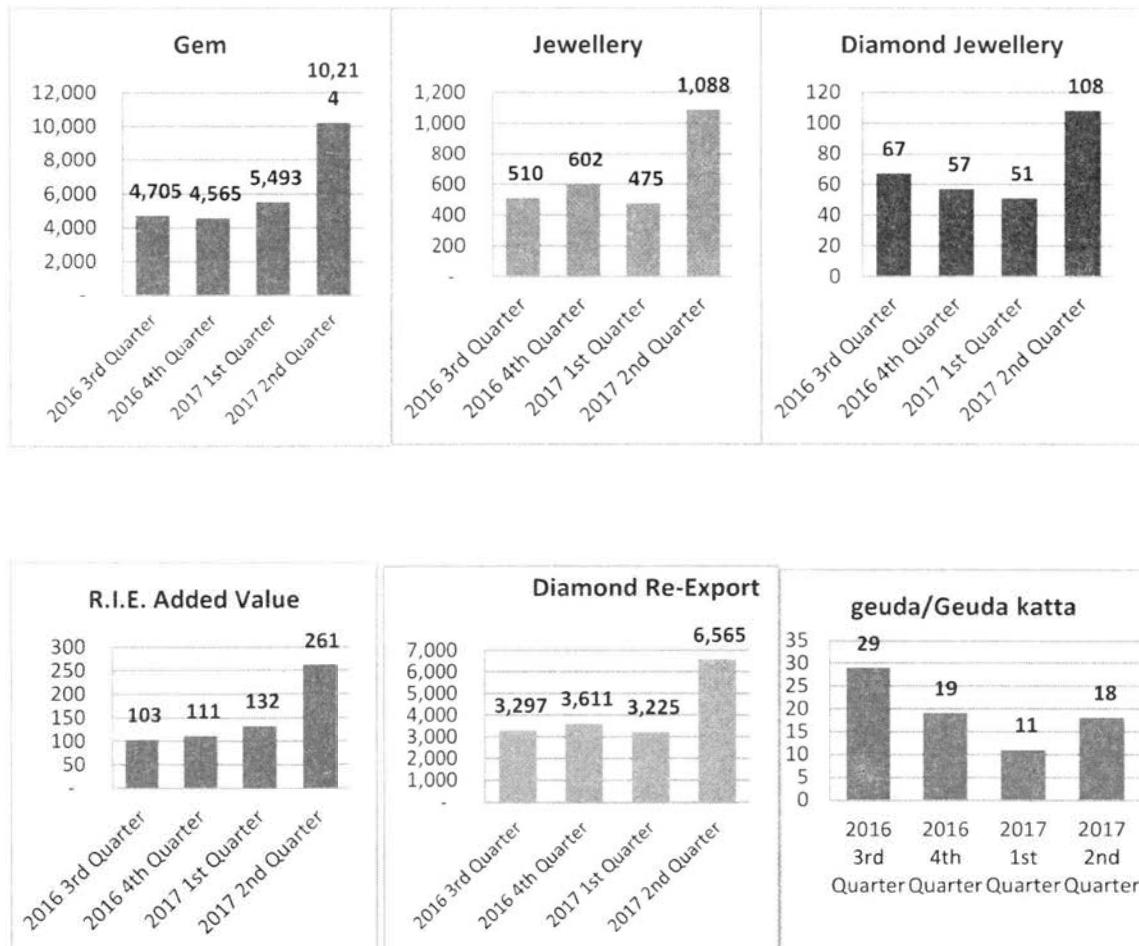
Opanayake corporative land and Kuruwita Hunugaldeniya destructed land due to gem mining has been rehabilitated.

To upgrade the living hood of gem mining community the National Gem & Jewellery Authority has been offered 105 scholarships to school going children of mining community in the year 2016 and 123 student in the year 2017.

It had been taken steps to paid compensation for the 01 deaths & 02 injury within the considered time of this report.

## 1.5.2 Export Division

The National Gem & Jewellery Authority has been established its export center branch at the departure longue in Bandaranayke International Airport to facilitate gem exporters.



### 1.5.3 Export Promotin Division

- ✓ Conciliate in existing markets & entering new markets.  
it had been taken steps to participate in the National as well as International Gem & Jewellery exhibitions and has organized “Sri Lankan Pavilion” in below stated exhibition. Hence, NGJA has facilitated to entering new markets and introducing jewellery item produced by SME manufacturers.

<b>International</b>	
<b>2016.07.01 – 2017.06.30</b>	<b>2017.01.07 – 2017.06.30</b>
China International Jewellery Fair – 10 <sup>th</sup> -14 <sup>th</sup> Nov	International Jewellery Tokyo – 23 <sup>rd</sup> -26 <sup>th</sup> 2017
China International Gold, Gem & Jewellery Fair – 18-21 Nov	Hong Kong international Diamond gem & pearl show 28 Fe -04 Ma
Vietnam International Gem & Jewellery Fair – Nov	JCK TUCSON 10 <sup>th</sup> Feb 2017
Junwex Yurvane show Armenia – 27 <sup>th</sup> -30 <sup>th</sup> Oct	Bangkok Gem & Jewellery Fair and Delegation 22 <sup>nd</sup> – 26 <sup>th</sup> Feb
Sri Lanka Gem fest , Tokyo – 24 <sup>th</sup> -26 <sup>th</sup> Oct 2016	Trade Delegation to Madagascar 14 <sup>th</sup> – 21 <sup>st</sup> Feb
Delegation to Vietnam – 10 <sup>th</sup> -14 <sup>th</sup> Oct 2016	Pakistan international Gem & Jewellery Exhibition 13 <sup>th</sup> – 16 <sup>th</sup> Apr
Hong Kong International Gem & Jewellery Show 13 <sup>th</sup> - 17 Sep	10 <sup>th</sup> Jakarta International Jewellery Fair 20 <sup>th</sup> -23 <sup>rd</sup> Apr
13 <sup>th</sup> China – Asian Expo 2016- Nanning 11 <sup>th</sup> - 14 <sup>th</sup> Sep	Delegation in Tanzania – 1 <sup>st</sup> -6 <sup>th</sup> May
IJL Exhibition and Delegation in Birmingham – 4 <sup>th</sup> -8 <sup>th</sup> Sep	Jewellery Shanghai Show 10 <sup>th</sup> -14 <sup>th</sup> May
Delegation Myanmar 2 <sup>nd</sup> – 8 <sup>th</sup> Oct 2016	Delegation Ethiopia 4 <sup>th</sup> -11 <sup>th</sup> June
Junwex Exhibition – Russia 28 <sup>th</sup> Sep – 2 <sup>nd</sup> Oct	South and South East Asia Commodity Expo fair 12 <sup>th</sup> – 18 <sup>th</sup> June
	JCK Las Vegas show ,USA 5 <sup>th</sup> -8 <sup>th</sup> June
	Sri Lankan Gem Fest Tokyo – 25 <sup>th</sup> -27 <sup>th</sup> June

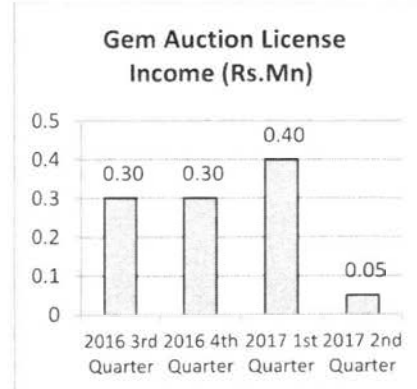
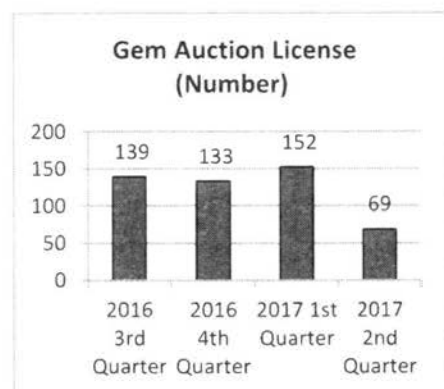
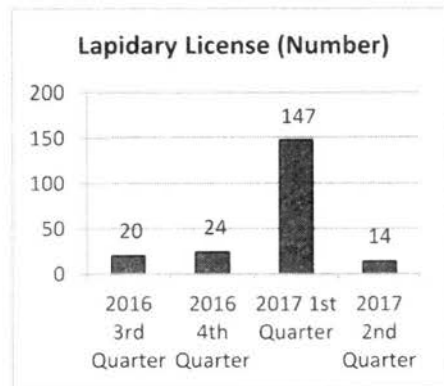
<b>National</b>	
<b>2016.07.01 – 2017.06.30</b>	<b>2017.01.07 – 2017.06.30</b>
Jewels -16 <sup>th</sup> 18 <sup>th</sup> 2016	Embilipitiya President Collage Exhibition 24 <sup>th</sup> -27 <sup>th</sup> Jan
Hali Ela Central Collage Educational Exhibition 8 <sup>th</sup> - 9 <sup>th</sup> Dec	Embilipitiya Central Collage Exhibition 24 <sup>th</sup> -27 <sup>th</sup> Feb
Sri Lanka NEXT BMICH 17 <sup>th</sup> -19 <sup>th</sup> Oct	Kegalu Vidyalyaya educational Exhibition 13 <sup>th</sup> -15 <sup>th</sup> Feb
Uva Wellasa University Educational Exhibition 8 <sup>th</sup> -9 <sup>th</sup> Sep	Godakawela Kularathne Central Collage Exhibitions 15 <sup>th</sup> -18 <sup>th</sup> Feb
Future Green 2016 Royal Collage Polonnaruwa sept	Rata wenuwen pibidena pulathisi yawwanaya
Future Green 2016 Chenkaladi Central Collage 27 <sup>th</sup> to 28 <sup>th</sup> Sep	Rathnapura fergazen high school exhibition 27 <sup>th</sup> – 31 <sup>st</sup> Mar
FACETS Sri Lanka 1 <sup>st</sup> – 4 <sup>th</sup> Sep 2016	Kalawana National school exhibition – 17 <sup>th</sup> -18 <sup>th</sup> May
	Exhibition at Youth center maharagama – 27 <sup>th</sup> -30 <sup>th</sup> July

- ✓ Facilitation for inward delegations for Sri Lanka for foreign countries.
  - Delegation from antique collection association of china
  - NIPPON MARU Programme 14<sup>th</sup> to 17<sup>th</sup> Feb 2017
  - Delegation from director general of civil aviation, asia and pacific region – 1<sup>st</sup> august
  - Delegation from furtue ambosserders of from 23 counties 4<sup>th</sup> august 2016
  - Visit of Diplomatic Tajikistan delegation to Sri Lanka 13<sup>th</sup> December 2016
  
- ✓ Conducted training programme and distribute jewellery craftman tools among “Pubudu Jewellery Craftman Associations” in Gampola and Kuliypitiya.

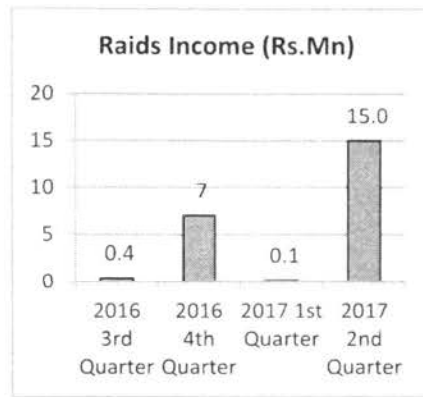
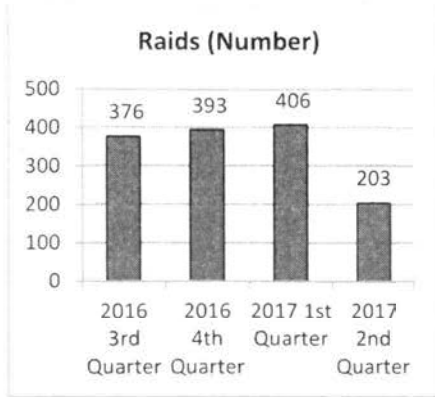
Some Picture of foreign exhibition.....



## 1.5.4 Enforcement Division







### 1.5.5 Gem Testing & Certification Laboratory

A Mobil bus has been purchased and furnished to issue gem testing services and certifications.



### 1.5.6 Assaying & Hallmarking Office

Conduct awareness programmes to acknowledge general public regarding the compulsory hallmarking system it is going to initiate in year 2018.

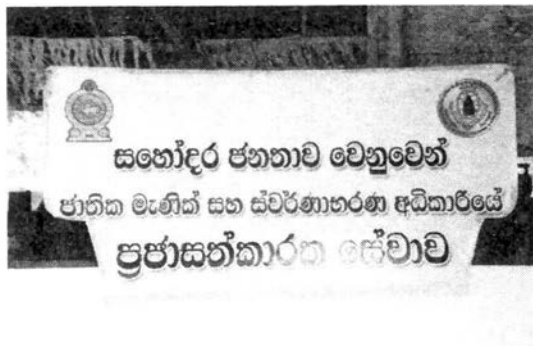
### 1.5.7 HR & Admindivision

To improve employee's productivity and efficiency NGJA has conducted a capacity building training programmes . Following pictures show how the employees participated in those training programmes.



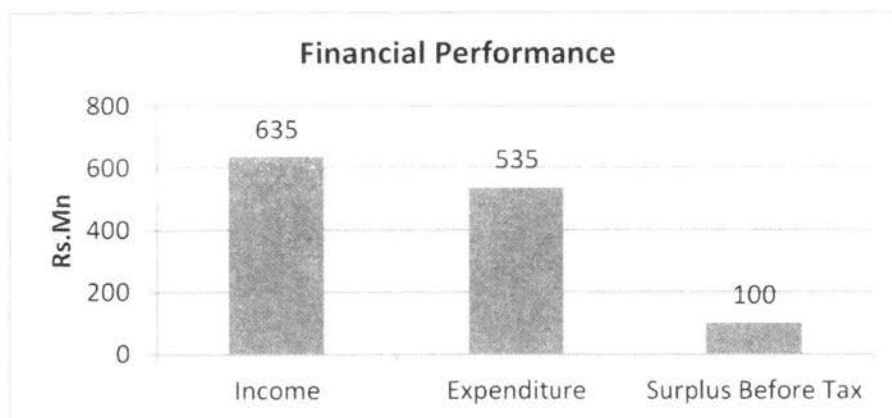
### 1.5.8 Welfare Activities

A medical camp has been conducted for displaced by floods.



### 1.5.9 Financial Statement

Description	2016.07.01 to 2017.06.30 Rs.Mn
Income	635
Expenditure	535
Surplus before taxes	100



## **1.6 Gem and Jewellery Research and Training Institute**

### **1.6.1 Research Projects**

#### **1.6.1.1. Exploration and Assessment of Gem Deposits in Sri Lanka (EAGSDL)**

Gem and Jewellery is an historical industry in Sri Lanka, existed from ancient time. During the last five years, Gem and Jewellery sector was recorded within top five of the export earners. It holds a prestigious position in the world market as the country producing the best gem stones. It is therefore vital to explore the gem deposits spread in divers regions in the country to achieve the objective of increasing the income of this industry by increasing the products in the gem market and the creation of job opportunities.

Although, the gem deposits are spread over 70% of the total land area of Sri Lanka, the gem mining is concentrated to a limited area of 10%. The country failed to earn a considerable income as a result of not identifying the land which has rich gem resources. In addition, considerable amount of environmental damages and social problems has been reported due to current hap hazard mining operations.

As a remedy, the Gem and Jewellery Research and Training Institute launched the project of "Exploration and Assessment of Gem Deposits in Sri Lanka" to identify the in-situ and placer gem deposits prioritized Divisional Secretary Division wise, by developing a gem potential database including maps, introducing eco-friendly mining methodologies, and preparing the guidelines for sustainable gem mining operations in Sri Lanka.

The project has been scheduled to be implement from 2018-2031 in 3 phases according to a new project proposal. The approval of the Cabinet of Minister has been granted to implement and the treasury has been agreed for funding.

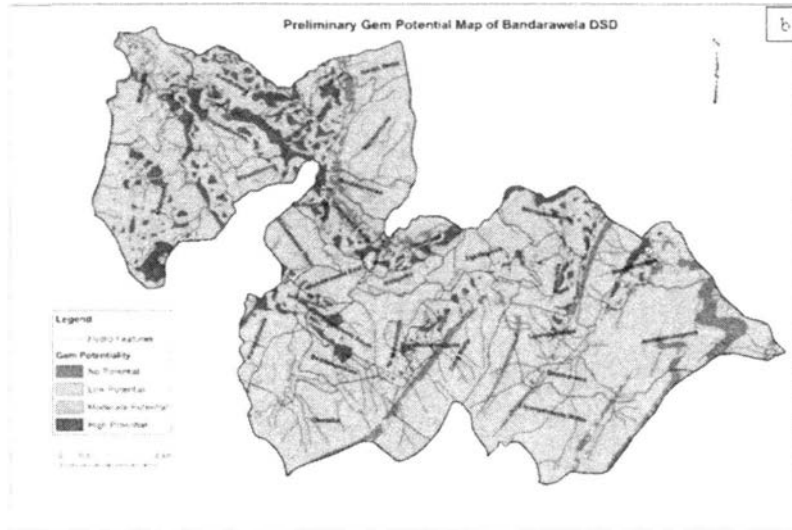
#### **Divisional Secretariat Division - Medagama**

Considering the progress of this project the Gem Potential maps has been prepared..According to all fields, laboratory and other investigations, five secondary gem fields were identified in Medagama area namely

1. Gala oya gem field,
2. Bibilemulla-Nannapurawa gem field,
3. Medagama Oya gem field,
4. Alana gem field and
5. Bella oya gem field.

#### **Divisional Secretariat Division - Bandarawela**

Bandarawela DSD is located in the Badulla district, 71 sq.km in area and consists of 36 Grama Niladhari Divisions. When consider the progress of the project, literature survey, base map and relevant factor maps, several field works and preliminary gem potential map were completed. It is estimated that the confirmatory sampling, sample analysis and the conclusive work of the project will take another five months.

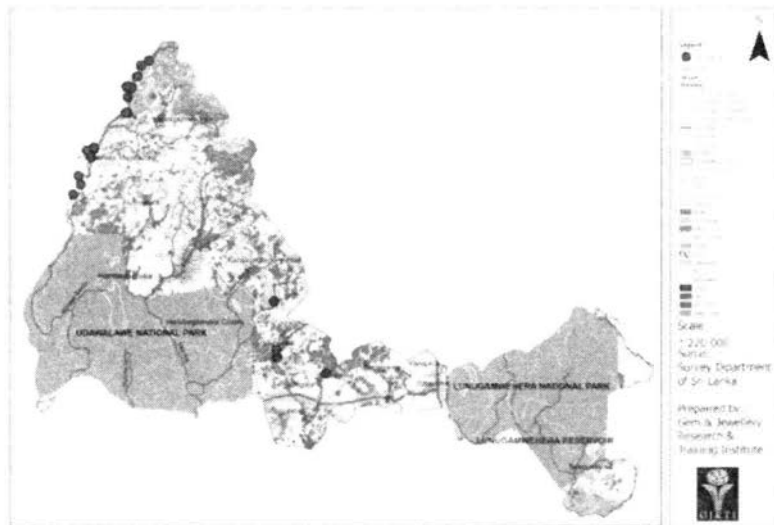


Field investigation at Bandarawela DSD, (b) Prepared preliminary gem potential map.

### Divisional Secretariat Division - Thanamalvila

Thanamalvila DS Division, situated between 205000- 255000E and 125000-165000N, belongs to Monaragala district and consists of 14 GN Divisions. Field investigations were initiated in January 2017. Alluvial and flood plain deposits have been deposited along both sides of the main streams and their tributaries. The thickness and number of depositional layers were studied based on the exposure on the river banks.

The predominant gem deposits found in Thanamalvila Division is secondary alluvial deposits, most of which are formed along the waterways of Welioya catchment area. Then, stream sediment and auger samples were collected from different locations in main streams and their tributaries where needed (figure R3). Laboratory analysis of these samples is in progress. Data obtained from these analyses will be made use in producing a gem potential map pertaining to the Thanamalvila DS division.

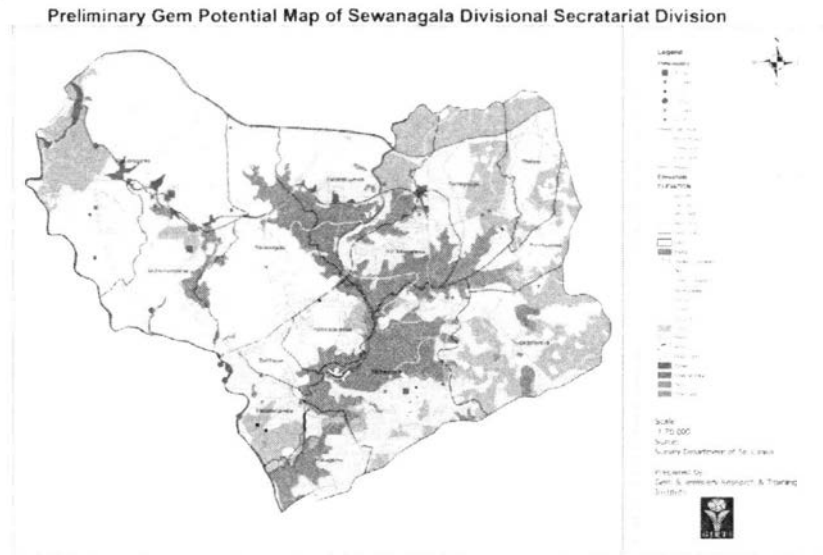


A land use map map showing sampling locations of Thanamalvila DS Division

### Divisional Secretariat Division - Sevanagala

Sewanagala DS division which contains 14 GN divisions belongs to Moneragala district. After traversing the area, detailed investigations were carried out on the targeted locations.

The main source of gem deposits in Sewanagala DS division is Walawe Ganga which flows along the south-western boundary of the division as an outlet of the Udawalawe reservoir. Walawe Ganga is well known for its fair share of gems and thus can be described as the principle contributor for the secondary deposits produced in the area. In addition, a serpentinite deposit of economic value was found at Ginigalpelessa, Sewanagala. The deposits is scattered over an area of about 10m radius run as deep as ~10ft in some areas.

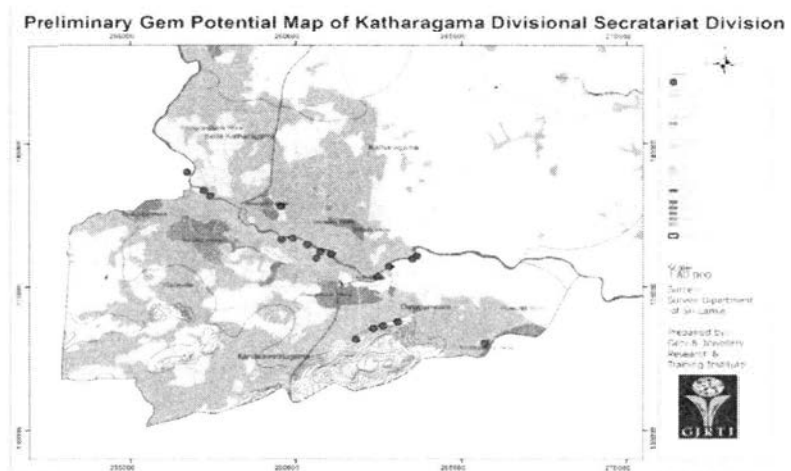


A land use map of Sewanagala DS Division with sampling locations

### Divisional Secretariat Division - Kataragama

Kataragama DS division, located within the moneragala district in Uva province, can be demarcated by the coordinates 250000- 290000E and 160000- 300000 N. It comprises 05 gramaniladari divisions and the forest reserve covers 1/3 of the whole DS division.

According to the investigations so far, Kataragama DS hardly contain any primary deposits but many secondary deposits were found. The main source of these deposits can be defined as Menik Ganga which flows across the division. Owing to the fact that river flows along the exposed bed rock and the river banks are completely covered with roots of “Kumbuk trees”, hardly any deposition can be found on either side of the river banks.



A land use map showing sampling locations of Kataragama DS Division

## Divisional Secretariat Division Bibile

Bibile area in Moneragala district is unique owing to its location on the Highland - Vijayan boundary as one comes across both in-situ highland gem occurrences as well as transported depositson vijayan complex. Dorapode mountain range on the eastern edge of central highlands bordering the Lunugala area is the source of Bibile gems. High quality corundum and other gem mineral crystals originated there are eroded and incorporate into the lower order streams of Gala oya starting from there and drained off to the Vijayan terrains.

According to the field and laboratory work , Dorapode primary gem field, Ibbannaoya gem field, Badullagamma-Wegama gem field and Gala oya gem field are the most pronounced gem fields, the latter three being secondary alluvial gem fields. Lower Dorapode gem field and Kehelattawela gem field are two another but minor gem occurrences of secondary, alluvial mode. Out of these, Ibbannaoya gem field is the most fertile and being extensively mined. It is concluded that Bibile division is of moderate gem potentiality in overall, compared to its large land area.

## Divisional Secretariat Division Haputale

Haputale DSD is located in the Badulla district, 72km<sup>2</sup> in area. When consider the progress literature survey, and base map preparation and preliminary field work are complete by now. It is estimated that the confirmatory sampling, sample analysis and the conclusive work of the project will take another four months.

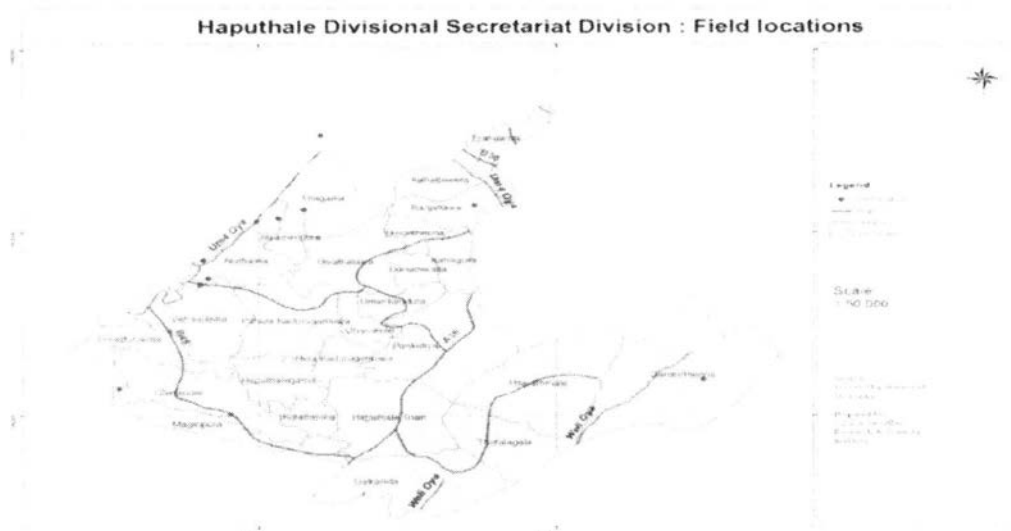
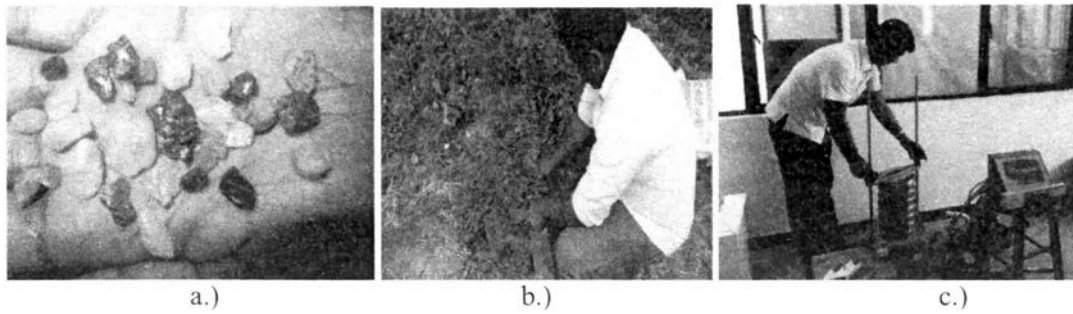


Figure R6: Preliminary field locations in the Haputale DSD

Special attention was paid to the Menikkanda area in Ranjallawa division, as it appears to be a primary gem occurrence. However when consider the geology of Haputale area, it is underlain by charnockites, khondalite, quartzo-feldspathic gneisses and quartzites according to the 1:100000 geology map (no: 17) published by the Geologic Survey and Mines Bureau. Also this area exhibits several shear zones, faults and lies bordering a thrust zone



- a.) Vivid gem minerals found from Haputale area
- b.) Sample collection at the field
- c.) Sieve analysis of sediments, a standard sedimentological test to unveil the hidden gems

### 1.6.1.2 Development of Mapping Methodology using GIS & Remote Sensing Techniques

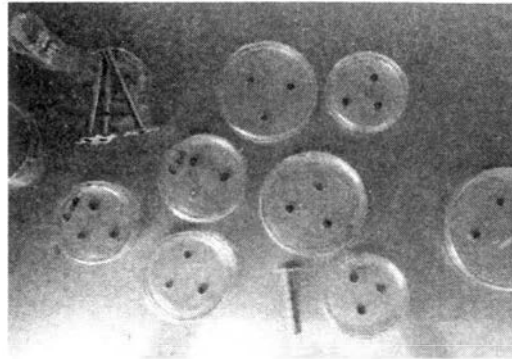
Although proposed study area was Moneragala district, availability of remote sensing data for our country. Bandarawela DSD in Badulla district is selected as the study area. Based on knowledge and field observations, factors related to occurrence and transportation of a gem deposits were identified as:

Identified factors	Required digital data
Surface and subsurface geology	Geology map published by GSMB
Geological structures	
Internal drainage system	Methodology will be developed using LiDAR data
Elevation	
Slope	
Flood plain	Methodology will be developed
Land use pattern	1:10,000 topographic maps published by survey department of Sri Lanka
Existing mining locations and sampling locations	GPS coordinates and gathered data from field survey
Mineralogical analysis data (from samples)	GPS coordinates of confirmatory sampling locations

When consider the progress of the project, digital database is constructing. Request was made for the purchase of LiDAR data from survey department of Sri Lanka. Financial progress will be achieved within one month.

### 1.6.1.3 Value addition of low gem quality Tourmaline

In this study, properties of black color Tourmaline particle were tested for bed of water filtration and heat treatment study performed for brown color low gem quality Tourmaline.



The well defused anti-microbial test performed for Tourmaline micro particles

In order to establishing heat treatment condition for brown color Tourmaline, heat treatment studies were performed. In this study, heat treatment with different condition, chemical analysis and inclusion variation during the treatment were analyzed. Available inclusion in the low gem quality brown tourmaline shown in figure R21 This research projects are ongoing.

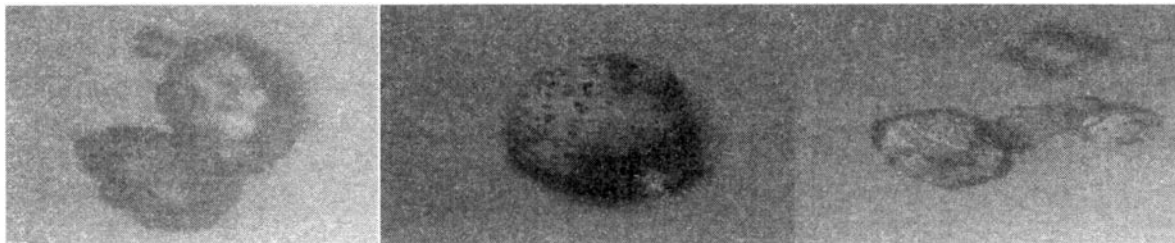


Figure R21. selected inclusion in low gem quality Tourmaline in Sri Lanka (before heat treatment)

### 1.6.1.4. Publications

Based on the projects of Exploration and Assessment of Gem Deposits in Sri Lanka and value addition of low quality gemstones, there are number of research articles were published in local and international journals as well as magazines. And also two books were published end of the year 2017.

1. R.M.N.P.K. Jayasinghe, M.K.C. Jayamali, S. Wijewardane, G.G.M.S.Wickramasinghe and R.M.S. Dharmasiri, 'Value addition of Sri Lankan Gemstones.', ISBN 978-955-8382-02-8.
2. ආර්.එම්.එන්.පී.කේ. ජයසිංහ.එම්.කේ.සී ජයමාලි, එස්. විජේවර්ධන.පී.පී.එම්.එස්. වික්‍රමසිංහ සහ ආර්.එම්.එස්. ධර්මසිරි. “ ශ්‍රී ලංකාවේ මැණික්වල අගය ඉහල නැංවීමේ තාක්ෂණය” ISBN 978-955-8382-03-5.
3. M.K.C. Jayamali, W.M.M.P.E. Bandara, J. Gunatilaka, P. Francis, R.M.N.P.K. Jayasinghe and R.M.S. Dharmasiri, 'Gem potential mapping based on Geographical Information Systems (GIS): A case study from Medagama, Moneragala district, Sri Lanka'. Journal of Geological Society of Sri Lanka Vol. 18 (2017).
4. W.G.C.N.Wewegedara, Prashan Francis 'Value addition of Sri Lankan gem zircon via heat treatment' (Abs.). Proceedings of the Sri Lanka NEXT – A Blue – Green Era Conference and Exhibition, 2016 : 7,8.
5. ගම්කලා ධර්මසිරි, මැණික් පතල් කැණීම් කර්මාන්තය හා බැඳුණු පාරිසරික බලපෑම්, හෙළමිණි වරුණ, 3 වන කලාපය(2016 ඔක්තෝබර්), මැණික් හා ස්වර්ණාභරණ පර්යේෂණ හා අභ්‍යාස ආයතනය.



6. එස්.විජේවර්ධන, නුවරඑළිය අඹගමුව කෝරළයට අනවසර මෑණික් කැණීමෙන් සිදුව ඇති පාරිසරික හානිය, හෙළමිණි වරුණ, 3 වන කලාපය(2016 ඔක්තෝබර්), මෑණික් හා ස්වර්ණාභරණ පර්යේෂණ හා අභ්‍යාස ආයතනය.
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11. රවිද්‍ර සාරංග, මෑණිකෙන් හෙලිවන හෙළ තාක්ෂණයක යටගියාව, හෙළමිණි වරුණ, 4 වන කලාපය(2017 අප්‍රේල්), මෑණික් හා ස්වර්ණාභරණ පර්යේෂණ හා අභ්‍යාස ආයතනය.
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13. ඒම්.ඒ.නදීකා මන්ත්‍රීරත්න, රුව හැඩකරන මෑණික්, හෙළමිණි වරුණ, 4වන කලාපය (2017 අප්‍රේල්), මෑණික් හා ස්වර්ණාභරණ පර්යේෂණ හා අභ්‍යාස ආයතනය.
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## 1.7. Marine Environment Protection Authority

### 1.7.1 Review of Programmes and Events in the Past Year

Work done by MEPA during the past year (1<sup>st</sup> July 2016 to 30<sup>th</sup> June 2017) is described below. Improved marine pollution control mechanisms, Improved marine pollution preventive measures. Increased knowledge and awareness on marine environment, pollution impact. Efficient implementation of National Oil Spill Contingency Plan (NOSCOP) were implemented under the “Punarudaya” National Programme to create a sustainable environment.

❖ **Improved marine pollution control mechanisms**

✓ **Water Quality Monitoring Programme**

Water quality of sea water in selected bathing sites in coastal districts were being monitor by the MEPA regional offices as mentioned in following table.

Water samples were taken from bathing sites and physical, chemical and biological properties such as: Acidity, Conductivity, Salinity, Dissolved Oxygen, Turbidity, Temperature, Nitrate, Phosphate, Coliform and E coli were monitored monthly.

The bathing sites have been graded based on water quality levels in order to take necessary actions to improve the quality of bathing water as well as to aware the general public.

## Selected bathing sites

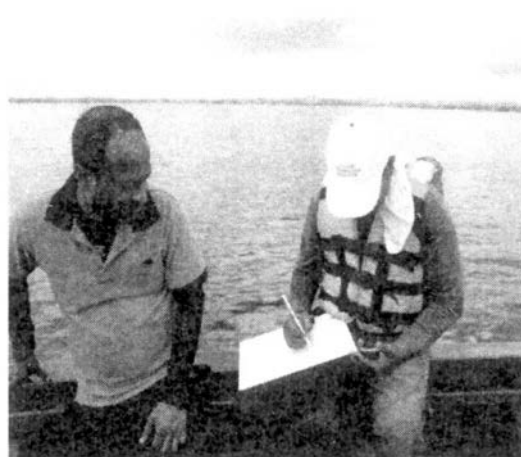
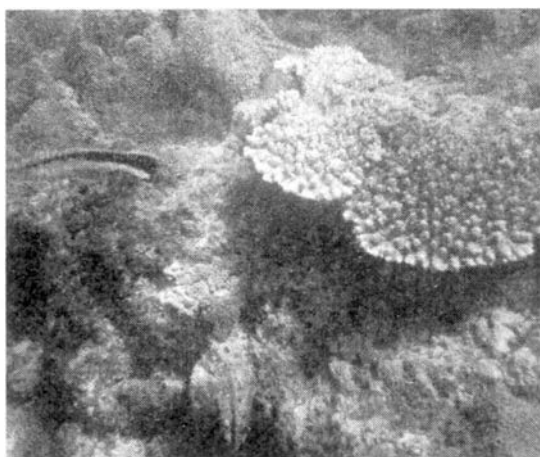
Regional office	Sea bathing site
Ampara	Arugambe
Batticaloa	Pasikuda
Puttalam	Chillaw beach park
Colombo	Mount Lavinia, Wallawatta
Galle	Hikkaduwa, Kokgala, Unawatuna,
Matara	Polhena
Hambanthota	Parawi wella, Hambanthota, Kirinda
Kalutara	Moragalla
Trincomalee	Trincomalee
Gampaha	Negambo Beach park
Jaffna	Jaffna fort, Thondamanaaru

### ✓ **Establishment of Beach Management Committees and Opening Ceremony of Marine Pollution Monitoring and Life-saving Tower at Moragolla**

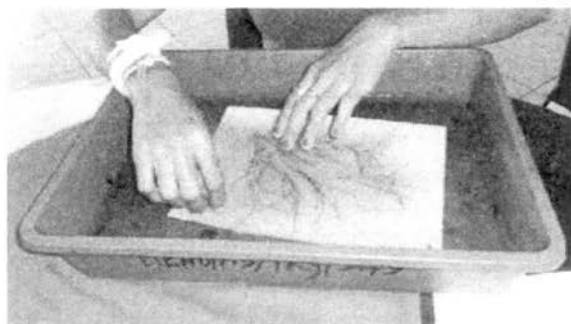
A programme of establishing Beach Management Committees consisting of related stake holders has been commenced to ensure pollution free beach around the country by planning and implementation of necessary actions through these committees.

In parallel with above, with the objective of monitoring marine pollution, a marine pollution monitoring tower was constructed by MEPA in Moragalla bathing site and was declared open on 29<sup>th</sup> July 2016 and handed over to Department of Sri Lanka Coast Guard by signing a memorandum of understanding for monitoring marine pollution and life-saving activities in Moragalla beach.

### ✓ **Assessment of Marine Ecosystems**



Coral mapping



Identification of sea grass and preparation of herbarium



Preparation of sea grass nursery

Maintaining and updating an accurate data base on marine pollution caused by various anthropogenic land based and coastal activities is vital for making decisions such as preventing marine pollution. Hence the coral reefs at Kalpitiya and Hikkaduwa have been mapped and a seagrass nursery has been established in Negombo lagoon. A seagrass survey from Rakawa to Puttalam area was completed under this project and the seagrass species distributed at different geographical regions were identified. Seagrass herbariums were prepared in order to identify seagrass species in future studies. Furthermore radioactivity data on seawater and sediments in Puttalam, Mannar and Hambantota areas were collected and the debris surveys were conducted at Trincomalee and Kirinda coastal areas.

✓ Issuing Dumping Permits

Dumping permits are issued under the Marine Environmental Protection Regulations No. 01 of 2013 to control the marine pollution occurring due to the release of waste to the jurisdiction of MEPA.

Dumping permits are being issued by all regional offices to discharge treated waste water and also this permit is being issued to dump confiscated items. There were 137 permits have been issued for the years 2016-2017 and a Rs. 1.15 Mn income has been generated in the first two quarters of the year 2017.

✓ Reducing adverse environmental impacts due to ship ballast water

Ballast water is the water filled in ship ballast tanks for maintaining the ship stability. Invasive alien species will be introduced to the native environments when releasing ballast water to the sea. Hence it is a main environmental issue with severe environmental, economic and health effects.

Authority has conducted Port Biological Baseline Surveys and completed survey reports at Sri Lankan commercial harbours such as; Colombo, Galle, Hambantota and Trincomalee harbours in order to study the distribution of invasive alien species.

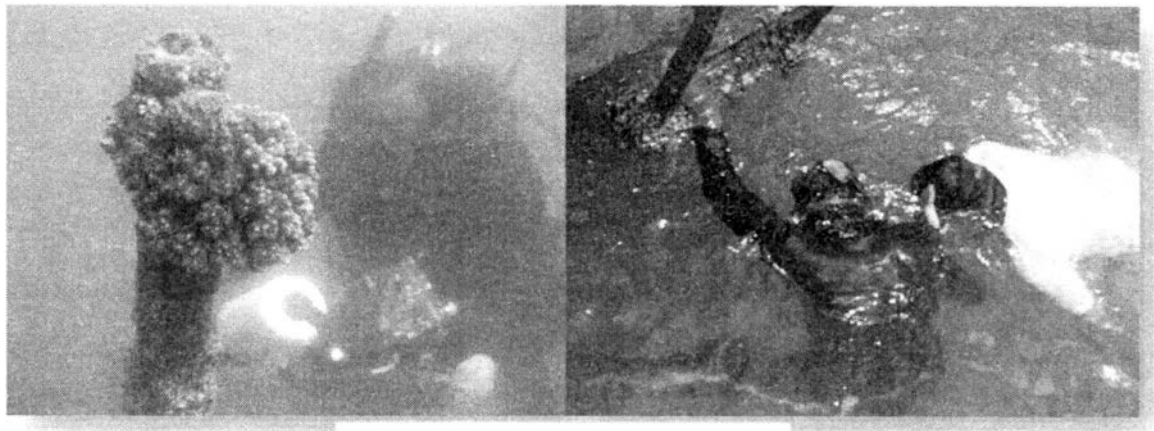


Figure 2.4: Biological Baseline Survey

## 1.7.2 Improved marine pollution preventive measures

✓ Preparation of legal framework to prevent marine pollution

MEPA has conducted 2 workshops on Civil liability, Bunkering and Ballast water management conventions and 1 workshop on MARPOL Annex VI convention. In these sessions, legal provisions of the Act-Part 11 was drafted by including provisions of the Fund protocol, CLC protocol and Bunkering convention.

✓ **Providing Ship Generated Waste Reception Service (WRS)**

Ship generated waste and waste oil reception for proper disposal, was conducted in Colombo, Galle, Trincomalee and Hambantota commercial harbours via registered service providers under the supervision of MEPA. There are 24 companies have been registered as service providers for 2017. A 24×7 online permit issuing system has been introduced for the Colombo harbour in order to improve the efficiency and effectiveness of Waste Reception Service. With the introduction of new system, there were 1478 permits have been issued from 1<sup>st</sup> July 2016 to 30<sup>th</sup> June 2017. Further, a new system of charging Rs. 1000 per each cubic meter, above 5m<sup>3</sup> has been introduced since 1<sup>st</sup> January 2017.

There were 23.043 m<sup>3</sup> of bunker oil and 7.211 m<sup>3</sup> of solid waste have been removed under 1478 permits issued during the years of 2016/2017.

### **1.7.3 Increased knowledge and awareness on marine environment, pollution impact**

✓ **Awareness programmes for school children**

Awareness programmes on the importance of the marine environment and its protection were held throughout the year by all the regional offices. In this process, there were 298 marine groups have been formed in selected schools and several programmes have been conducted targeting these groups. In addition, quarterly newsletter “Samuduru Puwath” was also published.

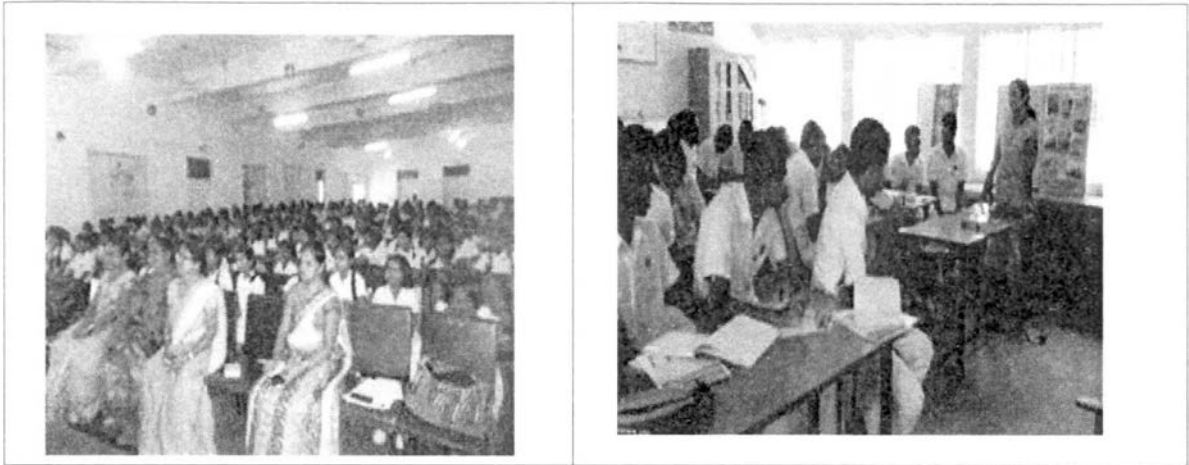
Table 2.2: Established School Marine Groups

<b>Regional office</b>	<b>Number of SMGs</b>
Colombo	12
Gampaha	30
Puttalam	44
Jaffna	08
Trincomalee	32
Ampara	21
Batticaloa	18
Hambanthota	35
Matara	35
Galle	35
Kalutara	28
Total	298

### **1.7.4 Organizing and Conducting of International Events**

#### **1.7.4.1. International Coastal Cleanup (ICC) Day 2016**

International Coastal Cleanup Day is held on the third week Saturday of September each year. In 2016, Marine Environmental Protection Authority (MEPA) and Department of Coast Conservation and Coastal Resources Management (CC&CRM) were jointly organized the 8th National Coastal Cleanup main programme on Saturday (17<sup>th</sup> September) at “crow Island beach park”, at Mattakkuliya. This year government declared a week from 17<sup>th</sup> September as a “National Coastal and Marine Resources Conservation Week”. Sri Lanka marks the “International Coastal Cleanup Day” with series of beach cleaning programs covering 14 coastal districts during this week.



Programme for school marine group



Beach cleaning programmes in National Coastal and Marine Resources Conservation Week

#### 1.7.4.2. World Environment Day 2016

As directed by the Ministry of Mahaweli Development and Environment, MEPA conducted beach cleaning programme at Moragalla, Kalutara district. In addition, beach cleaning programmes and awareness programmes were also conducted in 12 coastal districts.



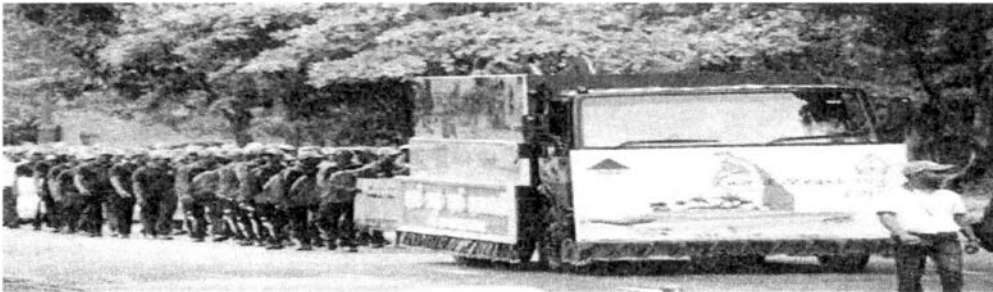
Awareness for school children

### 1.7.4.3. World Oceans Day 2016

World Oceans Day 2016 was celebrated by MEPA on 7<sup>th</sup> June 2017 organising an awareness walk and a beach cleaning programme under the theme of “Our Ocean – Our Future”.

Inauguration of World Oceans Day programme was held at the Viharamahadevi Park with the participation of Secretary, Ministry of Mahaweli Development and Environment and other distinguish guests. The first copy of the annual magazine ‘Sath Samudura’ published by MEPA was presented to the Secretary, Ministry of Mahaweli Development and Environment on this occasion.

On the same day two beach cleaning programmes were conducted at Wallawatta and Mattakkuliya area with the participation of nearly 1500 personal representing various government and non-government organizations.



World Ocean Day Walk and presenting “Sath Samudura” magazine

### 1.7.4.4. Sri Lanka NEXT exhibition

‘Sri Lanka Next’, a landmark campaign to take Sri Lanka towards the Blue Green Era, was organized and conducted by Ministry of Mahaweli Development and Environment on 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> September 2016 at the Bandaranayake Memorial International Conference Hall (BMICH). As a one major part of this event, a symposium on “Sustainable coastal and Ocean Environment” has been organized and an exhibition stall has been prepared by MEPA to promote the public awareness on marine ecosystem and importance of protecting marine environment.

## 1.7.5 Efficient implementation of National Oil Spill Contingency Plan

- ✓ **Capacity Building related to National Oil Spill Contingency Plan (NOS COP)**

MEPA is responsible to implement the NOS COP in order to reduce the environmental impacts occurring due to sudden oil spills happen in the Sri Lankan waters and to take immediate actions to prevent or minimize the damage.

As a preparatory measure, workshops and practical exercises have been conducted in Trincomalee (on 7<sup>th</sup> and 8<sup>th</sup> July at in Trincomalee harbour) and Colombo (on 31<sup>st</sup> August and 1<sup>st</sup> September at Foundation Institute and practical session on 2<sup>nd</sup> September at Dikowita Fishery harbour).

Further stake holder meeting for update the NOS COP was conducted at Banking centre, Rajagiriya on 9<sup>th</sup> August 2016. During the session, actions have been taken to amend the



Practical exercise

individual stake holder responsibilities and inclusion of other responsible institutions related to chemical spills.

As a national level activity, to ensure the preparedness a large scale national level exercise has been conducted on 9<sup>th</sup> and 10<sup>th</sup> December 2016 based on Disaster Management Centre, Colombo harbour and Dikowita Fishery harbour with the participation of Sri Lanka Army, Sri Lanka Navy, Sri Lanka Air force, Sri Lanka Police, Sri Lanka Coast Guard, Sri Lanka Ports Authority, Ceylon Petroleum Cooperation, Ceylon Petroleum Storage Terminal Limited, National Aquatic Resources Research and Development Agency (NARA), Ministry of Fisheries and Aquatic Resources, Ceylon Fishery Harbour Cooperation, Colombo Dockyard Limited.

The study of Activity Plan and procedures laid down in NOSCOP and the assessment of capacity and competency of each individual organization have been done during this exercise. Further, to improve the level of awareness among district level stakeholders around the country following awareness programs have been conducted in divisional secretariat level.



Practical exercise

#### ✓ Responding to Oil Spills

During the past year, there were number of incidents reported and the timely actions have been taken by MEPA with the assistance of relevant stakeholders to mitigate the environmental impact.

#### Oil spill incidents in 2016-2017

Date	Location and Incident	Damage
2 <sup>nd</sup> September 2016	Leakage of oil during oil loading to MT LMS Laxapana at Colombo harbour.	Polluted the sea area around the harbour due to contamination of approximately 2 metric ton of oil.
2 <sup>nd</sup> January 2017	Oil leakage near Nilwala river, Wallawita.	Affected the river due to contamination of about 2 oil barrels
1 <sup>st</sup> June 2017	Oil leakage from SPBM	Contamination of approximately 28 oil barrels
18 <sup>th</sup> June 2017	Oil leakage near Galle face	Polluted the sea area due to contamination of approximately 2 metric ton of oil.
24 <sup>th</sup> June 2017	Oil leakage at Sri Lanka water supply and drainage board, Pattivila	Contamination of approximately one barrel of oil.

## 1.7.6 Financial Aspect and Progress

Treasury grants allocated for the year of 2017 for MEPA and the progress and income up to 30<sup>th</sup> June 2017 are tabulated in Table

### Financial Status of MEPA

	Allocation (LKR)	Actual Expenditure (LKR)	Progress (%)
Recurrent	108,000,000.00	75,310,000.00	70.00
Capital	90,000,000.00	13,909,000.00	15.00
<b>Projects</b>	<b>Allocation (LKR)</b>	<b>Actual Expenditure (LKR)</b>	<b>Progress (%)</b>
Building capacity to manage marine debris for Sri Lanka (YEOSU Project)	1,000,000.00	420,000.00	42.00
<b>Income</b>	<b>Estimation (LKR)</b>	<b>Actual Income (LKR)</b>	<b>Progress (%)</b>
Income	45,500,000.00	16,670,000.00	37.00



## 1.8 STATE TIMBER CORPORATION

The State Timber Corporation was established in April 1968, under the State Industrial Corporation Act No 49 of 1957. The objectives and function of the STC as per Gazette notification no.14796 of 4<sup>th</sup> April 1968 and 178/10 of 5<sup>th</sup> February 1982 and 11907 of 26<sup>th</sup> June 2001 are as follows.

### 1.8.1 Major Challenges of the State Timber Corporation

- Risk of getting local timber particularly for the construction industry as a result of non-availability of required types in areas released by the Forest Department for harvesting.
- Due to the scarcity and high cost of hard wood, alternative materials have been introduced to complement timber such as plastics, cement, ceramics, steel, aluminum and ferrous materials.
- Competition from timber importers and small timber producers.
- To offer the products at an affordable price

#### STATE TIMBER CORPORATION - (FROM 01<sup>ST</sup> JULY 2016 TO 30<sup>TH</sup> JUNE 2017)

Activity	Target		Progress	
	Physical	Financial Rs.'000	Physical	Financial Rs.'000
Logs M <sup>3</sup>	139,162	2,420,186	157,705	3,552,952
Sawn Timber M <sup>3</sup>	5,376	293,280	4,748	243,423
Imported Sawn Timber M <sup>3</sup>	1,550	198,875	319	40,442
Transmission Poles No.	27,632	253,093	29,625	295,113
Sleepers No.	51,465	501,911	22,413	254,691
Round Poles No.	67,502	4,975	169,693	21,052
Fence Posts No.	58,588	3,485	100,901	12,755
Firewood M <sup>3</sup>	60,975	30,938	133,617	66,167
Furniture Rs.Mn.	354'8	474,729	333'9	390,743
Imported Sleepers No.		244,281		
Elephant Poles No.	53,600	134,242	29,485	126,598

#### SOURCES OF TIMBER FOR PRODUCTION (FROM 01<sup>ST</sup> JULY 2016 TO 30<sup>TH</sup> JUNE 2017)

	Crown Land	Private Land
Production of Logs (m <sup>3</sup> )	154,578	3,127
Production of Sawn Timber (m <sup>3</sup> )	4,748	
Production of Transmission Poles (No.)	26,812	2,813
Production of Sleepers (No.)	20,880	1,533
Production of Round Poles (No.)	169,111	582
Production of Fence Posts (No.)	99,318	1,583
Production of Elephant Poles (No.)	13,080	16,405
Production of Firewood (m <sup>3</sup> )	133,007	610

## **1.8.2 Infrastructural Development works of State Timber Corporation**

1. Construct of new quarters at Ampata cost of Rs. 54.9 million
2. Construct of 03 new timber stacking sheds at Kadawatha, Kaldemulla and Pannipitiya Depot cost of Rs. 10.6 million

## **1.8.3 Active contribution to "Wanaropa" National Tree Planting Programme held at Morawewa, Trincomalee district, several programmes were conducted.**

- Supply of 50 tree guards for national event
- Timber plaque was made for Morawewa tree planting programme
- Supply of 350 treated elephant poles for the Morawewa tree planting site
- About 100,000 tree seedlings were distributed among schools, government agencies, 3 forces and other individuals

## **1.8.4 To mark the World Environmental Day, Several Programme were conducted**

- Donation of school Library Furniture to Palugasdamana Sewa Muktha Kandawura Maha Vidyalaya in Polonnaruwa District worth of Rs. 400,000.00
- Donation of book to the Library of Palugasdamana Maha Vidyalaya worth of Rs. 50,000.00
- Distribution of 40 tree guards to Medicinal Orchard in Polonnaruwa Palugasdamana school
- Donation of 6 Agric. equipment sets for schools in Mathale and Polonnaruwa districts through "Thurujana Sisu Bank tree planting program"
- Five lectures were conducted for school children on Timber Conservation in Mathale and Polonnaruwa district
- Following books, published by Research Development and Training Division to 10 school libraries
  - Bio Diversity
  - Sustainable Forest Management Hand Book
  - Wooden Wonder of Sri Lanka
  - Endangered Tree : Ebony
- 50,000 leaflets on common timber species (10) were printed in Sri Lanka to distribute Environment programmes
- Maintaining of the biodiversity park at Minneriya
- One hundred sixty thousand seedlings were produced by nurseries which were managed and maintained by the corporation

## **1.8.5 Contribute active participation to "Sri Lanka Next" Blue Green Era Programme conducted by the Ministry of Mahaweli Development & Environment**

- ✓ 3 million rupees. financial sponsorship was given to "Sri Lanka Next" Blue Green Era programme

## 1.8.6 Research articles, newspaper articles and magazine articles related to the timber & wood industry which were written and published by the STC Officers

- ❖ Research Papers
  - Classification of Some Timber Species in Sri Lanka using Strength Properties (Madhuhansi B.P.H.<sup>1\*</sup>, Amarasekara D.A.B.N.<sup>2</sup>, Ruwanpathirana N.<sup>3</sup> – *Department of Crop Science, Faculty of Agriculture, University of Ruhuna, Sri Lanka & Research Development and Training division of State Timber Corporation* )
  - Economic Factors and Physical Properties of Finger Joint Timber Product to Promote Effective Utilization of Natural Resources – (Abeyasinghe L.S.<sup>1\*</sup>, Pathirana S<sup>1</sup>, and Kumara M.<sup>2</sup>- *Department of Agricultural Economics and Extension, University of Ruhuna, Sri Lanka & Research Development and Training division of State Timber Corporation* )
  - Performance of Finger Jointed Timber Boards with Different Joint Configurations (Sathesraj Kumar.S.<sup>1\*</sup>, De Silva Sudhira<sup>2</sup>, De Silva Subashi GHMJ<sup>3</sup> and Muthumala<sup>4</sup> · *Department of Civil Environmental, Faculty of Engineering, University of Ruhuna & Research Development and Training division of State Timber Corporation* )
  
- ❖ Newspaper Articles were published as follow
  - Know your Timber (*Standard needed for timber identification – C.K. Muthumala – The Nation – 2017/06/25*)- (English)
  
- ❖ Magazine Articles were published as follows
  - Sustainable utilization of timber through timber seasoning & Preservation - ( C.K. Muthumala – *Soba - 2016*)-(Sinhala)
  
- ❖ Exhibitions and awareness programmes were conducted to work following events
  - Sri Lanka Next – Blue green era BMICH
  - World Environmental Day –
    - Sewamuktha Kandawura Maha Vidyalaya
  - Jathika Kala Prasadini Apegama ceremony
  - Gangasiripura Kala Mangalya – AGA - Gampola
  - Exhibition stalls made for future dreams programme conducted by Dept. of Education
    - Haliela M.M. Vidyalaya – Badulla
    - C.W.W.Kannangara College – Borella
    - Royal College – Polonnaruwa
    - Sumangalaodaya Vidyalaya - Galle
  - 106 Timber Identification reports were issued as follows (252 timber spp.)
    - Spp. Identification -183
    - Moisture content -41
    - Timber Density -20
    - Boron Treatment Test -12
    - CCA/CCB Treatment Test -01
    - Timber Mechanical Property Reports -01
    - Technical Reports -06

### **1.8.7 Training programmes were conducted by Timber Technology Training Institute (TTTI)**

- ✓ TTTI provides a vast range of training programmes for employees in various fields. In the year 2016 the number of employees who were trained at the Training Institution were 186 Nos. The cost of training was Rs.1.2 million in 2016.

The conducted training programs in TTTI are mentioned as follows

• Trainings for newly recruits	-	25
• Trainings of timber grading	-	99
• Computer training programs	-	29
• Trainings on nursery management	-	33
• Trainings on basic concepts of Human Resource Management at head office (TTTI)	-	572
• Other various training programs in external training institutions	-	287

**The cost of external training programmes was RS. 1,173,280 in year 2016**

## 1.9 GEOLOGICAL SURVEY AND MINES BUREAU

Progress Reporting from July 2016 to June 2017

### 1.9.1 Geology Division

#### 1.9.1.1 Printing of Geological Maps

Publishing of the geological maps covering entire Sri Lanka is one of the major functions of the Bureau. The geological maps which contain the geo-information of the terrain are used in a wide range of activities including mineral and ground water exploration, major construction and civil engineering works and preparation of landslide hazard maps etc. The GSMB completed the printing of all 21 geological maps (1: 100,000 scale) covering the entire country in year 2014 and preparation of 04 no. of 1: 250,000 scale geological maps were completed within year 2016 and published in December 2016 (Fig. 1).

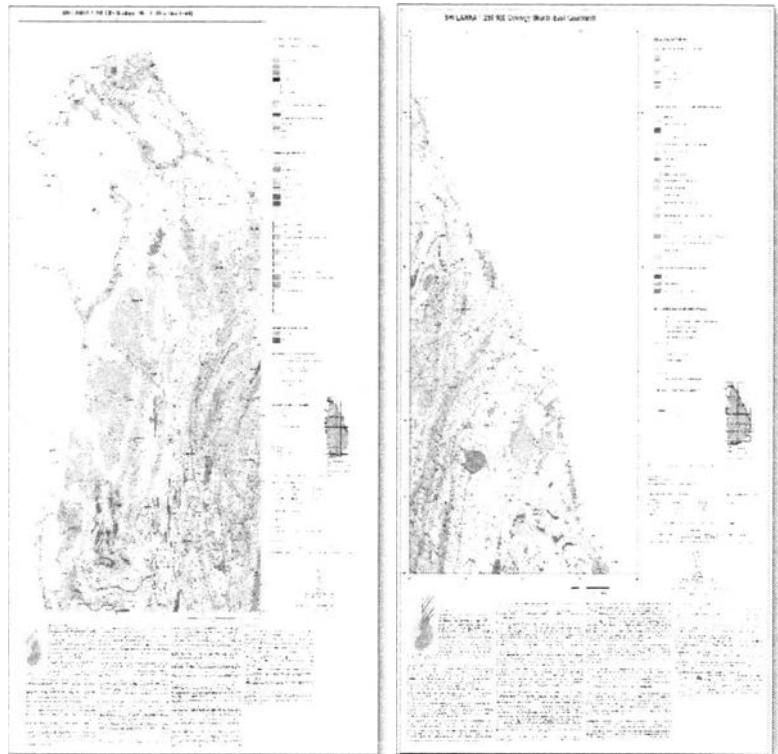


Fig.1: 1:250 000 Geological Maps

#### 1.9.1.2 Quaternary Mapping Program

The 'Quaternary' period of the geological time scale span from about two million years ago to the present. The quaternary formations of Sri Lanka are mainly restricted to coastal sediments, alluvial sediments in the flood plains and include soil formations. Yet, these formations are highly significant as they include economically important clay and sand deposits, coral deposits, the fertile soil cover and ground water bodies. The Geological Survey & Mines Bureau launched a project entitled "Quaternary Geological Mapping" in 2008.

#### 1.9.1.3 Drilling in Puttalam and Kalpitiya

Detailed Drilling in Puttalam and Kalpitiya sheets were completed. Two drill holes were completed in Attavilluwa and Sirambiadiya areas around Puttalam. Field work was carried out from 30<sup>th</sup> June 2016 to 26<sup>th</sup> August 2016 and a drill holes were completed in Eluwankulam area around Puttalam whereas field work of Kalpitiya sheet was carried out from 09<sup>th</sup> February to 23<sup>rd</sup> June 2016. Due to greater depth of the hole, it was not possible to drill the other two planned locations within the allocated time frame and budget. Therefore, it is proposed to continue these holes along with the next year programme.

#### 1.9.1.4 Compilation of Quaternary Maps

About 75% of map compilation of Puttalam and Silawatturai Sheets maps have been completed during the second quarter of the year. Compilation of data on Kalpitiya, Hambantota-Tangalle and Tissamaharama sheets have already been completed.

#### 1.9.1.5 Printing and Publishing of Quaternary Maps

Field work and Compilation work of 1:50 000 scale quaternary maps including Matara, Kalutara and Ambalangoda-Balapitiya sheets have been completed during the previous years and printing of those 03 maps was done by end of year 2016 and now available for public.

Sampling	Compilation	Printing and Publishing
Kakirawa sheet	Anuradapura- Polonnaruwa sheet	Rakwana- Tangalle sheet
Vavuniya sheet		

Compilation	Drilling	Printing and Publishing
Puttalam sheet	Puttalam sheet	Matara sheet
Silawatturai Sheet	Kalpitiya sheet	Kalutara sheet
		Ambalangoda-Balapitiya sheet

#### 1.9.1.6 Soil Geochemical Mapping Programme

The soil geochemical mapping programme was initiated in year the 2008 to study the geochemical characteristics of soil. These maps are useful in mineral exploration, environmental monitoring, and agricultural research and in geo-health hazard studies. Geochemical mapping work is being carried out on 1:50,000 scale base maps. Two soil samples are collected from the surface and 2 m depth, for each 1 km<sup>2</sup> grid area at each 4 km<sup>2</sup>. The chemical properties are analyzed using the Atomic Absorption Spectrophotometer (AAS) and the Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

#### 1.9.1.7 Field work of Soil Geochemical Mapping Programme

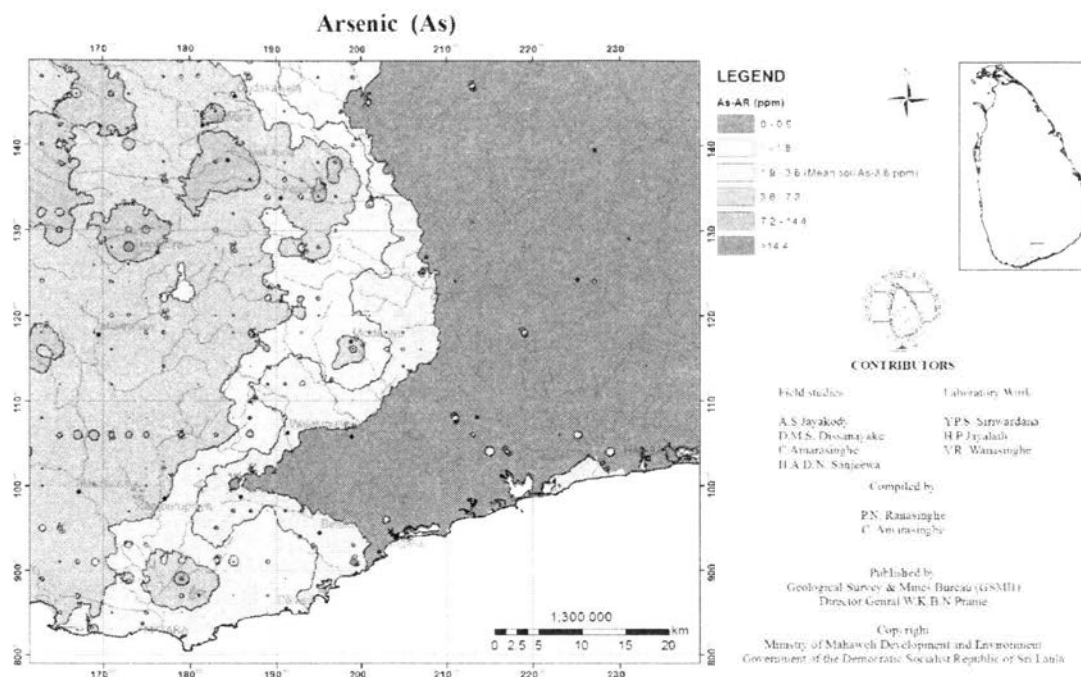
The field work of sheet no. Kakirawa (1:500,000) scale was completed by second quarter of the year 2016 and field work of Vavuniya sheet is initiated in second quarter of 2017 and still in progress.

#### 1.9.1.8 Laboratory work of Soil Geochemical Maps

Analytical work Sheet No 08 (Anuradapura- Polonnaruwa) and sheet No 06 is in progress.

#### 1.9.1.9 Compilation and Printing of Soil Geochemical Maps

Printing of the Geochemical Atlas of Sheet No 20 (Rakwana- Tangalle) using analytical data of six 1,50,000 sheets Thimbolketiya, Matara, Rakwana, Tangalle, Morawaka and Hambantota has been completed and the Atlas will be available for sale after the proposed launching ceremony (Fig.2).



Published Geochemical Map of Rakwana-Tangalle

#### 1.9.1.10. Minerals Year Book

Data collection for the “Minerals Year Book 2015” has been done during year 2015 and compilation was almost completed by the end of year 2016. Data collection and analyzing for Mineral Year Book 2016 have been almost completed.

#### 1.9.1.11. Provincial Mineral Surveys

##### *Provincial Mineral Survey of Sabaragamuwa Province*

Under the action plan for 2016 Geological Survey and Mines Bureau (GSMB) carried out a Rapid Provincial Mineral Survey covering Sabaragamuwa province following and continuing the previous Preliminary Survey on Mineral Resources of Sabaragamuwa Province (Siriwardana C.H.E.R., 2003) to fill the gaps in the mineral map of Sabaragamuwa province and to identify new locations of mineral in order to publish new provincial mineral map of Sabaragamuwa. Most of the studied mineral occurrences had been identified in the past studies. At the outset a two month period was allocated to complete the survey in each district. However, considerable numbers of new localities in each of the two districts were identified in this survey. This survey was completed within 60 field worked days and the final report was submitted in January 2017

#### 1.9.1.12. Printing of Provincial Mineral Maps

The printing of Provincial Mineral Map of Central Province was completed by the end of year 2016.

Field Survey	Compilation	Printing
Sabaragamuwa Province	Sabaragamuwa Province	Central Province

## 1.9.2.0. Nuclear Raw Material Survey and Allied Activities

### 1.9.2.1. Car-borne Gamma Ray Spectrometer Survey

IAEA Assisted Nuclear Raw Material Survey using car-borne gamma ray spectrometer was carried out in the topographic sheets of Matale, Dambulla, Elahera, Pallegama, Kandy, Gampola, Mahiyanganaya and Hanguranketha 1:50,000 topographic sheets. Field work of the survey was completed by the third quarter of year 2016. The interim reports have been submitted while the samples are being analyzed at laboratories. The initial field visit was carried out to investigate the thorium and uranium occurrences in Bamabarakotuwa, Rathnapura area. The detailed geological investigation of Thorium anomaly at Naula area which was identified during the carbon gamma ray survey was commenced in third quarter.

### 1.9.2.2. Nuclear Raw Material Survey from Coastal Stretch from Talaimnna to Galle

The nuclear raw material survey from coastal stretch from Talaimnna to Galle which was started at the end of 2016 will be continued in year 2017. The field work upto Wilpattu boundary from Talaimnna has been completed.

<i>Car-borne Gamma Ray Survey</i>	<i>Nuclear Raw Material Survey</i>
Matale	Talaimnna to Galle
Dambulla	
Elahera	
Pallegama	
Kandy	
Gampola	
Mahiyanganaya	
Hanguranketha	

### 1.9.2.3. Tsunami Alert Centre and Maintenance of the three Seismic Stations

Although, there were some temporary troubles, three seismic stations [Pallekelle (PALK), Hakmana (HALK) and Mahaknadarawa (MALK)] installed by the GSMB together with other donor agencies are functioning smoothly and data from these stations were transmitted to the Data Center at the Head Office, GSMB. The data availability of the three seismic station was nearly 98% which is in satisfactory level in 2016. The Data Center has successfully responded to public complaints on earth tremors, earth vibrations and Indian Ocean earthquake events.

Although there are was a lightning protection system was available at PALK site currently, still PALK is badly effected by lightning. Therefore, CTBTO and the UCSD with the assistance of the GSMB have planned to upgrade the available lightning protection system at the PALK. A site visit was made by chief engineer of the Project IDA, UCSD and a consultant engineer from CTBTO together with GSMB officers to prepare a project proposal on October 2016. The upgrading will be done in 2017. The trouble shooting activities at GFZ (MALK and HALK) seismic stations included (1) problem with the power system at MALK seismic station (2) VSAT problem at both GFZ stations and BGAN communication problem with MALK seismic station. The communication problems were solved with the assistance (instruments and technical assistance) of GFZ in early 2016. In year 2017, problems were arisen with the VSAT communication links of the HALK and MALK as the VSAT service provider Telkomsel has switched the Telkom2 satellite to Telkom3S without prior notice to GFZ on April 8<sup>th</sup> 2017. The foot print of the new satellite shows that it does not cover the Sri Lankan landmass. As a temporary solution for this problem mobile connections were established at two stations. Now the data is transmitted



through MOBITEL connection. GFZ is in the process of transferring the VSAT communication link to new satellite. For that purpose, existing VSAT antennas have to be replaced and GFZ will bear the cost.

### **1.9.3 Library Activities**

#### **1.9.3.1. Purchasing Library Text Book**

The Library Committee has selected the 33 textbooks purchase for the year 2016. Eight requests from GSMB staff were considered and were selected to be purchased. The estimated cost was LKR 561118/=. Part of the books has been received. Rs. 10 million has been allocated to purchase books for the library in 2017 and preparation of final list of books is in progress.

#### **1.9.3.2. Museum Development**

The proposal of the museum development was submitted to the Director General through the Deputy Director (Geology) And Geological Survey and Mines Bureau. Library and Museum Committee selected the (85 specimens) crystals, Minerals and Rock Specimens from the catalogue of WARD'S Natural Science establishment USA was obtained and duly accessed to the museum and we got approved to purchase these specimens and paid (US\$ 5179.96) for 85 items. These specimens arrived in 2016.

#### **1.9.3.3. Journal Binding**

GSMB library was prepared the 460 sets of old magazines for binding and it's still proceeding in procurement division.

#### **1.9.3.4. Library Digitization Project**

Geological Survey and Mines Bureau was started of the Digital Library Project Phase ii collaborations with National Science Foundation in mid-year 2016 and phase III has been started in year 2017.

##### Phase ii

1. Select documents (Documents types: Technical Reports and other reports, Newspaper Clipping) for scanning and 20000 number of pages selected to scan.
2. Create tag systems for above 20000 pages
3. Start scanning above 20000 pages
4. Rechecked scanning documents are correct
5. Data entered to the DSpace software.

##### Phase iii

1. Select documents (Documents types: Technical Reports and other reports, Newspaper Clipping) for scanning and 50000 number of pages selected to scan.
2. Create tag systems for above 50,000 pages. It's still ongoing.

#### **1.9.3.5. New Library Software (KOHA)**

Geological Survey and Mines Bureau Library is currently using "Automated online Library System" as a Library Software, since 2010, developed by the Sri Lanka Institute of Information Technology in Malabe. This software is commercial software (Software cost is 8,000,000/=) and the annual maintenance cost Rs. 84,000/=. However, AOLS commercial software allowed only limited modifications and customized services.

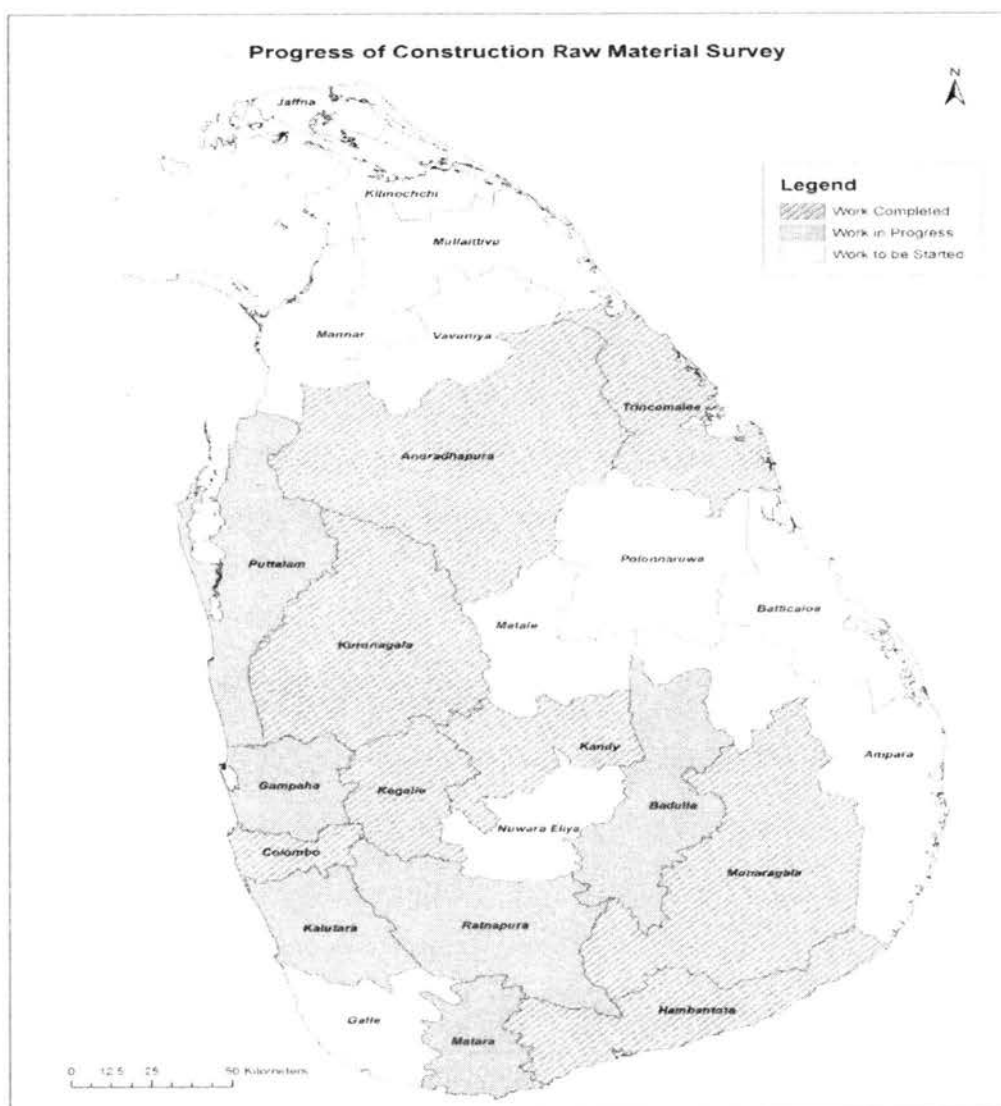
Therefore, it was suggested to introduce software "KOHA": an integrated open source software which is very popular among many Universities, Government Institution, and Research Institutions in Sri Lanka as well as worldwide. Also, this software agrees to International Library rules. (Z39.50, MARC, UNIMARC) The Library has been requested to buy KOHA software in this year. It's still proceeding.

## 1.9.4.0. Projects not Included in Action Plan (2016/2017)

### 1.9.4.1. Islandwide Construction Raw Material Survey.

In order to cater the huge demand of construction raw materials generated due to on-going accelerated development projects in Sri Lanka and to fulfill their future requirements, Geology Division of GSMB started a qualitative and quantitative construction raw material survey for and demands, since end of February 2017. This survey is carried out on the request of the Department of National Planning with their sponsorship of Rs. Sixty Million (Rs. 60 Million). The aim of the survey is to identify suitable locations evaluating the quality and quantity to mine metal/rocks, gravel, soil and sand throughout the Island. Recommendations will be given for suitable sites with highly consideration of residential areas, water sources, landslide prone areas with the environment concern. The priority was given for Kandy Express Way, proposed road at Kurunegala, extended Southern Express Way from Matara, extended Express Way towards Negombo and constructions at Colombo under the Ministry of Megapolis. Progress of the survey is summarized below in Figure.

**current Status of the Islandwide Construction Material Survey**



**Identified Locations suitable for raw materials**

District	Rock/Aggregates		Gravel/Soil		River/Inland Sand	
	All Locations	Recommended (under the conditions)	All Locations	Recommended (under the conditions)	All Locations	Recommended (under the conditions)
Hambantota	62	60	62	61		
Kegalle	222	217	115	115	10	7
Kurunegala	99	94	32	32	11	11
Kandy	155	142	65	63		
Trincomalee	20	14	23	17	1	1
Colombo	72	22	37	1		
Anuradhapura	83	77	54	52		

All locations indicate the mixture of ongoing and new locations

Recommendations have given under the conditions and therefore final figures may be changed.

***Project work on “The Highland – Vijayan Geological Boundary Experiment in Sri Lanka (THICNES) “with GFZ (German) collaboration***

GSMB in collaboration with GFZ, Germany is carrying out a Passive Seismic Study by deploying a network of temporary seismic stations with a view to interpret the subsurface seismic behavior in relation to the contact zone of Highland Complex-Vijayan Complex to diagnose subsurface lithological characteristics and economic potential. Project commenced in Main tasks being carried out under this project are:

- Ensuring the smooth running of temporary deployed seismic network.
- Attending for their maintenance work, data collection and preparation of them.
- Coordination and arranging of visits of German project partners in April and July 2017.
- Coordination of the teams deployed for field work at station monitoring.
- Briefing of project progress for GSMB and project partners.
- Maintaining status records of the instruments, batteries, and other accessories.
- Working with Ministry, National Planning Department and foreign Ministry as the project coordinator and forwarding necessary documents.

The next phase would be the data analysis work with the support of GFZ experts within an identified time frame.

**1.9.4.2. Petrology Laboratory**

Approximately 95 sand sample analysis and number of mineral sample analysis and 100 petrographic studies were carried out.

**1.9.4.3. Analytical Laboratory**

***(a) Chemical Analysis Carried Out for Clients***

One hundred and Ten (110) samples were analyzed consisting of limestone, quartz, dolomite, graphite, feldspar, soil, sand, cement, mica, mineral sand, clay, water, digested rocks, and other metal alloys and body mixtures of tiles and ceramic etc. were carried out by the laboratory on the requests made by various institutions and individuals. This brought Rs 759,581.00 (without taxes) as Analytical laboratory income.

***(b) Chemical Analysis Conducted for the Projects Undertaken by Geology Division***

Analyzed 50 laterite/clay samples under the “2<sup>nd</sup> phase of cement raw material (clay) survey carried out in Mannar District for Tokyo Cement Company Lanka Ltd- Geologists In charge – Mr. A.S. Jayakody.” Income from the analysis is Rs 600,000/= (without taxes)

***(c) Chemical Analysis done for other surveys carried out by GSMB***

Analyzed 20 water samples collected from Morawewa- Trinco area for a ground water project by Mr. Nalin De Silva. Geophysicists. Value of the analysis- Rs 180,000.00 (without taxes)

***(d) Laboratory Accreditation – ISO 17025***

A consultant, Quality Trilogy (pvt) Ltd has been selected by the GSMB for the application of ISO 17025. According to the instruction of the consultant, preparation of Quality manuals, procedure manuals, filling systems and rearranging of the laboratory have been commenced.

**1.9.4.4. Geophysical Work**

During this period the exploration geophysical unit involved in the following projects despite of dwindling capacity due to lack of personnel to involve in the allotted work.

***(a) Groundwater survey in Trincomalee District***

As of the request made by the Presidential Secretariat, a thorough investigation was conducted on the groundwater resources of Trincomalee district with focus on groundwater quality in Morawewa area (analysis is in progress) and possible adverse impact on groundwater regime of Kantale irrigation scheme. Preliminary report has already been submitted.

***(b) Passive and active seismic surveys, GSMB/ GFZ/NOAC and AWI joint projects***

Two projects were conducted with German counterparts GFZ and AWI. Land data acquisition, seismometer installation and recovery of stations were partially conducted by the Exploration Geophysics Unit and the entire coordination with AWI was assigned to Exploration geophysics.

***(c) Geothermal studies***

Continuous studies on geothermal field of Sri Lanka in relation with dyke as source was further continued. as new dykes were identified in Wigamwehera area. Water sample analysis is being conducted with an assistance of Atomic Energy Agency, which is expected to relate the source with dykes. The Structural correlation with Gondwana break-up and dolerite dykes were further established and 14 samples were sent for chronological analysis with courtesy of AWI.

***(d) Workshops***

Workshop was conducted for UVa University and three abstracts were published in Science and Technology conference of Comprehensive Nuclear Test Ban Treaty. July 2017. Vienna.

**Client Responsive Projects and Activities (Income Generating)**

- (a)** Summary of the income generated from various projects during the year 2016 inn given in the following Table. Summary of the income generated from various projects during the year 2016

<b>Name of Project and Client (Company)</b>	<b>Income (Rs Mn.)</b>
Koslanda, Gatamanna & Beliatta Geophysical Investigation of Metal Quarry <b>Maga Engineering (Pvt) Ltd</b>	0.500
Cement Raw Material Survey Poonerine - 2015 <b>Tokyo Cement Company Lanka PLC</b>	
Drilling Project at Jaffna / Sengupitiya <b>Ceylon Electricity Board</b>	1.545
Resistivity Survey at Ragala, Maliboda & Nawalapitiya <b>Ceylon Electricity Board</b>	0.900
Kalugaga - Moragahakanda Drilling, Rock Testing Survey <b>Mahaweli Water Security Investment Program - (Mahaweli Con. Bureau)</b>	3.207
Drilling Investigation at Poonerine - Vallaipadu <b>Tokyo Cement Company Lanka PLC</b>	3.618
Soil Investigation at Deniyaya <b>Department of Health Services - Southern Province</b>	0.338
Silica Sand Exploration Vallipuram & Champi. - Jaffna <b>M.G.M. Mines &amp; Mineral</b>	2.000
Drilling Investigation - Colombo Expressway at Mirigama <b>Neat Solutions (Pvt) Ltd</b>	4.763
Padukka Drilling Project <b>Access Engineering PLC</b>	0.328
<b>Total</b>	<b>17.199</b>

**(b) Point-Pedro glass exploration project**

The field work has been completed and the report writing is in progress.

**(c) Resource Estimations**

- Resource estimation of vein quartz deposit in Matale Kaikawala area.
- Resource estimation and joint field information of inland sand mining at Kotiyakumbura area. Report submitted.
- Resource estimation of dune sand in Pooneryn area on request made by BPP Engineering.
- Resource estimation of the vein quartz deposit located at Ratwatta estate, Matale.

## 1.9.5 Mines Division

### 2.9.5.1. Income generating

Income achieved by Mines Division from July 2016 to June 2017.

Year	Month	Income (Rs. Mn)	Cumulative Income (Rs. Mn)
2016	July	290.233	290.233
	August	127.160	417.393
	September	124.784	542.177
	October	180.343	722.520
	November	88.492	811.012
	December	111.713	922.725
2017	January	177.849	1,100.574
	February	129.282	1,229.856
	March	146.070	1,375.926
	April	188.774	1,564.700
	May	122.241	1,686.941
	June	260.435	1,947.376

## 1.9.6 Educational/Awareness Programmes

### 1.9.6.1. Certificate Course on Industrial Rock Blasting

The Mines Division of the Geological Survey and Mines Bureau has been conducting three month duration certificate course on rock blasting designed for technical, supervisory level engaged in the Sri Lankan rock blasting industry in collaboration with the Defense Ministry, Central Environmental Authority and the University of Moratuwa.

Major objective of this blasting course is to provide better theoretical and practical knowledge about blasting materials, methodologies and social & environmental impacts related to quarry blasting activities. The programme planned to be conducted annually will result in raising the safety standards and blasting productivity.

### 1.9.6.2. Workshops and Seminars

The Mines Division has carried-out several workshops and Seminars at various districts in order to sort out major industrial problems related to mining activities and make aware state organization & license holders about Bureaus regulatory functions according to Mines and Mineral Act. The major objective of these workshops was to improve coordination between GSMB and other state organizations such as Divisional Secretaries during the implementation of Mines and Mineral Act

## 1.9.7 FINANCIAL PERFORMENCES

### INCOME & EXPENDITURE STATEMENT

	2016		2017
	January	December	January – June
	Rs Mn		Rs Mn
LICENSE FEES		224.798	57.257
INSPECTION FEES		247.954	123.011
<b>MINING INCOME</b>		<b>2,051.336</b>	<b>2,389.678</b>
LAB		3.247	0.864
PROJECT		33.328	13.703
<b>GEOLOGY INCOME</b>		<b>36.575</b>	<b>14.567</b>
OTHER		195.596	150.945
<b>OTHER INCOME</b>		<b>195.596</b>	<b>150.945</b>
<b>INCOME TOTAL</b>		<b>2,283.517</b>	<b>2,555.190</b>
GEOLOGY		55.817	25.591
MAPPING		6.770	3.795
PROJECT		13.216	4.074
REGIONAL		197.998	91.115
MINING		33.177	17.631
ADMINISTRATION		385.188	126.113
INCOME TAX		27.316	21.206
<b>EXPENSES TOTAL</b>		<b>719.482</b>	<b>289.525</b>
<b>INCOME OVER EXP.</b>		<b>1,564.035</b>	<b>2,265.665</b>

Actual income of the Year 2016, and Financial Plan of the Year 2017 and 2018.

<b>Income Description</b>	<b>ACTUAL 2016 Rs Mn</b>	<b>BUDGET 2017 Rs Mn</b>	<b>BUDGET 2018</b>
<u>Royalties</u>			
Royalties on Mining	1,578.584	1,661.000	3,550.000
<u>License Fees</u>			
Exploration	7.889	15.000	15.000
Industrial	142.381	20.000	82.500
Reserved Mineral	-	-	-
Artisanal Mining	8.201	8.000	8.000
Trading	9.786	7.100	8.500
Export	2.455	2.000	3.000
Transport	54.086	48.500	75.000
Inspection Charges	247.954	228.000	245.000
<u>Other Operating Income</u>			
Test Blast	4.737	10.000	10.000
Mining Refund (Service charge)	0.038	0.050	0.500
Sundry Income Mining	0.407	30.000	0.500
Export of Samples	0.561	1.500	1.500
Conducting of blasting Courses	0.454	0.500	0.500
<u>Geoscientific Projects</u>			
Drilling, geological and geophysical projects	33.328	70.000	50.000
Analytical laboratory	2.692	12.000	3.000
Petrology laboratory	0.556	8.000	1.000
Geotechnical laboratory	0		
Library	0.417	0.350	0.500
Other geological and geophysical projects	0		-
<u>Other</u>	188.983	178.600	196.460
<b>TOTAL INCOME</b>	<b>2,283.509</b>	<b>2,300.600</b>	<b>4,250.960</b>



## 1.10 CENTRAL ENGINEERING CONSULTANCY BUREAU

Achievements up to the end of June 2017 –Status of a few major projects undertaken.

### 1.10.1 Consultancy Division

1. **Matara – Katharagama Railway Extension Project**  
Matara – Beliatta Sector: 80% of the services completed. The total cost of works is Rs.40 Billion.
2. **Construction of National Stroke Centre at Base Hospital, Mulleriyawa**  
The total cost of this project is Rs.1, 220 Million. The progress achieved is 40%.
3. **Kaluganga Head Works Development Project**  
The total cost of this project is Rs. 12,723 Million. The progress achieved is 72%.
4. **Broadland Hydropower Project**  
CECB is responsible for the review of design and supervision of construction of this project. The total cost of this project is Rs. 11,480 Million. The progress achieved is 34.2%.
5. **Construction of AVIC Residential Project, Colombo 3**  
CECB is responsible for technical support from the design office for review of the cuments and resident supervision of this Rs.25 Billion project. Progress achieved by CECB is 75%. The client is Avic Hotels Lanka Ltd.
6. **Construction of Proposed Prison Complex at Angunakolapelessa.**  
CECB is responsible for providing total consultancy services for this Rs. 3,000 million project. **This Project has been successfully completed.**
7. **Uma Oya Multipurpose Development Project**  
The total cost of this project is Rs. 71.4 Billion. The progress achieved is 78%
8. **Manning Market Relocation Project at Peliyagoda**  
The total cost of this project is Rs. 4 Billion. The progress achieved is 20%.
9. **Kotelawala Defence University Hospital Project**  
The total value consultancy fee is Rs. 220 Million.  
**This Project has been successfully completed.**
10. **Defence Head Quarters Complex Project at Akuregoda**  
The total cost of this project is Rs. 43 Billion. The progress achieved is 77.3%.
11. **District Secretariat Building Complex at Narahenpita**  
The total cost of this project is Rs. 2,515 Million. The progress of services achieved is 80%.
12. **Design of Jetty at Naval Dock yard at Trincomalee**  
The total cost of this project is Rs. 3,000 Million. The progress achieved is 40%.
13. **Proposed National School at Polonnaruwa**  
The total cost of this project (Stage 1) is Rs. 315 Million. The progress of services achieved is 75%.
14. **Extension of Southern Expressway Project-Matara to Beliatta and Mattala to Hambantota**  
The total cost of this project is Rs. 255 Billion. The progress of services achieved is 42%.
15. **Central Expressway Project – Meerigama to Kurunegala**  
The total cost of this project is Rs. 137 Billion. The progress of services achieved is 3.4

## 1.10.2 Construction Division

1. **Construction of Morana Reservoir**
  - Progress achieved is 61%. The total cost of this project is Rs.1, 209 Million.
2. **Design and Construction of National Environmental Secretariat at Battaramulla**
  - The total cost of this project is Rs. 1,126 Million. Progress achieved is 97%.
3. **Construction of Vidyalankara International Buddhist Conference Hall at Vidyalankara Pirivena, Kelaniya**
  - The total cost of this project is Rs. 685 Million. Progress achieved is 54%.
4. **Provincial Level Sports Complex at Rathnapura**
  - The total cost of this project is Rs. 406 Million. Progress achieved is 64%.
5. **Construction of Proposed Nephrology, Dialysis & Transplant Unit at Teaching Hospital, Karapitiya**
  - The total cost of this project is Rs. 790 Million. Progress achieved is 39%.
6. **Construction of Accident & Emergency Treatment Unit Teaching Hospital in Jaffna.**
  - The total cost of this project is Rs. 531 Million. Progress achieved is 57%.
7. **Construction of Maternity Ward Complex - G.H-Kurunegala (Stage -III)**
  - The total cost of this project is Rs. 915 Million. Progress achieved is 26%.
8. **Design & Construction of Head Office Building for Ministry of Health.**
  - This is a sixteen storied building with two basements.
  - The total cost of this project is Rs. 3.355 Million. Progress achieved is 11%.

## 1.10.3 International Division

1. **Proposed Extension and Refurbishment of Sri Lankan High Commissioners Residence in Malaysia.**
  - The total cost of this work is Rs. 56 Million. Progress achieved is 95%.
2. **Renovation/Refurbishment of Chancery and Official Residence of Sri Lanka High Commissioner in Myanmar.**
  - The total cost of this work is Rs. 42 Million.
  - This Project has been successfully completed.

### Photographs of Some Completed and Ongoing Projects



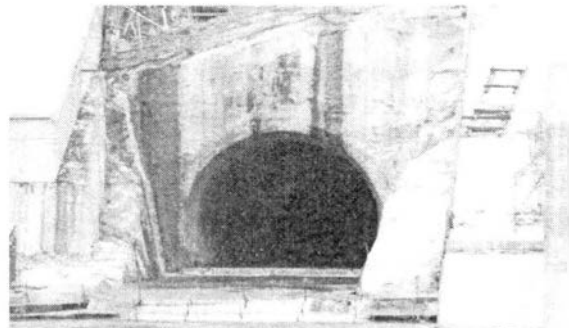
MATARA – BELIATTA RAILWAY EXTENSION PROJECT



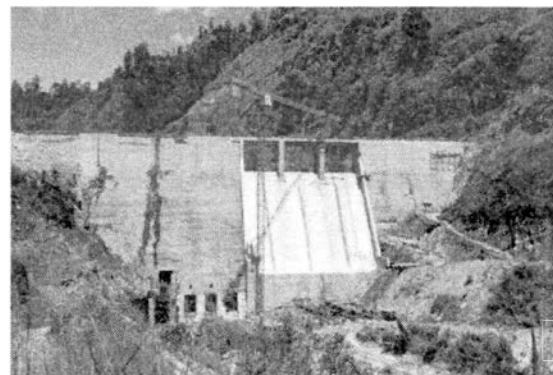
**AVIC ASTORIA LUXURY RESIDENCIES**



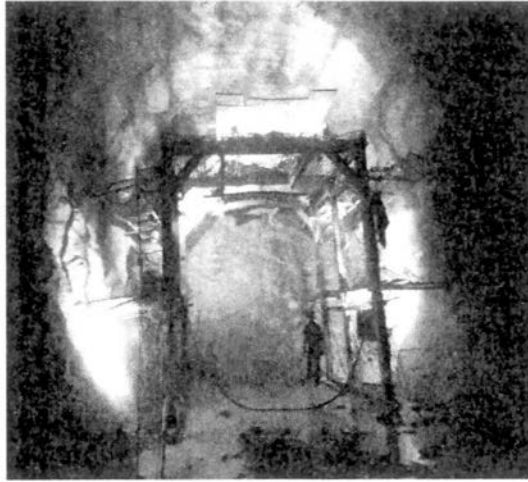
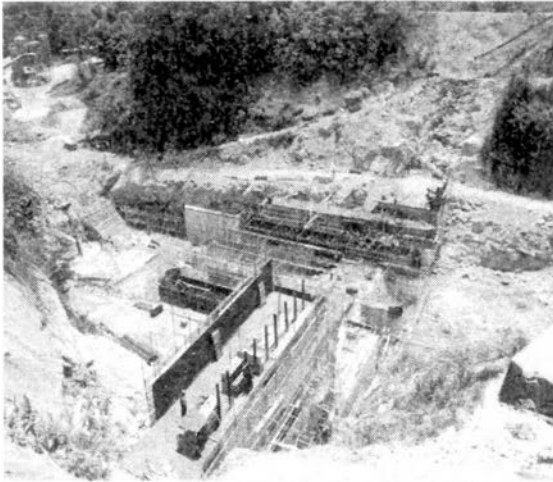
**KDU HOSPITAL PROJECT**



**KALUGANGA HEAD WORKS DEVELOPMENT PROJECT**



**UMA OYA MULTIPURPOSE DEVELOPMENT PROJECT**



**BROADLAND HYDROPOWER PROJECT**



**EXTENSION OF SOUTHERN EXPRESSWAY PROJECT – MATARA TO BELIATTA AND**

#### 1.10.4 Construction Projects



**DESIGN AND CONSTRUCTION OF NATIONAL ENVIRONMENTAL SECRETARIAT AT BATTARAMULLA**

## 1.11 MAHAWELI CONSULTANCY BUREAU

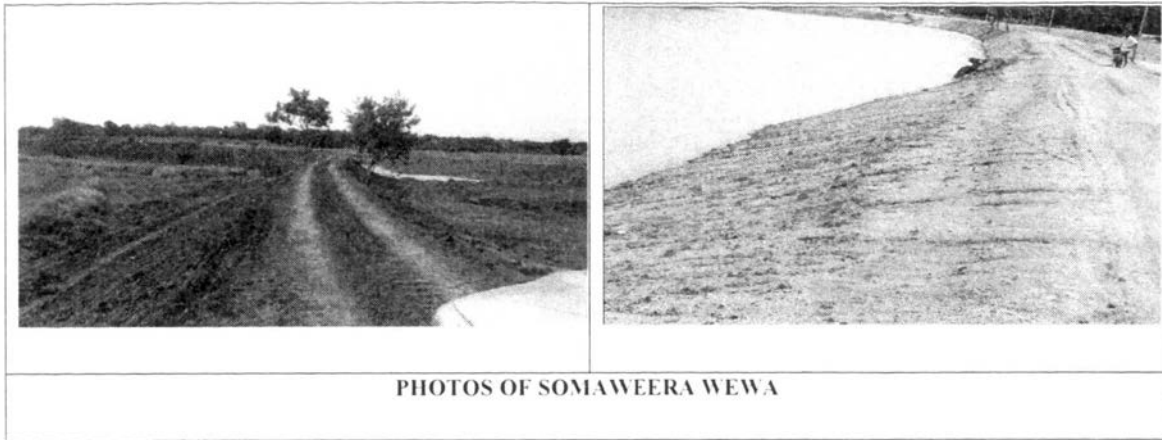
### 1.11.1 Construction Division

Major Activities performed during the period 01/07/2016 to 30/06/2017

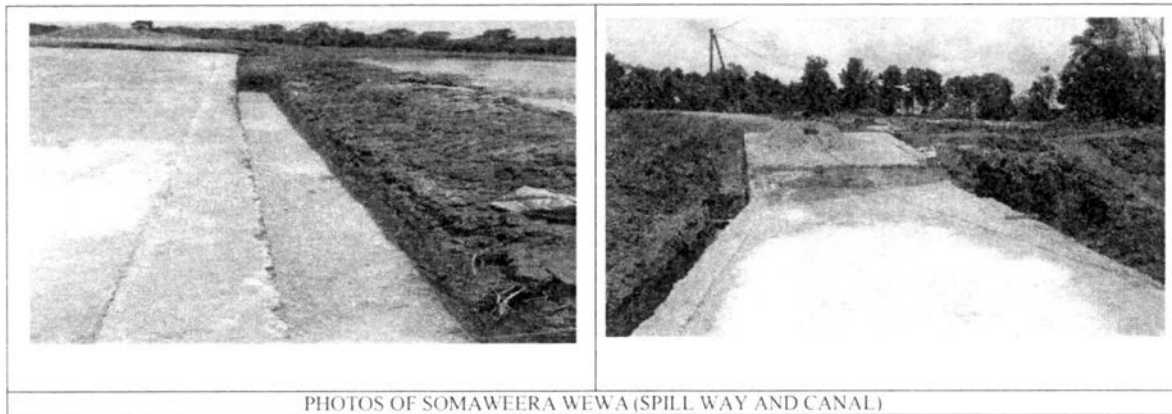
NO	PROJECT NAME	CONTRACT VALUE	PROGRESS
01	<b>MEDIRIGIRIYA LAKES :</b>		
(I)	Rehabilitation of Somaweera wewa Down Stream in Madirigiriya Divisional Secretariat Division	3.8 Million	100%
(II)	Rehabilitation of Somaweera wewa in Madirigiriya Divisional Secretariat Division	7.9 Million	100%
(III)	Rehabilitation of Pathola Kotuwa wewa in Madirigiriya Divisional Secretariat Division	5.2 Million	90%
(IV)	Rehabilitation of Ekamuthugama-Dimuthu wewa (37-1) in Madirigiriya Divisional Secretariat Division	5.6 Million	95%
(V)	Rehabilitation of Ekamuthugama – Dimuthu wewa (37 )in Madirigiriya Divisional Secretariat Division	7.6 Million	95%
02	<b>PROPOSED CIRCUIT BUNGALOW AT MORAGAHAKANDA – MORAGAHAKANDA KALUGANGA DEVELOPMENT PROJECT</b>	82 Million	10%
03	Construction of the proposed observation center Moragahakanda Kaluganga Development Project	130 Million	5%



PHOTOS OF PATHOLA KOTUWA WEA



PHOTOS OF SOMAWEERA WEA



PHOTOS OF SOMAWEERA WEA (SPILL WAY AND CANAL)

### 1.11.2 Consultant Recruitment Division

Major Activities performed during the period 01/07/2016 to 30/06/2017

Project Activity	Description	Claimed (Rs.)	Received (Rs.)
Provision of Services for Moragahakanda Reservoir Project between Sino Hydro Corporation Limited and MCB (Pvt) Ltd	Consultancy Services	17.4M	14M
Reviewing of Design and Construction Supervision of Head Work Moragahakanda Reservoir (Local)	Consultancy Services	18.1M	16.8M
Reviewing of Design and Construction Supervision of Head Work Moragahakanda Reservoir (Foreign)	Consultancy Services	127M	87.5M

## 1.11.3 Project Management Division

### 1.11.3.1 Completed Projects 2016

#### ❖ **Initial Environmental Examination (IEE) Study – Thalpitigala Reservoir Project**

In Uma oya Multipurpose Development Project (UOMDP), it was proposed to divert 145 MCM water from Uma Oya to Kirindi Oya to address the water scarce city in the south-eastern dry zone. Diversion of water from Uma oya to Kirindioya may result in a scarcity of water for the downstream users of Uma oya, especially the Bathmedilla Irrigation Scheme with a command area of 810 ha. Central Environmental Authority has laid down a condition that makes it mandatory to ensure that the water requirements of the inhabitants in the lower reaches of Uma Oya are fulfilled, especially the farmers that comes under the Bathmedilla Irrigation Scheme.

In order to address the above mentioned environmental issue, the Ministry of Irrigation and Water Resources Management propose to construct a new reservoir (Thalpitigala reservoir) upstream of the BathmedillaAnicut that would enable better management of water demands of the downstream users using the excess water spills from Puhulpola and Dyraba dams. Further, this upstream reservoir can be used to retain part of the sediment carried in Uma Oya thereby preventing siltation of the Rantambe reservoir. The project will also make use of the head difference between the Thalpitigala dam site and Bathmedillaanicut to **generate around 51.3 GWh of hydropower annually through a hydro power plant having an installed capacity of 15 MW.**

The proposed Thalpitigala reservoir project involves the construction of a concrete gravity dam across Uma Oya, approximately 3 km upstream of the existing BathmedillaAnicut (near the village Hunuketiya), to establish a 15.56 mcm capacity reservoir at full supply level of 454 m. The height of the proposed dam will be 45.7 m and it will result in the inundation of 96 ha of land confined mainly to the banks of the deep river valley.

*MCB has undertaken the IEE study of the above project. During the IEE study existing physical, biological and social environmental conditions of the project area were studied, potential environmental impacts were identified and possible mitigatory measures were proposed. Further, an environmental monitoring plan prepared for monitoring activities to be performed during pre-construction and post construction period. The IEE study was completed and CEA has granted final approval in June 2016.*

#### ❖ **Socio Economic Survey & Preparation of RIP for Yan Oya Reservoir project**

The proposed Yan Oya reservoir project involves the construction of an earth dam across Yan Oya, upstream of the existing Yan Oya diversion weir at Pamburugaswewa, to establish a 169m.cm capacity reservoir. The objective of yanoya reservoir project is to harness water from yanoya to provide gravity fed irrigation facilities to lower command area of padaviya reservoir and up to last minor tank to be fed under the project.

*MCB has carried out socio-economic survey and Resettlement Implementation Plan (RIP) for the proposed yanoya reservoir. During this study primary data were collected at household level and focus group discussions were carried out. Further, secondary data were collected from grama niladari levels and divisional secretariat level and identified the total population get affected by the construction of this project. Then identified the area of land to be acquired and resettlement locations and the compensation packages were prepared. This contract was completed in May 2016*

### 1.11.3.2 Projects are in progress

#### ❖ **Environmental Impact Assessment (EIA) for Proposed Lower MalwathuOya Reservoir Project**

The key objective of the proposed MalwathuOya Reservoir project is to increase the agricultural production of the Northern Province by improving the cropping intensities of Giants tank and Akattimurippu tank and develop new lands for agricultural purposes under the new reservoir. With the

increase in cropping intensities of Giants tank and Akathimuruppu tank the socio-economic benefits of the farming community will be increased.

*MCB has undertaken the EIA study of the above project. The EIA study is at the final stage and supposed to be completed in December 2017.*

#### **❖ Environmental Impact Assessment (EIA) for Proposed MaduruOya Right Bank Development Project**

The primary objective of the Maduru Oya Right Bank development is the establishment of an integrated rural society which is able to sustain, through the medium of irrigated agriculture and associated activities, an acceptable standard of living conditions while contributing to the economic well-being of the country as a whole.

*MCB has undertaken the EIA study of the above project. During the EIA study existing physical, biological and social environmental conditions of the project area were studied, potential environmental impacts were identified and possible mitigatory measures were proposed. Further, an environmental management plan and monitoring plan were prepared for pre-construction and post-construction activities. The EIA study is at the final approval stage and expected to obtain the EIA approval in September 2017.*

#### **❖ Strategic Environment Assessment (SEA) of Water Resources Development and Irrigation Development**

The proposed SEA is to identify and assess the likely significant effects on the environment of implementing the proposed water resources and irrigation sector plan, as well as the most important environmental and natural resource-related constraints bearing on the implementation of any related constraints bearing on the implementation of any related programmes in the study area.

The main objectives of this SEA study are to conduct an initial desk based assessment of the environment, social and economic sustainability of the portfolio of projects earmarked for implementation by the MIWRM during the next two decades to identify the feasibility of individual projects. Then, identify a set of feasible projects in consultation with the MIWRM and conduct the detailed SEA for these projects to prepare a list of priority projects ranked based on the predicted impacts, where the projects that will have the least impacts receiving a higher rank and Provide recommendations as to how the identified negative effects of individual projects can be minimized as well as ways to enhance the projected benefits. Provide recommendations on how to enhance the capacity at regional and national level to ensure effective and sustainable environmental management of the projects implemented by the Irrigation Department.

*MCB is undertaking this SEA study and an interim report has already been submitted to the Ministry of Irrigation and Water Resources Management.*

#### **❖ Contract on Compliance monitoring, Auditing and Reporting services for the Implementation of Environment Management Plan prepared for the Uma Oya Multipurpose Development Project Head Works.**

The main objective of this assignment is to carry out a compliance monitoring on Environment Management Plan (EMP) prepared by the Ministry of irrigation and Water Resources Management. The main contractor of Uma Oya Multipurpose Project (UOMDP), FARAB Company has awarded this contract to the MCB.

MCB's scope of services are;

- (1) Compliance Monitoring,
- (2) Auditing,
- (3) Preparing non-compliance notice,
- (4) Reporting.



MCB's responsibility is to only ensure that the contractor complies with the EMP that has already been developed for the Uma Oya head works and we do not take responsibility for the adequacy of the EMP to prevent any other impacts that may arise as a result of the project.

*MCB is undertaking this project and monthly reports are submitting to the FARAB Company.*

#### **❖ Consultancy Services for the study of water resources development in Northern Province**

In order to address the key problems in the Northern Province, the supply of water as the main resource affecting development, His Excellency, the President of Sri Lanka has taken initiation to find a solution to meet the increase water demand for Irrigation, drinking and industrial use in the Northern Province, specially to fulfill the drinking water deficit in the Jaffna peninsula. Under this consultancy following two proposals will be reviewed.

- Review the proposed River for Jaffna project on Social, Technical and Environmental concern and Carryout feasibility study for implementation of modified "River for Jaffna" project as a supply of drinking water to Jaffna peninsula.
- Review the proposal for development of water resources in ParangiAru and PaliAru basins and formulate a feasible project proposal considering Social, Technical and Environmental issues for providing drinking water for North of Vavuniya & Mankulam area of Mullaitivu district and for providing irrigation water with augmentation of Kurai tank and Vavunikkulam reservoir by building reservoirs in upper ParangiAru basin and in PaliAru basin at suitable locations and diverting required amount of water from ParangiAru to PaliAru via cutting a trans basin channel.

*MCB is carrying out the above feasibility studies and inteim report completed in April 2017. The draft final report is to be submitted in September 2017.*



# **PART II**

## **Progress of Multipurpose Development Projects.**

## **2.1 MORAGAHAKANDA - KALUGANGA DEVELOPMENT PROJECT**

### **2.1.1 Brief Description of Moragahakanda / Kaluganga Reservoir Development Project**

The Moragahakanda / Kaluganga Development Project consist following main activities under phase 1 developments.

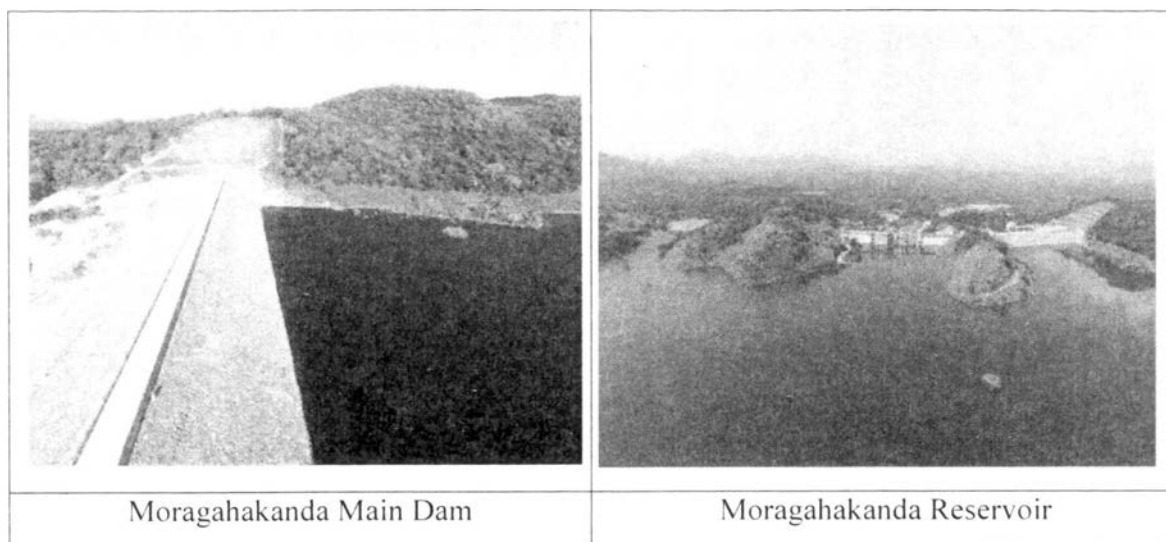
- ❖ Moragahakanda reservoir construction across Ambanganga which include construction of main dam, two saddle dams, spill way, EMC sluice, UEC sluice, 25 MW Hydropower plant and Power Transmission line (16km)
- ❖ Kaluganga reservoir construction across Kaluganga which is a main tributary of Ambanganga. This include two rock fill dams, spill way two sluice for LB & RB canal, another sluice for transfer canal & Tunnel.
- ❖ Construction of transfer canal, tunnel and Upper Elahara Canal (94.5 km) up to Anuradhapura Mahakandara– This has been implemented as a separate project on 11<sup>th</sup> January 2017.
- ❖ Social and Irrigation Infrastructure development in following two resettlement sites.
- ❖ Development area under Kaluganga reservoir (Left bank area 1900ha, Right bank area 1700ha) - System F.
- ❖ Development area under Kaudulla left bank extension (9000ha) - System D.
- ❖ Land acquisition and resettlement of affected families (nearly 3000 families)
- ❖ Implementation of environment mitigation activates given in two EIA reports for Moragahakanda and Kaluganga.

The development activities were commenced in year 2007 and related activates carried out during 01.07.2016 to 30.06.2017 are given below.

### **2.1.2 Moragahakanda Reservoir Head works**

Construction of Rock fill and RCC dams and apparent structures were awarded to Sinohydro Corporation Limited of China as an EPC contract. The contract value is USD 252.3 million and 85% of the contract value is funded by the China Development Bank and 15% from GOSL. In addition to the initial contract value, there are 2 variation claims to be paid for the contractor, USD 10.94 Mn to be paid for the power house variation and the saddle dam excavation variation yet to be finalized.

Details of each item covering Moragahakanda Reservoir Head works Development Project are described below;



Item No.	Description of Works	Work done during 2016.07.01 to 2017.06.30 (%)	Cumulative work done up to 2017.06.30 (%)	Financial Progress during 2016.07.01 to 2017.06.30 (Rs. Mn.)
1.0	Construction of main dam	46.4	99.1	9,028.93
2.0	Saddle dam 1 (including apparent structures such as EMC, EUC, Power House, Spillway etc.)	27.8	99.0	
3.0	Saddle dam 2	Completed in 2010		

### 2.1.2.1 Kaluganga Reservoir Head works

This project is financed by Kuwait Fund for Arab Economic Development (KFAED), Saudi Fund for Development (SFD), OPEC fund for International Development (OFID) and the Government of Sri Lanka.

The contract for construction of Kaluganga reservoir construction was awarded to the Sinohydro Corporation Limited of China on 12<sup>th</sup> march 2014. The contract value is US \$ 124.94 Mn. Work commenced on 2<sup>nd</sup> April 2014.

Details of each item covering Kaluganga Reservoir Head works Development Project are described below:

Item No.	Description of Works	Work done during 2016.07.01 to 2017.06.30 (%)	Cumulative work done up to 2017.06.30 (%)	Financial Progress during 2016.07.01 to 2017.06.30 (Rs. Mn)
2.0	Construction of main dam	54.7	68.8	4,917.42
3.0	Saddle dam	18.0	24.7	

### 2.1.2.2 Downstream Development Works

Two resettlement sites namely System F coming under Kaluganga downstream (3600 ha) and System D under Kaudulla LB extension area (7000 ha) have been developed by using domestic funds (DF). Details of each items are described below.

- **Survey**
  - ❖ Right Bank of Kaluganga
    - Surveying of road network was completed
    - Surveying of canals are 75% completed
  - ❖ Left bank of Kaluganga
    - Surveying of Hamlet centers Ma Oya, Thorapitiya and Wellewela are completed.
    - Surveying of canals are 98% completed
  - ❖ Medirigiriya development area in system D
    - Surveying of canals are 50% completed
- **Building Constructions**
  - ❖ Kaluganga-Right Bank
    - 8 buildings are newly started. In those buildings, one was completed during 2016.07.01 to 2017.06.30.
    - 42 buildings were under construction in Kaluganga Right Bank area at the beginning of 2016.07.01. In those, 16 of them were completed during the period.
  - ❖ Kaluganga-Left Bank (Moragahakanda )
    - 19 buildings were newly started and 7 of them were completed during 2016.07.01 to 2017.06.30.
    - 11 buildings were under construction in LB area at the beginning of 2016.07.01. and all of them was completed during the period.
- **Roads**
  - ❖ Kaluganaga – Right Bank
    - Main Road (surfacing with Asphalt concrete – 10 km) – 97% completed
    - Internal Roads (13 km) – 3km completed with Asphalt concrete. 10km completed up to sub gravel base.
    - Hamlet Roads - 20 km completed
  - ❖ Kaluganga LB (Moragahakanda)
    - Main Road (Road surfacing with Asphalt concrete 27.82 km) – 92 % completed
    - Market Roads (66 km) – 90% completed
    - Hamlet Roads (36.62 km) – completed
  - ❖ Medirigiriya development area in system D
    - Main Road (Road surfacing with Asphalt concrete – 8.5 km) - 85% completed
    - Hamlet Roads (14 km) - completed
- **Irrigation Development work**
  - ❖ Right Bank of Kaluganga
    - Canals - 16 km completed
  - ❖ Left Bank of Kaluganga
    - Canals (65 km) – completed
    - Ridee Ella reservoir – completed
  - ❖ Medirigiriya development area in system D
    - LB branch canal extension (1.3 to 8.0 km) – 98% completed
    - LB branch canal extension (8.0 to 16.0 km) – 55% completed
    - Sub branch canal (4 km) – 30% completed

### 2.1.2.3 Land Acquisition & Resettlement

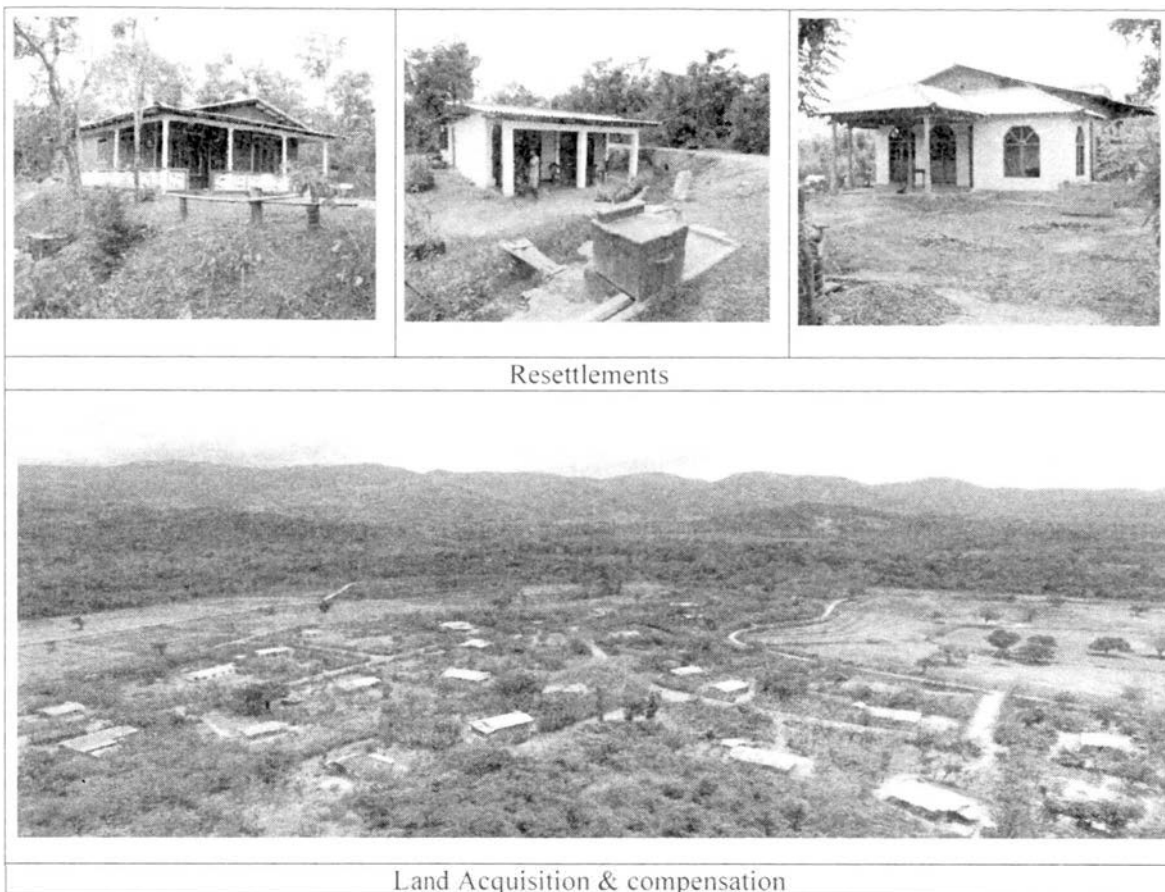
As per the socio economic survey 2874 families will be affected due to both Moragahakanda & Kaluganga reservoir head works projects. Resettlement plan is already prepared and it is distributed among the affected families. Land acquisition work is in progress.

The following table illustrates the resettlement activities related to Moragahakanda reservoir effected families during 2016.07.01 to 2017.06.30;

GN Division	No of families resettled		Families received Rs. 16 lakhs instead of irrigable and highlands		Families received Rs. 12 lakhs instead of Irrigable lands	
	Cumulative (as at 2017.06.30)	During 2016.07.01 to 2017.06.30	Cumulative (as at 2017.06.30)	During 2016.07.01 to 2017.06.30	Cumulative (as at 2017.06.30)	During 2016.07.01 to 2017.06.30
Thalagoda	326	89	85	59	44	8
Kadawatha	252	52	70	56	95	48
Kambarawa	305	91	98	64	38	38
Galporugolla	155	57	69	37	29	26
Elagamuwa	237	74	88	50	49	48
Medhapihilla	180	152	130	79	31	29
Kongahawela	36	36	33	33	7	7
Moragolla	0	0	0	0	0	0
Maragamuwa	12	12	12	12	1	1
Millaghamulathenna	135	135	109	109	21	21
Rajawela	2	2	0	0	0	0
<b>Total</b>	<b>1640</b>	<b>700</b>	<b>694</b>	<b>499</b>	<b>315</b>	<b>226</b>

Resettlement activities related to Kaluganga reservoir effected families during 2016.07.01 to 2017.06.30;

GN Division	No of families resettled		Families received Rs. 16 lakhs instead of irrigable and highlands		Families received Rs. 12 lakhs instead of Irrigable lands	
	Cumulative (as at 2017.06.30)	During 2016.07.01 to 2017.06.30	Cumulative (as at 2017.06.30)	During 2016.07.01 to 2017.06.30	Cumulative (as at 2017.06.30)	During 2016.07.01 to 2017.06.30
Karandamulla	193	18	1	1	3	3
Guruwela	11	1	0	0	0	0
Galgedawela	29	29	2	2	0	0
Rawanagama	85	85	9	9	7	7
Gonawela	75	75	7	7	3	3
Pallegama	169	169	16	16	18	18
Miranketiya	139	139	4	4	15	15
Halminiya	26	25	0	0	0	0
Imaduwa	68	68	0	0	0	0
Gangahenwela	28	28	1	1	0	0
Rambukoluwa	55	55	5	5	0	0
Akarahediya	3	0	0	0	0	0
<b>Total</b>	<b>881</b>	<b>692</b>	<b>45</b>	<b>45</b>	<b>46</b>	<b>46</b>



#### 2.1.2.4 Land Acquisition & compensation

The following describes the compensation paid in each development area during 2016.07.01 to 2017.06.30 period:

- Moragahakanda - Rs. 1,415.75 million (for 2627 lots)
- Kaluganga - Rs. 1,330.00 million (for 1269 lots)
- Medirigiriya - Rs. 2.00 million (for 28 lots)

#### 2.1.2.5 Environmental Clearance and Impact Mitigation

Environmental impact mitigation measures given in the Moragahakanda - Kaluganga Projects EIA reports have been implemented in parallel to the construction activities since the year 2007. Based on both EIA reports (Moragahakanda and Kaluganga) environmental management plans have also been prepared.

Following activities were implemented during 2016.07.01 to 2017.06.30

##### 2.1.2.5.1 Moragahakanda Agricultural Development Project

In order to mitigate the anticipated environmental impacts, countermeasures proposed for watershed development in Comprehensive Watershed Protection Management Plan are being implemented in parallel to the construction activities since the year 2007 and the progress made regarding these activities during the period from 01.07.2016 to 30.06.2017 is given below.



#### ❖ Implementation of Soil Conservation Methods

- On-farm soil conservation

130 farming lands within the upper watershed of Moragahakanda reservoir have been identified for promoting soil conservation activities on lands under cultivation. Preliminary inspections have been made in 27 lands from the selected 7 G.N. Divisions of the Naula (Divisional Secretariat Area in Matale).

- Off-farm soil conservation

Three locations have been identified: reservation of the Anicut named Alugolla Ihala amuna, stream reservation of Diyagoda Ela and the reservation of Naula spring feeding the Penelaboda tank.

#### ❖ Forestry Development

- Implemented by Department of Forest Conservation

Establishment and maintenance of enrichment plantations, fire resistant forest plantations, fire belts and stream bank plantations have been accomplished by the Department with the funds of Rs. 42,851,374.64 from the project.

#### ❖ Implemented by the Project

Reservation of of Elahara anicut has been enriched by establishing 90 Kumbuk (*Terminalia arjuna*) plants.

#### ❖ Supportive programs implemented by Project for catchment development

- Central Plant Nursery

Around 20,000 plants have been issued for tree planting programs conducted in the watershed by the Central Plant Nursery at the premises of Moragahakanda Development Project and nearly 50000 plants are currently being maintained in the nursery.

- Herbal garden

Over 200 medicinal plants, traditionally used and found in the inundated area due to the construction of reservoir are being conserved in the herbal garden as ex-situ conservation.

## 2.1.2.6 Farm Production and income generation activities

### 2.1.2.6.1 Establishment of Nurseries



3 farmers have been selected as plants suppliers from Opalgala, Andawela and Madiyawela and the project has come to the negotiation with them on the plant species, amount of plants from each species they should produce and the payments. These plant nurseries are expected to produce around 6000 plants from jak, areca nut, cashew nut, coffee, mango, and few forest plants like thimbiri with the technical guidance and supervision of the Project.

### **2.1.2.6.2 Home Gardening**

Almost all the plants purchased by the project from rural plant nurseries are being distributed among the farmers residing in watershed with the intention of improving home gardens. Which will increase the vegetation of the watershed and thereby the watershed functions. 3500 number of plants are distributed. This increases their earning nearly Rs. 90,000/=.

### **2.1.2.6.3 Community infrastructure Development**

As a part of irrigation system rehabilitation, agriculture roads, small tanks and anicuts have been investigated.

### **2.1.2.6.4 Rehabilitation of small tanks**

Two small tanks namely Karawilahena pahala wewa and Halambagahawatta Udathanna wewa have been selected for rehabilitation by dredging sediment deposits.

In addition to small tanks, 3 agro wells in Moragolla have been rehabilitated.

### **2.1.2.6.5 Rehabilitation of small Anicuts**

Provisions have been allocated for two anicuts to be rehabilitated (Opalgala Udubowa amuna and Haduwela amuna). Under rehabilitation of field canals funds are allocated for reinforcement of side walls of two canals namely Opalgala Uda-aswadduma Ela and Lihinipitiya main canal by constructing concrete lining.

### **2.1.2.6.6 Construction of Agriculture Roads**



Construction of 600m long agriculture road in Kapukotuwa G.N. Division has been completed.

### **2.1.2.6.7 Wildlife Conservation**

A financial support of Rs. 69,733,510.41 has been offered for the Department of Wildlife Conservation as per the MoU signed between 2 institutions and the Department has spent Rs.16,302,398.42 on eco-tourism promotion and eco-development activities.

## **2.1.3 Kaluganga Project**

### **2.1.3.1 Buffer Zone Development**

3500 plants were planted in 100 m reservation of Kaluganga reservoir.

#### **2.1.3.1.1 Tree Planting Programme Implemented by the project**

- ❖ Tree planting in river reservation – 4000 No. of plants were planted in the 60m reservation of kaluganga area.

- ❖ Avenue planting, tree planting & landscaping of new town buildings (Police station, Pradesheeya saba building, Divisional secretariats office) were done.
- ❖ 04 Rural plant nurseries were established.

### **2.1.3.1.2 Implemented by the Department of Forestry**

Rs .18.09 million were provided to Department of Forestry according to the MoU that signed between MASL & FD for the enrichment of forest plantation, buffer zone development, establishment of fire belts, boundary demarcation and maintenance of forest plantations.

- ❖ Enrichment planting - 20 ha
- ❖ Maintenance of enrichment planting - 113 ha

### **2.1.3.1.3 Plant Production in Central Plant Nursery**

47000 nos of plants were produced and 9000 plants were issued for tree planting program in the Kaluganga catchment area and resettlement area.

### **2.1.3.2 Soil Conservation Measures**

27 nos of homesteads developed with soil conservation measures in Mahalakotuwa, ilukkumbura, Atanwala, Kahagala etc.. in Kaluganga catchment .0.3 million allowance paid for farmers for motivation in soil conservation measures.

#### **2.1.3.2.1 Rehabilitation of the Small Scale Irrigation Systems and Improvement of Living Condition in the Watershed.**

- ❖ Rehabilitation of 07 nos of anicuts was completed. Rehabilitation of 02 nos of anicuts and one lake was started.
- ❖ 02 nos of Agricultural roads were completed with the length of 8 km.

#### **2.1.3.2.2 Wildlife Conservation Program**

Rs 30.60 million provided under MoU signed between Dept. of Wildlife Conservation and MASL for Kaluganga project during 01.07.2016 to 30.06.2017 period for the following activities;

- ❖ Establishment of the live fence comprising Agave, Citrus, and Boganvila parallel to electric fence
- ❖ Establishment of Central Elephant Control Unit in Guruwela with necessary facilities (started in 2015 and continuing in the year 2017)
- ❖ Establishment and continuation of 9 village elephant control committees (Laggala pallegama, Athulanthota ,Gonawala , Mahapitya, Dewaladeniya, Kajuwatta, Kabaragoimada, Guruwela (no34) and Thorapitiya)
- ❖ Construction of rest rooms and guard rooms for the maintenance people of electric fence
- ❖ Maintenance of the new settlement electric fence 60 km is being continued.

### **2.1.3.2.3 Biodiversity Conservation Program**



- ❖ Removal of invasive species in the project area- salvinia in tank no 04 was removed and commenced compost production unit of Central Plant Nursery.
- ❖ Fish translocation program was done at Kaluganga dam site river diversion location.

### **2.1.3.2.4 Training & Capacity Building for the Officers**

- ❖ Ten awareness programs were conducted on soil conservation & Nursery management
- ❖ Three training programs were conducted for school children on environmental conservation and farm management.
- ❖ Training program about horticultural crops in HORDI(HORANA) for the officers who work the Environment section

### **2.1.3.2.5 Solid Waste Management**

- ❖ Solid waste management programs at Theligamu oya continued.
- ❖ Conducted awareness programs for resettlements on waste separation and composting at household level
- ❖ started solid and liquid waste management program at New Laggala Town area

### **2.1.3.2.6 Obtaining Environment Licenses'**

- ❖ Sand mining license -01
- ❖ Extension of Q1- quarry site license for the contractor of kaluganga dam constructions.
- ❖ Licenses for the quarry site -02
- ❖ Gravel and soil mining license- 04

### **2.1.3.2.7 Timber Removing at Reservoir Bed Area**

4000 no of trees removed in the reservoir bed through the Timber Corporation with the approval of Department of Forest conservation. Temporary access roads also constructed in the reservoir bed area to facilitate the timber transportation.

### **2.1.3.2.8 Guruwela Model Farm**

Construction of farm office building and a building for training purposes with a quarters is completed.

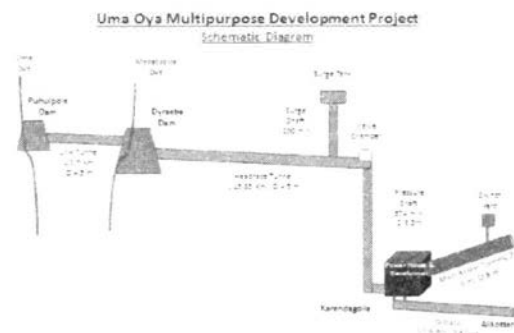
## 2.2 Uma Oya Multipurpose Development Project

### 2.2.1 ANNUAL REPORT 2017

The main objective of Uma Oya Multipurpose Development Project (UOMDP) is trans-basin diversion of 145 MCM of excess water annually from Uma Oya basin to Kirindi Oya basin for alleviating the water scarcity in the southern dry zone without affecting the water users and environment in Uma Oya basin. This will provide water to irrigate around 4500 ha of new land and to around 1500 ha of existing agricultural land in Moneragala District and will provide 30 MCM of drinking and industrial water requirements in Moneragala and Hambantota Districts. An underground power station with an installed capacity of 120 MW will be constructed which will add around 251 GWh of electrical energy annually to the National Grid. Further, in Badulla District, drinking water will be provided to Bandarawela area from Dyraaba reservoir and to Atampitiya area from Puhulpola reservoir.

The Project is comprised of two major components, viz. the Head Works and the Downstream Development Works in Kirindi Oya Basin.

#### The Head Works



The Head Works of the Project comprised of construction of:

- ❖ Two Reservoirs one across Uma Oya at Puhulpola (35 m high) and the other across Mathatilla Oya in Dyraaba (50 m high)
- ❖ 3.718 m long Link Tunnel connecting the two reservoirs
- ❖ 15.446 m long Headrace Tunnel from Dyraaba to Randeniya
- ❖ 618m high Vertical Pressure Shaft
- ❖ 150 m high Surge Shaft and 15 m diameter Surge Chamber
- ❖ 120 MW Underground Power Station
- ❖ 3.600 m long Tailrace Tunnel
- ❖ Switch Yard and 23 km long 132 kV Transmission Line connecting to Badulla Grid Substation and

Other infrastructure for the Project consisting of 14 km long access roads, construction of residential camps, office complexes and site laboratories at respective work sites including necessary facilities. Including 12 months of defects liability period.

Construction of Head Works is done on an EPC Contract and the contract commencement date was 15<sup>th</sup> March 2010 and the Environmental Approval for this component was given on 12<sup>th</sup> April 2011. The original scheduled date of completion of construction was 15<sup>th</sup> November 2015 and the date of completion of UOMDP has now been revised to 30<sup>th</sup> June 2019 including 12 months of defects liability period.

**Major Activities performed under Head Works Component during the period from 1st July 2016 to 30th June 2017:**

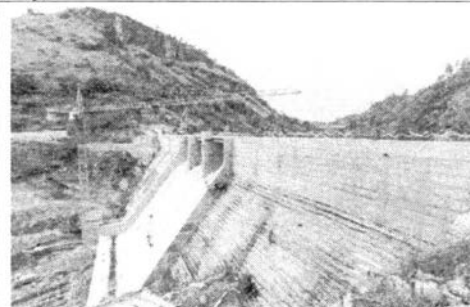
Puhulpola Dam



**Puhulpola Dam under construction**

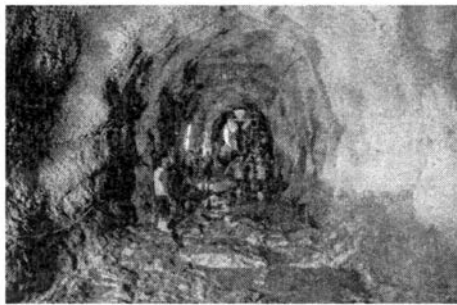
A section of Welimada – Badulla road will be going under water once this reservoir is impounded. This section of Replacement Road is now complete and now open for public. Construction of the dam is under way and progress up to end of June 2017 is 54.5%.

Dyraaba Dam



**Dyraaba Dam**

Constructions work of Roller Compacted Concrete (RCC) dam at Dyraaba was complete by end of June 2017.



Shotcreting in Link Tunnel

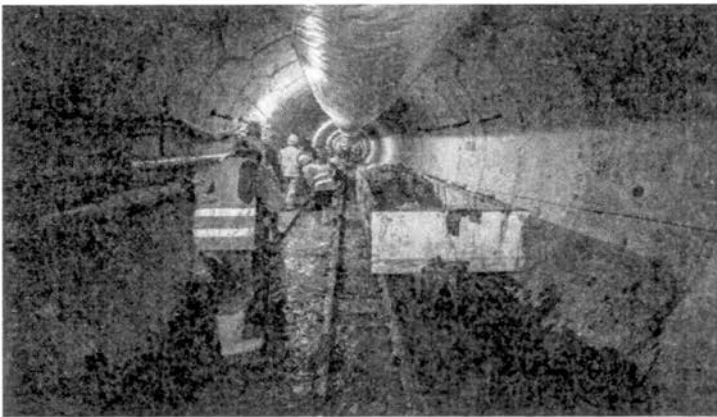
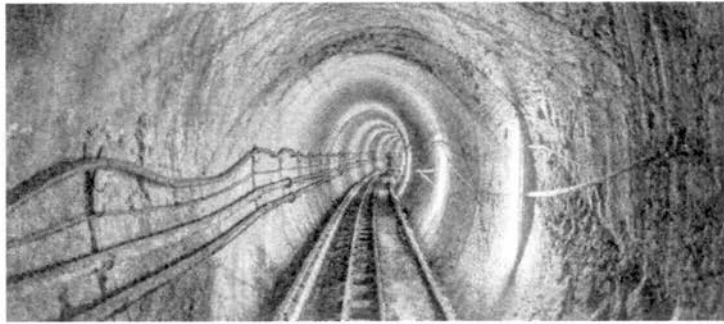
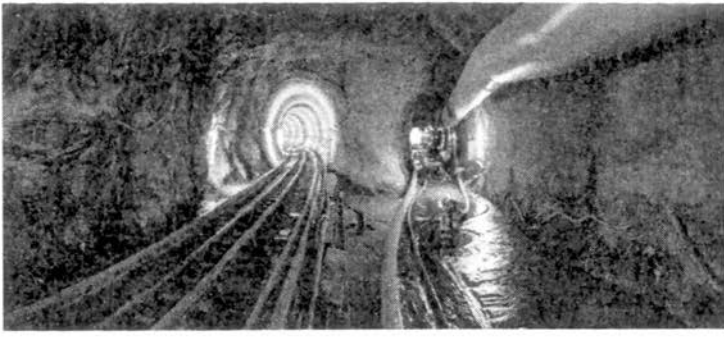
**Link Tunnel**

The 3.718m long Link Tunnel connecting the two reservoirs of Puhulpola and Dyraaba is excavated by conventional drilling and blasting method from both ends and excavation was completed by end of January 2017.

**Headrace Tunnel (HRT)**

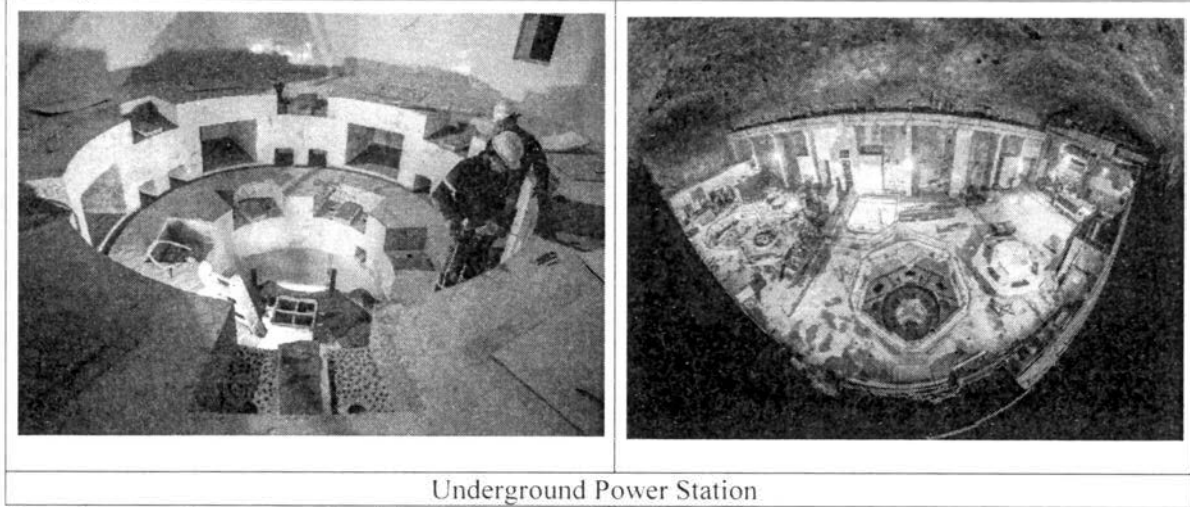
The 15.5 km long Headrace Tunnel (HRT) is being excavated using Tunnel Boring Machines (TBM). This is the first time in Sri Lanka TBM are used for the construction of tunnels. Excavation of HRT was commenced from the downstream end with the first TBM and later from upstream end with a second TBM.

Due to water ingress occurred in Headrace Tunnel at 8.2 km upstream from downstream end in April 2017, excavation was temporarily stopped until water ingress is sealed. A length of 2.0 km has been excavated from upstream end.



Sealing of Water Ingress in Headrace Tunnel

### Underground Power Station



Underground Power Station

Powerhouse under construction 1 km below ground level

Construction work of Underground Power House is nearly complete. Pressure Shaft is ready to be steel lined and installation of turbines are complete.

#### Transmission Line

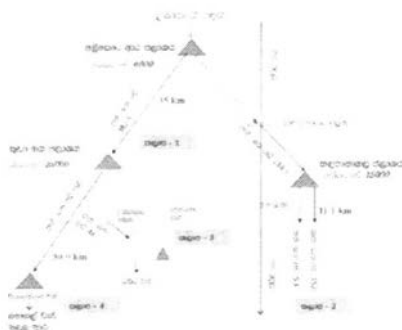
Foundation work of 23 km long 132 kv Transmission Line towers are underway.

Cumulative Progress of Head Works as at 30<sup>th</sup> June 2017 is 76.90% and construction of all works are expected to be completed by 30<sup>th</sup> June 2018. The details are given below.

No.	Activity	Physical Progress as at end of June 2017 (%)	Target Date of Completion
Overall		76.90	June 2018
1	Puhulpola Dam	54.51	March 2018
2	Dyraaba Dam	88.60	December 2017
3	Link Tunnel	85.08	December 2017
4	Headrace Tunnel	56.37	April 2018
5	Surge Tank	51.68	December 2017
6	Vertical Pressure Shaft	68.08	December 2017
7	Tail Race Tunnel	95.86	December 2017
8	Power House	82.43	December 2017
9	Roadworks and Access Tunnel	91.33	June 2018
10	Transmission Line	44.41	June 2018



## Downstream Development Works in Kirindi Oya Basin



The main purpose of the developments within Kirindi Oya Basin under UOMDP is to develop the necessary irrigation and water transfer infrastructure in order to make use of an estimated 145 MCM of water diverted from Uma Oya into Kirindi Oya basin. The project area is located in the Moneragala District except the two regulating reservoirs of Alikota Ara and Kuda Oya which are in the boundary of Badulla District.

The main features of the developments within Kirindi Oya basin under UOMDP include following developments below the Tailrace of Power Station:

- ❖ Construction of Alikota Ara reservoir (capacity of 6.5 MCM) across Alikota Ara, a tributary of Kirindi Oya
- ❖ Construction of Kuda Oya reservoir (capacity of 29.0 MCM) across Kuda Oya, a tributary of Kirindi Oya
- ❖ Enhancing capacity of existing Handapanagala Tank from 6.5 MCM to 14 MCM
- ❖ Construction of 18 km Transfer Canal from Alikota Ara reservoir to Kuda Oya Reservoir including two tunnel sections of 600 m and 400 m long
- ❖ Construction of 30 km long Transfer Canal from Kuda Oya to Sinhalayagama Tank.
- ❖ Construction of 11.3 km long LB Main Canal and provision of irrigation facilities under Handapanagala Tank
- ❖ Improvements to Handapanagala Tank Feeder Canal and Anicut and
- ❖ Rehabilitation of 96 minor tanks.

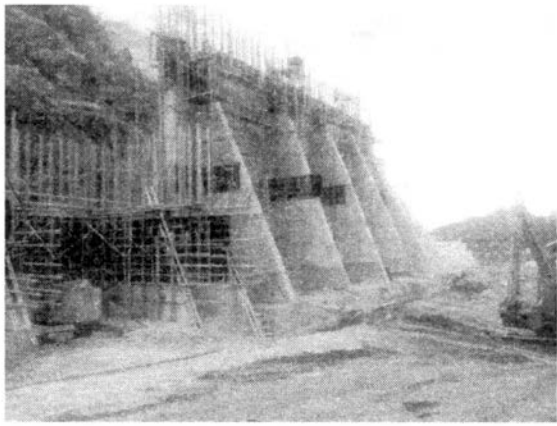
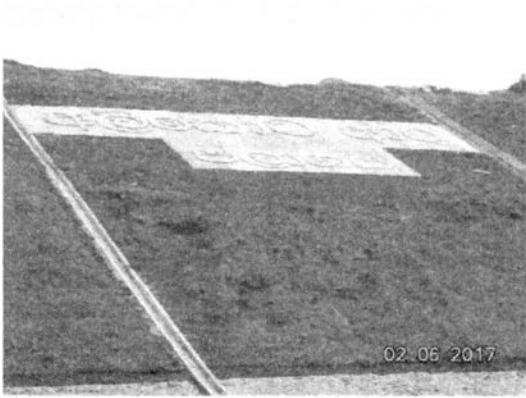
Construction of Downstream Development component is handled by the Irrigation Department and the work commenced in 2013 with the Environmental approval given on 27<sup>th</sup> September 2013 after the supplementary EIA conducted for this component.

### *Major Activities performed under Downstream Development Works Component during the period from 1st July 2016 to 30th June 2017:*

Overall progress of Downstream Development Works as at end of June 2017 is 41.9%. The details progress and the target dates of completion are given below:

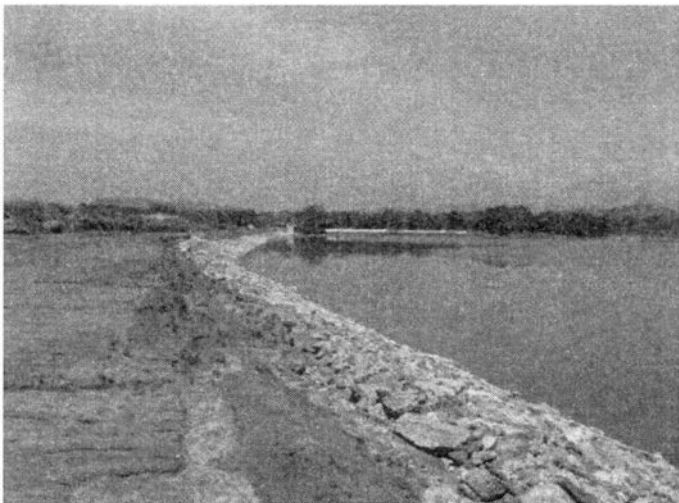
No.	Major Activity	% Progress as at end of June 2017	Date of Completion
01	Construction of Alikota Ara Reservoir	96.0	2017
02	Capacity Enhancement of Handapanagala Tank	70.3	2019
03	Construction of Kuda Oya Reservoir	29.0	2017
04	Construction of LB Canal in Handapanagala Scheme	16.5	2018
05	Transfer Canals		
	Alikota Ara - Kuda Oya Transfer Canal	9.2	2018
	Kuda Oya - Sinhalayagama Transfer Canal	8.5	2019
06	Rehabilitation of Tanks	19.3	2019

**Alikota Ara Reservoir**



**Kuda Oya Reservoir Dam and Spillway under Construction**

**Handapanagala Tank Expansion**



## **2.3 Dam Safety and Water Resources Planning Project**

### **2.3.1 Additional Financing of Dam Safety and Water Resources Planning Project (AF-DSWRPP)**

At the completion of the DSWRP original credit the Government of Sri Lanka made a request to the World Bank for additional financing support to continue to the scope of the DSWRP project. Accordingly, the World Bank grant another 83 USD million to continue the remaining activities related to the Project objectives.

**The main objective of the DSWRPP AF is**

- ❖ Establish long term sustainable arrangement for operation and maintenance (O&M) of large dams
- ❖ Improve water resources planning.

**The proposed additional credit would help to finance the costs associated with**

- ❖ Cost overruns to complete the original DSWRP project scope;
- ❖ Scale-up of successful project activities, including rehabilitation and modernization of dams in parts of the east and north of the country that could not be included in the original project.

**Basic Project Parameters**

- ❖ Effective date of the Project - 23rd October 2014
- ❖ Closing date of the Project - 15th May 2018
- ❖ Project Duration - 4 years

The 100% of Additional Financing is funded by IDA-WB. In addition GOSL agreed to provide USD 1.5 Mn to cover the allowances for the project management and implementation team.

**The Project consists of 4 main components. They are**

- ❖ Component 01:  
Dam Safety and Operational Efficiency Improvement. To complete 14 dams from the original project under cost overrun and carry out remedial works at 31 dams, provide selective maintenance equipment and prepare operation and maintenance manual and emergency action plan
- ❖ Component 02  
Hydro-meteorological Information System Improvement. Development of about 45 hydro meteorological stations and expansion of seven pilot ground water monitoring networks, developed under original project, continuation of monitoring of groundwater parameters in these seven areas and development of one additional groundwater pilot area
- ❖ Component 03  
Multi Sector Water Resources Planning. Preparation of feasibility studies for priority water resources development and improvements and irrigation training centers at Kotmale and Galgamuwa so that the training program on various aspects of dam safety and water resources planning and management for staff of the Irrigation Department and Mahaweli Authority of Sri Lanka and other water management agencies can be carried out in house.
- ❖ Component 04  
Project Management, Monitoring and Evaluation. Support to project management and coordination and monitoring and evaluation through an already established project management unit within Ministry of Mahaweli Development & Environment.

**The main activities coming under DSWRPP-AF are:**

Project received financial assistance from World Bank in various aspects. Those are

- ❖ Fund requirement to meet cost overrun  
This component consist the items included in the original dam safety project but unable to complete or execute during the time period of the original DSWRP Project
- ❖ Fund requirement to meet proposed WRB new activities  
Seven pilots were identified and monitoring network was establish to identify the quality of the groundwater in the selected critical areas. Under the additional financing of the DSWRP, these pilots area are expand to adjoin areas and new pilot area with high intensity of Chronical Kidney Diseases was selected to conduct the water quality study.
- ❖ Fund required to meet proposed new activities under the Additional Financing of the DSWRPP;  
Aanother 31 dams which need immediate rehabilitation was included under this component. The dam selection was done by the respective implementation agencies. Further to that all the implementation agencies are getting the new equipment to improve the operational efficiency of the operational and maintenance of the dam with strengthening the quality controlling facilities, capacity building, and other incremental operation cost etc.

Some of the items in the initial cost allocation were subjected to change with the current requirement of implementation agencies.

**Progress of the balance work coming under original DSWRP Project**

Most of the balance payment of additional work of the original project is over and remaining are few retention to be pay. All the dam rehabilitation contract have been awarded except the Maussakele and they are at different stages as given below

No.	Dam	Contract Amount Rs.M.	Starting date	Major activities and Current progress as at 30 June 2017	
Irrigation Department					
1	Mahawilachchiya	210.5	3 <sup>rd</sup> Feb 2016	Physical	92.50%
				Financial	55%
2	Mahakanadarawa	102.3	25 <sup>th</sup> Feb 2016	Physical	100%
				Financial	108%
3	Padaviya	126.54	25 <sup>th</sup> Feb 2016	Physical	53%
				Financial	36%
4	Angamuwa	166.97	1 <sup>st</sup> Mar 2016	Physical	100%
				Financial	100%
5	Wan Ela	69.17	8 <sup>th</sup> May 2016	Physical	70%
				Financial	59%
6	Thoppur	48.3	24 <sup>th</sup> May 2016	Physical	100%
				Financial	65%
7	Kachchimadu	97	8 <sup>th</sup> Aug 2016	Physical	40%
				Financial	27%
8	Kottukachchi	74.54	2 <sup>nd</sup> Aug 2016	Physical	50%
				Financial	36%
9	Nawagiriwewa	89.06	22 <sup>nd</sup> Aug 2016	Physical	30%

No.	Dam	Contract Amount Rs.M.	Starting date	Major activities and Current progress as at 30 June 2017	
				Financial	24%
10	Unnachchai	73.81	19 <sup>th</sup> Sep 2016	Physical	19%
				Financial	22%
11	Janaranjanawewa	104.7	15 <sup>th</sup> Aug 2016	Physical	65%
				Financial	57%
12	Soraborawewa	19.47	4 <sup>th</sup> Aug 2016	Physical	22%
				Financial	22%
13	Bandagiriya	75.57	30 <sup>th</sup> Aug 2016	Physical	20%
				Financial	31%
14	Baduluoya	59.85	23 <sup>rd</sup> Nov 2016	Physical	10%
				Financial	18%
15	Muthykandika	20.14	24 <sup>th</sup> Nov 2016	Physical	10%
				Financial	0%
<b>Mahaweli Authority of Sri Lanka</b>					
1	Victoria	1,402.66	29-Jan-15	Physical: Substantially Completed	
				Financial	90%
2	Minipe TBC	482.54	7 <sup>th</sup> Nov 2014	Physical	83%
				Financial	67%
3	Ulhitiya Rathkinda	257.14	12 <sup>th</sup> Aug 2015	Physical	100%
				Financial	77%
4	Henanigala	125.56	23 <sup>rd</sup> Jan 2016	Physical	98%
				Financial	85%
5	Pimburaththewa	261	8 <sup>th</sup> April 2016	Physical	55%
				Financial	37%
6	Bambarawana	59.28	14 <sup>th</sup> Jan 2016	Physical	98%
				Financial	87%
7	Pusselavinna	42.4	14 <sup>th</sup> Jan 2016	Physical	96%
				Financial	61%
8	Moowagamma	61.86	28 <sup>th</sup> Mar 2016	Physical Progress- Civil	82%
				Physical Progress - mechanical	15%
				Financial	38%
9	Udawalawa	91.47	11 <sup>th</sup> Aug 2016	Physical	65%
				Financial	37%
10	Ambagahagama	33.52	16 <sup>th</sup> Sep 2016	Physical	70%
				Financial	34%
11	Panakkaniya	13.35	13 <sup>th</sup> Sep 2016	Physical	77%
				Financial	41%
12	Urusitawewa	48.66	9 <sup>th</sup> Nov 2016	Physical	68%
				Financial	35%
<b>Northern Provincial Council</b>					

No.	Dam	Contract Amount Rs.M.	Starting date	Major activities and Current progress as at 30 June 2017	
1	Periyapandivirachchan	72.44	8 <sup>th</sup> Nov 2014	Physical	100%
				Financial	100%
2	Muthuiyankaddu - Civil	171.5	20 <sup>th</sup> Feb 2015	Physical	100%
				Financial	74.60%
	Muthuiyankaddu – Electro Mechanical	428	1 <sup>st</sup> Mar 2015	Physical	100%
				Financial	97.5%
3	Thondamaru - Civil	112.37	25 <sup>th</sup> July 2016	Physical	55%
				Financial	34.34%
	Thondamaru – Electro Mechanical	280.53	17 <sup>th</sup> June 2016	Physical	45%
				Financial	17.39%
<b>Kandy Municipal Council</b>					
1	Dunumadalwa	42.41	18 <sup>th</sup> Aug. 2016	Physical	17%
				Financial	20%
2	Roseneath	23.76	27 <sup>th</sup> Jul 2016	Physical	45%
				Financial	31.22%
<b>Ceylon Electricity Board</b>					
1	Maussakele			Just awarded.	

### Implementation and Monitoring of EMP

Monitoring matrix has developed by the PMU for each site based on the respective EMP and responsibility has been given to contractor to fill this matrix and submit it to respective Implementation agency in monthly basis. The implementation agency has to conduct a field inspection and the matrix has to be certified signed and send to PMU whether the Implementation Agency is satisfied with the implementation of EMP. Environmental Specialist of the PMU often visits the dam sites and monitoring the EMP implementation process. Implementation process of EMP has connected with the payment procedure and therefore, Implementation Agency only can release payments for the construction work if the implementation of EMP is satisfied.

### Social Safeguard Management Programme

Livelihood Support Assistance Plan implemented under the Social Safeguard Management Programme

- ❖ To mitigate possible negative impacts on livelihood of the people within during a Yala 2016 season due to the rehabilitation of Mahakanadarawa, Mahavilachiya and Muthiyankaddu Tanks, a Livelihood Support Assistance Plan has been prepared
- ❖ Under the SSMP, a systematic and extensive IEC campaign was conducted, carried out Socio-Economic Baseline Survey and assessing the impacts the Livelihood of the affected community.
- ❖ 03 sub plans were implemented.
  - Wage Assistance Plan (WAP)
  - Drinking Water Supply Plan (DWSP)
  - Gender Assistance Plan (GAP)

Tank	Affected farmer families	Fishing families	Agriculture labours	Total affected families	Total affected population
Mahakanadarawa	2,765	86	-	2851	11,062
Mahavilachchiya	1,778	-	-	1778	7,645
Muthiyankaddu	1,663	52	505	2,220	7,650
<b>Total</b>	<b>6,206</b>	<b>138</b>	<b>505</b>	<b>6,987</b>	<b>26,357</b>

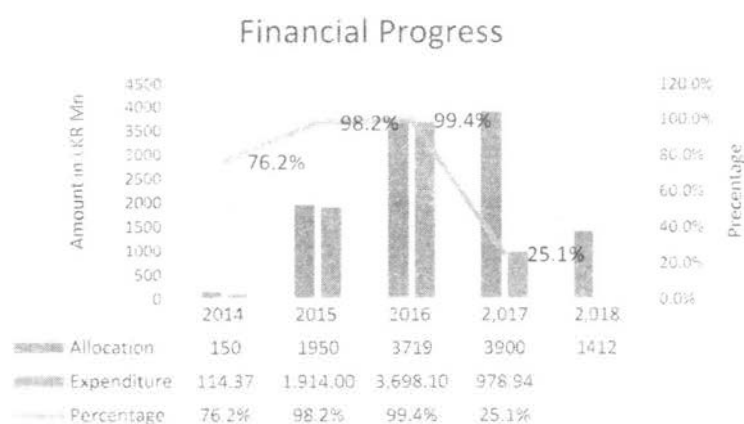
The project commenced of LSA implementation of the all 3dams from June 2016 up to October 2016.

Total allocation for LSA programme

Plan	Mahakanadarawa	Mahavilachchiya	Muthiyankaddu	Total
Wage Assistance Plan	75.8	44.75	54.7	175.25
Domestic Water Supply Plan	5.65	4.41	3.14	13.20
Gender Action Plan	1.20	1.00	0.60	2.80
Replenishing fish stock with fingerlings	1.60	0.80	0.60	3.00
<b>Total</b>	<b>84.25</b>	<b>50.96</b>	<b>59.04</b>	<b>194.25</b>

The LSA programme was successfully completed and saving has utilized for the renovation of Irrigation Management Division building in Anuradhapura

### Financial Progress of the Project




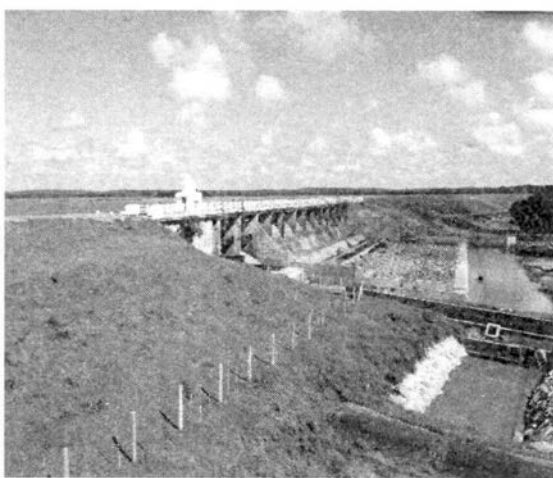

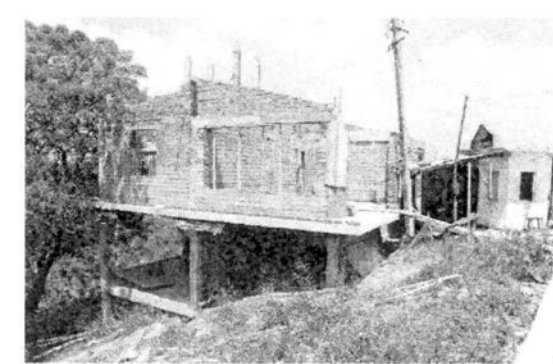


### Monitoring & Evaluation of the Project

Special Construction project management programme is implementing with the assistance of Dam Safety Review Panel to monitor the quality assurance of construction sites. Basically DSRP help the IAs in following aspects

- ❖ Present progress of work and to assess the likelihood of achieving the targets both financial and physical within the stipulated contract period
- ❖ Proposed rehabilitation works are execute as per agreed items of work, agreed/standard methodology confirming to stand quality control procedures and practices

- ❖ Identification of any unforeseen problem that are likely to hinder the progress and to assist the dam Owners/ project Manager to solve them
- ❖ Assist in sorting out technical and administrative problem arising in the execution of contract

**Photos of the Dam Sites**

	
<p>During Mahawilachchiya dam rehabilitation</p>	<p>Muthu Iyan Kaddu – North Provincial Council</p>
	
<p>Thondamaru Flood Bund</p>	<p>Rajangana new control house</p>
	
<p>Bambarawana name Board</p>	<p>Maps of the Project Area</p>



## **2.4 Mahaweli Water Security Investment Program**

### **2.4.1 Program Description**

The investment program will accelerate the economic activities of Sri Lanka's northern dry zone region<sup>1</sup> by transferring surplus water of the Mahaweli river basin for irrigation, drinking and commercial purposes. It will develop bulk water conveyance and storage infrastructure planned under the North Central Province Canal Program (NCPCP), a high priority development program of the government that will support completion of the Mahaweli Development Program (MDP) which started in 1970.<sup>3</sup> Water management practices will also be strengthened

The cost of the investment program is estimated at \$675 million, the estimated cost of Tranche 1 is \$190 million. The Tranche 1 OCR and ADF loans from ADB will finance. The government has requested an MFF in an amount up to \$453 million equivalent from ADB's resources to help finance the investment program. The MFF will be financed from loans from ADB's ordinary capital resources (\$262 million) and Special Funds resources (\$191 million).

#### **North Central Province Canal Program - NCPCP Phase I**

These priorities will be addressed by completing the NCPCP which comprises the outstanding MDP components. The NCPCP is estimated to cost approximately \$1.640 million and will be implemented in two phases. The investment program will finance Phase I which includes

(i) key upstream investments of the NCPCP that will transfer water from the Mahaweli River to existing reservoirs in the Central, North Central and North Western Provinces, and

(ii) Rehabilitation of an existing irrigation system located in the lower reach of the Mahaweli River to improve its water management. Phase I comprises the following three projects:

- ❖ The Upper Elahera Canal Project (UECP) comprises two components.
- ❖ The North Western Province Canal Project (NWPCP)
- ❖ Minipe Left Bank Canal Rehabilitation Project (MLBCRP).

#### **North Central Province Canal Program - NCPCP Phase II**

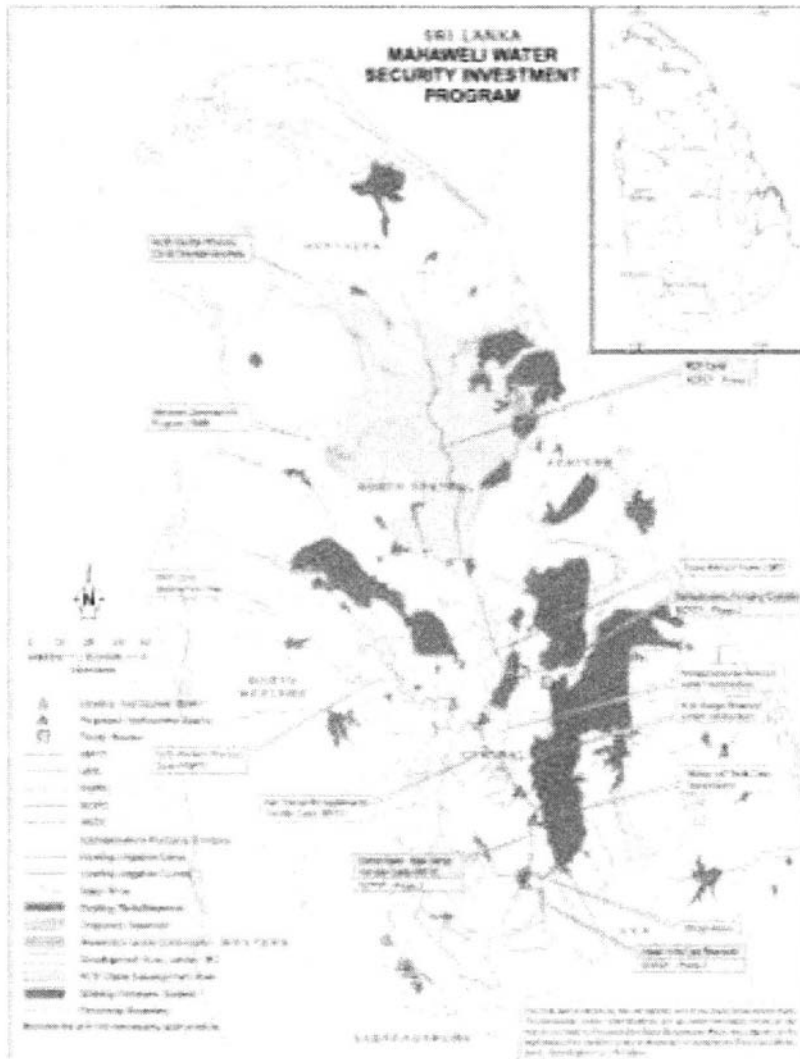
The investment program also supports preparation of Phase 2 projects that will develop additional transfer canals and reservoirs to allow additional water be diverted from the Mahaweli River and extend the system to additional existing reservoirs in the North Central Province. The government plans to implement Phase 2 from 2018-2030 under separate financing, possibly with ADB's support. It may comprise the following projects: (i) Kalinganuwara Pumping Complex Project; (ii) Lower Uma Oya Reservoir Project; (iii) Randenigala-Kalu Ganga Transfer Canal Project; and (iv) North Central Province Canal Project. With Phase 2, Mahaweli river water may eventually augment drinking water supplies to Jaffna and Kilinochchi, complementing an ongoing ADB-financed water supply and sanitation project.

The investment program's impact will be improved agricultural production and sustained economic growth in the North Central, Central, North Western and Eastern Provinces. Its outcome will be secured access to water resources for agricultural and non-agricultural purposes in the project areas. The outputs will be (i) Output 1: new and improved water conveyance and storage infrastructure developed, (ii) Output 2: systems for improving water resources management and productivity developed, and (iii) Output 3: efficient multi-disciplinary investment program management operational. Each tranche of the MFF finances slices of the investment projects.

Output 2 will address the key non-structural sector priorities through two consulting packages. Firstly, the "improving system efficiencies and water productivity" package investigates existing inefficiencies

within the existing conveyance and irrigation systems, and also constraints to improving water productivity, and will recommend on-farm and system-wide improvements; structural recommendations will be incorporated into civil packages for implementation under subsequent tranches and possibly under Phase 2. The second consulting package, “strengthening institutions with integrated water resources management,” will recommend programs for modernizing policy and governance frameworks, and institutional strengthening, to improve national water resources planning and operational procedures.

The tentative schedule for the investment program is to initiate tendering and award of contracts in Q1/Q2 2015 via advance contracting and retroactive financing. The MFF is designed for a 10-year implementation period. The government has expressed its desire to complete critical sub-projects of the investment program by 2020. Progress will depend on the expeditious implementation of civil works, disbursement rates, and timely submissions of periodic financing requests under the MFF.



Tranche 1 of the MFF will finance the following: (i) Stage 1 of the UECP comprising construction of the first 6.2 km of open canals and associated structures of UEC; (ii) Stage 1 of NWPCP comprising construction of two new dams and two new reservoirs at Mahakithula and Mahkirula, the 29 km of open canals between the Wemedila tank and the new Mahakithula and

Mahkirula Reservoirs, and a 940m tunnel; (iii) all of MLBCRP; (iv) Stage 1 of PMDSC; and (v) ISEWP. Tranche 1 will be financed, in part, from a loan from ADB's ordinary capital resources (\$76 million) and a loan from ADB's Special Funds resources (\$74 million). The ADB (OCR) loan will have a 26-year term, including a grace period of 5 years, an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility,<sup>8</sup> a commitment charge of 0.15% per year, and

such other terms and conditions set forth in the loan agreement. The loan from ADB's Special Funds will have a 25-year term, including a grace period of 5 years, an interest rate of 2.0% per annum, and such other terms and conditions set forth in the loan agreement. The remainder of the cost of Tranche 1 will be funded by the government (\$40 million).

The approval of Tranche 2 is expected in 2017.<sup>9</sup> Tranche 2 is envisaged to be financed by ADB (\$130 million) and various bilateral development partners that have expressed an interest in financing Tranche 2. The financing requirements for Tranche 2 are estimated at approximately \$114 million. Tranche 3 is

envisaged to be financed by ADB (\$173 million) and the government, and is expected to be approved in 2018.

### Program Progress

The report summarizes cumulative financial and physical progress of the Mahaweli Water Security Investment Program (MWSIP) for the reporting period of 01 July 2016 to 30 June 2017.

Work continued on the remaining Tranche 1 and Tranche 2 packages; Development of the water allocation model using River Ware software advanced. Available meteorological and stream flow data related to Mahaweli watershed have been collected from the field and compiled. Major progress was made on the infilling of rainfall data records at stations relevant to the Program area. Presently the quality of data gathered is being verified.

### Overall Financial and Physical Progress

The program total expenditure was reported Rs1748.44 Mn for the reporting period of 01 July 2016 to 30 June 2017. Year 2016, 01 July to 31 December total expenditure was Rs1082.48 Mn and Year 2017, 01 January to 30 June total expenditure was Rs1082.48 Mn. End of June 2017, total awarded civil contracts was 6 and work commenced contracts was 3.

### Financial Progress

The following Tables are presented expenditure by financers (ADB & GOSL) and expenditure by activates for the reporting period.

Expenditure by Financers - 01 July to 31 December 2016

Financer	Allocation 2016	Estimated Budget 01.July to 31December 2016	Expenditure 01 July to 31 December 2016
Asian Development Bank (ADB)	2,500.00	2,012.78	879.02
Government of Sri Lanka (GOSL)	510.00	398.83	203.46
<b>Total</b>	<b>3,010.00</b>	<b>2,411.61</b>	<b>1,082.48</b>

Expenditure by Financers - 01 January to 30 June 2017

Financer	Allocation 2017	Estimated Budget 01.January to 30 June 2017	Expenditure 01.January to 30 June 2017
Asian Development Bank (ADB)	4,120.00	1,156.31	494.15
Government of Sri Lanka (GOSL)	1,030.00	299.64	171.81
<b>Total</b>	<b>5,010.00</b>	<b>1,455.95</b>	<b>665.96</b>

Total Expenditure by Financers - (01. July to 30. June 2017)

Financer	Expenditure 01. July to 30. June 2017
Asian Development Bank (ADB)	1,373.17
Government of Sri Lanka (GOSL)	375.27
Total	1,748.44

**2.4.2 Physical Progress (01. July 2016- 30 June 2017)**

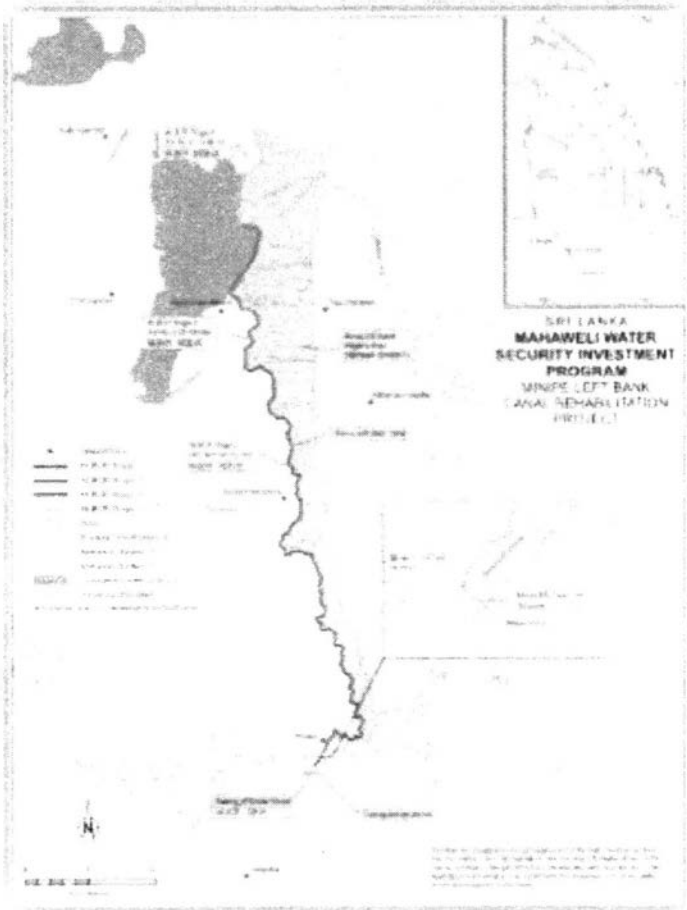
The program Physical progress are given in the following tables for civil contracts, environmental activities, resettlement activities, communication, training, consultancies and phase 2 rainfall data modeling.

**Progress of Civil Contracts**

**2.4.2.1 Minipe Left Bank Canal rehabilitation (MLBCRP)**

S. No.	Contract No.	Contract Package	Cumulative Physical Performance 01 July 2016 - 30 June 2017	Cumulative Financial Progress 01. July 2016 - 30 June 2017 (Rs. Mn)	Details of Contract/Remarks
1.1	ICB-1	Raising of Crest of Minipe Anicut and Water Control and Measurement Facilities for LB and RB canals.	<ul style="list-style-type: none"> <li>Technical evaluation on going –progress 90% (bids closing on 23. June 2017)</li> </ul>		<ul style="list-style-type: none"> <li>Plan to contract award October 2017</li> </ul>
1.2	NCB-1	Rehabilitation of Minipe LB Canal (0+000km to 30+140km) - Stage 1	<p><b>Preliminary work prog.</b></p> <ul style="list-style-type: none"> <li>Completed. topographic survey on going - 40%</li> </ul> <p><b>Construction progress</b></p> <ul style="list-style-type: none"> <li>Overall Construction progress is 2.5%.</li> <li>Flood damage completed at 14+452Km.</li> <li>Causeways construction ongoing 53% (13 completed out of 19) Turnouts (D/S)-ongoing 1.6%</li> </ul>	85.21 (Advance payment 48.57 and Interim payment 36.64)	<ul style="list-style-type: none"> <li>Contractor -Edward and Cristee</li> <li>Value of contract -Rs.Mn- 408 (including VAT)</li> <li>Construction commence 13 Oct 2016</li> <li>Contract Duration - 24 Months</li> <li>Date of completion- 12 October 2018</li> </ul>
1.3	NCB-2	Rehabilitation of Minipe LB Canal (30+140km to 49+820km) - Stage 2	<p><b>Preliminary work progress</b></p> <ul style="list-style-type: none"> <li>Site established</li> <li>Topography survey on going – progress LS -35%.CSs -25%</li> </ul>	40.72 (Advance 40.72)	<ul style="list-style-type: none"> <li>Contractor - Gamini Construction</li> <li>Value of contract -Rs.Mn - 343 (including VAT)</li> <li>Construction commence 25.Apr. 2017</li> <li>Duration of Contract- 24 Months</li> <li>Date of completion- 27 March 2019</li> </ul>
1.4	NCB-3	Rehabilitation of Minipe LB Canal (49+820km to 63+650km) - Stage 3	<p><b>Preliminary work progress</b></p> <ul style="list-style-type: none"> <li>Site stabilized and Batching plant establishment is in progress</li> <li>Topographic survey on going-LS-35%. CSs-25%</li> </ul>	101.16 (Advance 101.16)	<ul style="list-style-type: none"> <li>Contractor - Nawaloka Construction</li> <li>Value of contract - Rs.Mn- 829 (including VAT)</li> <li>Construction started- 28.Apr.2017</li> <li>Contract Duration -24 Months</li> <li>Date of completion- 27 March 2019</li> </ul>

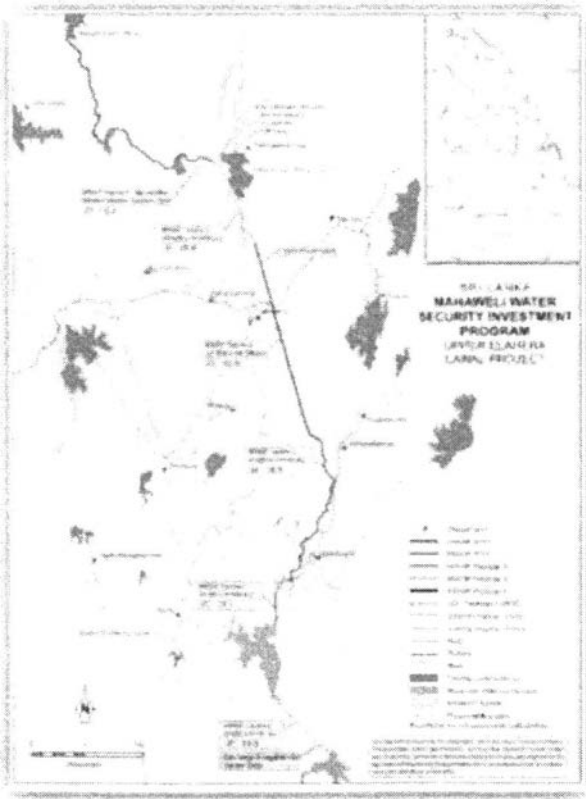
1.5	NCB-4	Rehabilitation of Minipe LB Canal (63+650km to 73+960km) - Stage 4	<b>Preliminary work progress</b> <ul style="list-style-type: none"> <li>• Site stabilized and Batching plant establishment is in progress</li> <li>• Topographic survey on going- LS-25%, CSs-15%</li> </ul>	22.90 (Advance 22 90)	<ul style="list-style-type: none"> <li>• Contractor -Gamini Construction</li> <li>• Value of contract -Rs.Mn- 246 (including VAT)</li> <li>• Construction commence 26 Apr 2017</li> <li>• Contract Duration- 24 Months</li> <li>• Date of completion- 27 March 2019</li> </ul>
1.6	NCB-5	Rehabilitation and improvements of Control Gate Structures (15 Structures)	<ul style="list-style-type: none"> <li>• Financial Evaluation in progress</li> </ul>		<ul style="list-style-type: none"> <li>• Plan to contract award September 2017</li> </ul>
1.7	DC 1	Improvements of Field Canals of Minipe LB Canal (20 Canals)	<ul style="list-style-type: none"> <li>• Contract awarded –May 2017 and planned to sign contract 4 June 2017</li> </ul>		<ul style="list-style-type: none"> <li>• Plan to contract award May 2018 for Farmer Organizations</li> </ul>



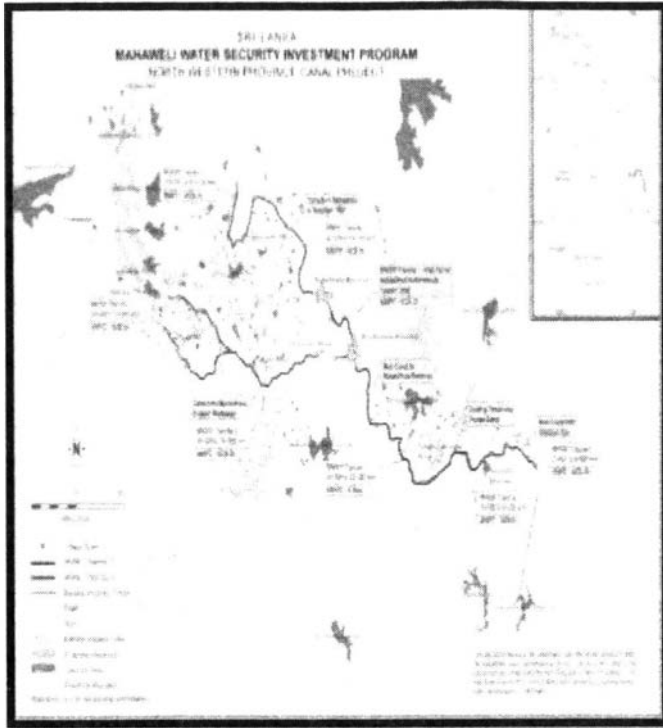
**Minipe Left Bank Canal  
rehabilitation**

### 2.4.2.2 Upper Elahara Canal Project (UECP)

S. No	Contract No	Contract Package	Cumulative Physical Performance 01.July 2016 - 30 June 2017	Cumulative Financial Progress 01.July 2016 - 30 June 2017 (Rs. Mn)	Details of Contract/Remarks
1.11	ICB-1	Upper Elahara Canal (6+226Km) to 17+900Km)	<p><u>Preliminary work progress</u></p> <ul style="list-style-type: none"> <li>• Topographic survey completed, bathing plant established</li> <li>• Threaten flora and fauna species removal is completed.</li> <li>• Preparation of construction drawing by contractor.</li> </ul> <p><u>Construction progress</u></p> <ul style="list-style-type: none"> <li>• Overall Construction progress 0.54%</li> <li>• 6+640Km site clearing and 6+240Km earth excavation are in progress</li> </ul>	495.80 (Advance 4 50.73; Interim Payment 45.07)	<ul style="list-style-type: none"> <li>• Contractor -CML MTD Construction</li> <li>• Value of contract - Rs. Mn - 3254 (excluding VAT)</li> <li>• Date of Contract award - 11 November 2016</li> <li>• Duration of Contracts - 36 Months</li> <li>• Date of completion - December 2019</li> </ul>
1.12	ICB-2A	Upper Elahera Canal (Tunnel 3 & 4)	As per the new ADB-SABD, revised the bid document.		<ul style="list-style-type: none"> <li>• Plan to contract award 19 Apr 2018</li> </ul>
1.13	ICB-2B	Upper Elahera Canal (KMTC)	TEC on going –progress 25%		<ul style="list-style-type: none"> <li>• Plan to contract award 9 December 2017</li> </ul>
1.14	ICB-3A	Upper Elahara Canal (6+226Km) to 17+900Km)	The bid document preparation is in progress		<ul style="list-style-type: none"> <li>• Plan to contract award 6 July 2018</li> </ul>



Upper Elahara Canal


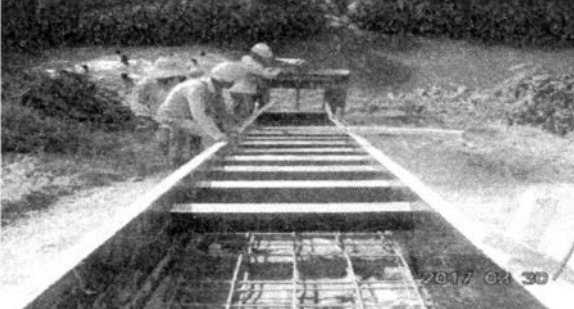




North Western Province Canal

2.4.2.3 North Western Province Canal Project (NWPCP)

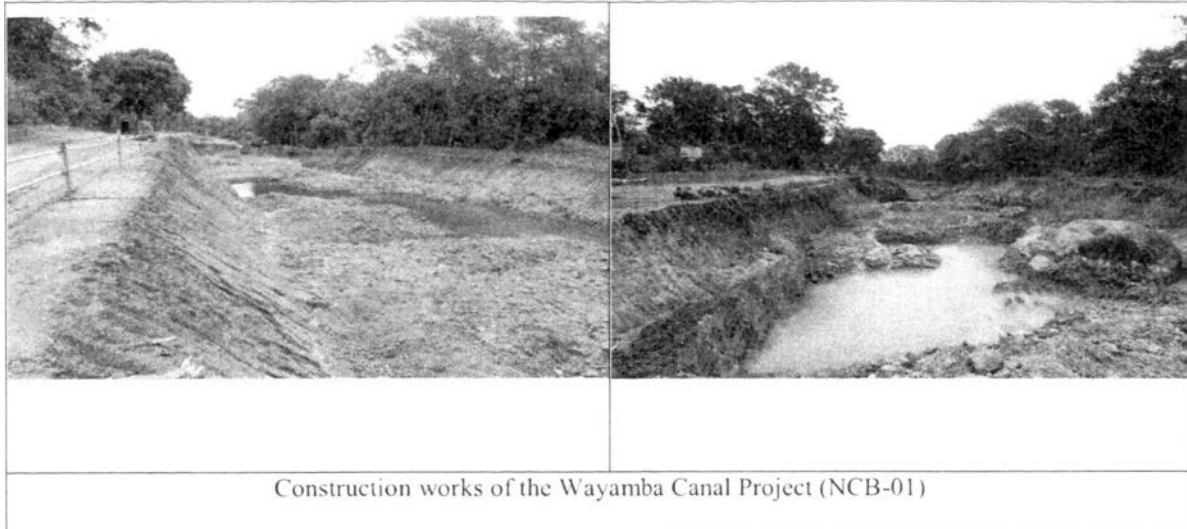
S. No	Contract No	Contract Package	Cumulative Physical Performance 01.July 2016 - 30 June 2017	Cumulative Financial Progress 01.July 2016 - 30 June 2017 (Rs. Mn)	Details of Contract/Remarks
1.8	ICB-1	Construction of Mahakithula and Mahakirula reservoirs, feeder canal 3.66km from Mahakithula to Mahakirula and inlet tunnel from Mahakithulana to Nabadagahawatta diversion canal	<ul style="list-style-type: none"> <li>Bidding issuing- (closing 4.Sep 2017)</li> </ul>		<ul style="list-style-type: none"> <li>Plan to contract award February 2018</li> </ul>
1.9	ICB-2	Construction of Main Canal from Nabadagahawatta to Mahakithula Reservoir inlet tunnel (5+250 to 22+500km)	<ul style="list-style-type: none"> <li>TBER review by the ADB</li> </ul>		<ul style="list-style-type: none"> <li>Plan to contract award 5 November 2017</li> </ul>
1.10	NCB-1	Improvements to Wemadilla Left bank Main Canal up to Nabadagahawatta (0 to 5+250Km) & Construction of new suez and tail canal (0 to 0+600Km)	<p><b>Preliminary work progress</b></p> <ul style="list-style-type: none"> <li>Topographic survey completed, construction program approved,</li> <li>Batching plant established</li> </ul> <p><b>Construction progress</b></p> <ul style="list-style-type: none"> <li>Overall Construction progress 3%</li> </ul>	141.01 (Advance 117.61 first interim payment 23.4))	<ul style="list-style-type: none"> <li>Contractor - NEM Construction LTD</li> <li>Value of contract - Rs.Mn - 826 (excluding VAT)</li> <li>Date of Contract award - 11.November 2016</li> </ul>

		<ul style="list-style-type: none"> <li>• Site clearing earth exaction is in progress</li> <li>• Canal lining commenced.</li> <li>• Commenced at Wemadilla sluice, aqueduct &amp; conduit</li> </ul>	<ul style="list-style-type: none"> <li>• Duration of Contracts - 24 Months</li> <li>• Date of completion- December 2018</li> </ul>
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Rehabilitation of 8+429 location	Reconstruction of the main canal 4 + 755

	
Construction works of the Upper Elahera canal project	





## **2.5 ECOSYSTEM CONSERVATION AND MANAGEMENT PROJECT**

### **2.5.1 Introduction**

#### **2.5.1.1 Project Development Objective**

The project development objective (PDO) is to improve the management of ecosystems in selected locations in Sri Lanka for conservation and community benefits.

#### **2.5.1.2 Project Beneficiaries**

The project will generate national and local environmental and community-level benefits. At the national level, the project will develop the capacity of the key implementing agencies, the Department of Wildlife Conservation (DWC) and the Department of Forest (FD) to manage PAs more effectively and based on modern PA and landscape management approach. Locally, the project will directly benefit approximately 15,000 people out of which at least 30 percent are expected to be female beneficiaries from communities located in the adjacent areas of the participating PAs. It will also benefit other sensitive natural habitats by supporting sustainable use of natural resources and the mitigation of the human-elephant conflict resources.

#### **2.5.1.3 Project Duration**

The project was designed to implement from 2017-2021.

#### **2.5.1.4 Project Financing**

The Project will be financed through a US\$ 45.0 million International Development Association (IDA) Credit.

Following table illustrates the distribution of project cost among major project components.

No.	Project Components	Project cost (US\$ million)
1	Pilot Landscape Planning and Management	2.8
2	Sustainable Use of Natural Resources and Human-Elephant Co-existence	17.0
3	Protected Area Management and Institutional Capacity	24.2
4	Project Management	1.0
<b>Total</b>		<b>45.0</b>

### 2.5.1.5 Project Components

#### **Component 1: Pilot Landscape Planning and Management**

The project will finance to a new planning process that will look at ecologically functional wider landscape units that will provides guidelines and principles for management of protected areas and ecosystems outside the designated PA network. These plans will negotiate landscape level conservation priorities and influence for special planning policies and national sectoral within that landscape.

#### **Major activities performed during the period 01.01.2017 to 30.06.2017**

Following activities have been completed during first six months (from 01.01.2017 to 30.06.2017) under the Component 01.

- ❖ Awareness workshop on the component 1 was conducted for the implementing agencies
- ❖ Recruitment of a Project Coordinator
- ❖ Expert committee was appointed for selecting of project areas and advise on other related matters.
- ❖ Two project sites were selected in consultation of the expert committee and design methodology was developed.

#### **Component 2: Sustainable Use of Natural Resources and Human-Elephant Co-Existence**

Component 2 will support to the communities who living adjacent to PAs and other ecologically sensitive areas to plan for natural resource use and to develop biodiversity compatible, productive and climate resilient livelihood activities and to scale-up successful models that address the human-elephant conflict.

#### **Sub-component 2 (a): Sustainable Use of Natural Resources for Livelihood Enhancement**

The project will support the development of sustainable natural resources based livelihood options for communities living adjacent to PAs in order to obtain their participation for conservation and management and also minimize their dependency.

#### **Major activities performed during the period 01.07.2016 to 30.06.2017**

- ❖ Department of Wildlife Conservation completed the preparation of 02 micro plans for Uva and Southern regions in consultation of the neighboring villagers of the PAs. Participatory Rural Appraisal (PRA) methodologies have been used to complete comprehensive action plans/micro plans.

- ❖ Forest Department updated Community Action Plans (CAPs) and identified sustainable supplementary/alternative livelihood activities based on the PRAs done in buffer zone villagers of selected nine Protected Areas (PAs).

**Sub-component 2(b): Human-elephant Co-existence for Livelihood Protection**

The project will finance in scaling up and piloting human elephant co-existing models, identification of economic incentives for affected communities and to replicate proven HECOEX models for the areas.

**Major activities performed during the period 01.07.2016 to 30.06.2017**

- ❖ Country-wide Elephant Survey  
*Planning works for the task was completed by the DWC. One-day workshop was conducted for stakeholder consultation and discuss the methodology for the survey and planning of other works are in-progress under the guidance of an expert panel.*
- ❖ Assessment of wild elephant distribution ranging pattern and monitoring  
*Procurement process for purchasing of elephant radio collars is in-progress.*
- ❖ Elephant proof fencing program  
*A training program on 'identification of villages for co-existence' was conducted for the responsible officials of both implementing agencies. Some sites where human elephant conflict is aggressively happening were identified for the electric fencing program (Eg: Ehatuwewa and Galgamuwa).*
- ❖ Establishing of Elephant Holding Ground.  
*Sub project proposal is submitted to the World Bank for clearance. Site for establishing of problematic elephant holding ground is identified and preparation of designs and cost estimates and underway*

**Component 3: Protected Area Management and Institutional Capacity**

This component will support for intervening in PAs with the Fauna and Flora Protection Ordinance (FFPO) and the Forest Conservation Ordinance (FCO), support for the nature based tourism and strengthen the institutional capacity and investment capability for conservation and management.

**Sub-component 3 (a): Protected Area Conservation and Management**

The sub-component will support in preparation of Protected Area Management Plans (PAMP) where needed and implementation of existing PAMPs for priority PAs.

**Major activities performed during the period 01.07.2016 to 30.06.2017**

Following activities have been completed during first six months (from 01.01.2017 to 30.06.2017) under this sub-component.

- ❖ Rehabilitation of existing infrastructure in Sinharaja, Knuckles and Kanneliya
- ❖ Demarcation of forest boundaries and national park (NP) boundaries -80 km
- ❖ Habitat Management & removal of Invasive Aliens plant species (IAS) – 100 ha
- ❖ Assisting for natural regeneration in damaged forest/national park areas. -50 ha

- ❖ Development and improvement of road system. -60 km
- ❖ Designing of Rehabilitation of cascade tank system in Yala complex
- ❖ Technical Evaluation commenced for Introduction of SMART Patrolling system of DWC

In addition to that Nine project proposals of the Forest Department were approved to implement the above interventions and two project proposal of DWC were approved for Udawalawa & Yala complex.

**Sub-component 3 (b): Nature-based Tourism in Protected Areas**

The project will assist to enhance the quality of nature based tourism through improvement of tourism infrastructures and visitor services in selected protected areas.

**Major activities performed during the period 01.07.2016 to 30.06.2017**

Nine subproject proposals for selected PAs under the jurisdiction of Forest department namely Sinharaja (Rathnapura & Matara Range), Knuckles (Kandy & Matale), Kanneliya, Galwila, Galgamuwa and Hurulu (Anuradhapura and Polonnaruwa) were cleared by the World Bank for implementation. The following activities are commenced to implement.

- ❖ Awareness for relevant government officials, community based organizations (CBO) and other relevant stakeholders.
- ❖ Strengthening of CBOs for implementing certain activities.
- ❖ Rehabilitation of nature trails and access roads. – 30 km

**Sub-component 3 (c): Institutional Capacity and Investment Capability of Department of Wildlife and Forest Department**

The sub-component will support to strength the institutional capacity of Forest Department and Department of Wildlife Conservation.

**Major activities performed during the period 01.07.2016 to 30.06.2017**

- ❖ Improvement of Sri Lanka Forestry Institute (SLFI) and National Wildlife Research and Training Center (NWRTC). - Consultancy firm for the design and supervision of the structural improvement was selected. The initial planning for training quality improvement is in-progress.
- ❖ Capacity Building- 9 capacity building programs were conducted for Implementing Agencies.
- ❖ Official inauguration was done for Wildlife Management Diploma Course.
- ❖ Initial planning activities and procurement process are completed for the Wildlife Symposium and is scheduled to be held on 16th and 17th of August 2017

## 2.6 An addressing climate change impact on marginalized agricultural communities living in the mahaweli river basin of Sri Lanka

### 2.6.1 General Description

The project targets rain-dependent farming families in two hazard-prone divisional secretary divisions (DSDs) in the Mahaweli Basin

#### Divisional Secretariat Walapane - (Nuwara Eliya District)

Highly prone to landslides in the upper elevations. Very high erosivity in the mid elevations with seasonal dry periods

- ❖ Agrarian Service Areas 05 - Walapane/Munwatha/ Nildandiyahinna/RuuPaha/Teripehe
- ❖ GN Divisions - 103
- ❖ Farmer Organizations - 117

#### Divisional Secretariat of Medirigiriya and Lankapura - (Polonnaruwa District)

##### GN Divisions - Pulasthigama Medirigiriya Galamuna

DS office	Agrairian Service Division	GN Divisions	No. of Farmer Organizations	No. of Houses	No. of Beneficiaries
Medirigiriya		18	54	7,400	22,479
Lankapura	Pulathisigama	05	10	900	2,700
	Galamuna	03	03	400	1,200
	<b>Total</b>	<b>08</b>	<b>13</b>	<b>1,300</b>	<b>3,900</b>

#### Main Programs under the project

- ❖ Development of Minor irrigation Projects
- ❖ Projects of Agricultural roads
- ❖ Programs to Develop Milk farming Villages
- ❖ Preparation of Land use plans
- ❖ Promotion of self-employments
- ❖ Soil conservation Models/Home Garden Models
- ❖ Distribution of Agricultural Equipments and Plants

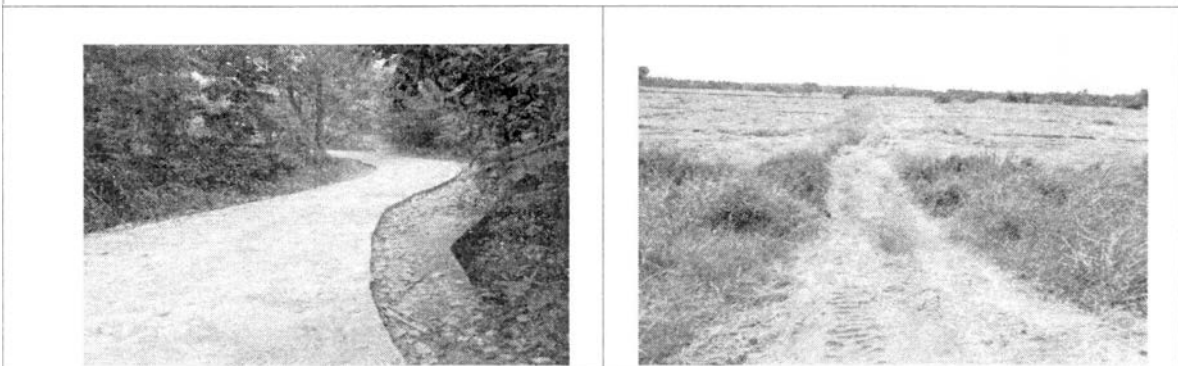
❖ Development of Minor irrigation Projects



27 Minor irrigation Projects have been rehabilitated in Walapane Divisional Secretariat Division, 13 minor irrigation Projects have been by rehabilitated the Mahaweli Consultancy Bureau in Lankapura Divisional Secretariat and other 19 minor irrigation Projects have been rehabilitated by the Department of Agrarian Service.



Agricultural roads



Agricultural roads

15 Agricultural road in Walapane Divisional Secretariat and 23 Agricultural road in Polonnaruwa Divisional Secretariat Division have been developed.

## Develop Milk farming Villages



Number of beneficiary families in Walapane Divisional Secretariat Division - 16.

Total Estimated Cost – Rs. 1.6 million.

Basic Training Workshop. Construction of cattle sheds. tender procedure for purchase of animals have been completed.

- Installation of pre-warning alert system.
- Preparation of land use maps.
- Conservation of water shed.
- Soil Conservation/Home gardening/Training program for Home Gardening.
- Self-employment promotion program.
- Distribution of agro equipment and plants.
- Expansion of export agricultural crops.
- Providing Rain Water Harvesting Tank.



## PART III

# **Major Achievement of the Ministry Of Mahaweli Development & Environment July 2016 – June 2017 And Action Plan 2018**



## **3.1 Activities carried out to address the Clean Air- Everywhere**

### **3.1.0 Air Resources Management and National Ozone Unit**

#### **3.1.01 Introduction:**

Bio diversity degradation and climate change that relate with the Ozone layer depletion have become first place among the global environment problems today. International as well as National forces have lined up to safeguard the environment through implementing several conventions and protocols to tackle these threatening issues for the existence of all living beings and sustainability of mankind. Among them, Vienna Convention and its legal entity Montreal Protocol has been identified as the internationally bound treaty for the protection of Ozone Layer. It is recognized as the universally ratified protocol and Air Resource Management & National Ozone Unit of the Ministry of Mahaweli Development & Environment is function as the focal point of the Montreal protocol.

The Multilateral Fund of the Montreal protocol provides fund annually through United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP) to control of Ozone depleting substances (ODSs) and to implement parallel projects with the phase-out of ODSs

The National Ozone Unit submits reports annual data on the use of ODS to Multilateral Fund and Ozone Secretariat and take measures to introduce necessary legislation for phasing out of ODSs and to promote refrigerants which are having zero Ozone Depleting Potential (ODP) and low Global Warming Potential (GWP). Further, to control illegal imports, necessary Laws and Acts have been prepared and also to phase out Hydro chlorofluoro carbons (HCFC), Hydro chlorofluoro carbons Phase-out Management Plan (HPMP) is implemented. A Quota system for import of HCFC has been in effect successfully from 2013 to limit the import of HCFC with minimum impact to the industries and development.

The latest Amendment to the Montreal Protocol is Phase-down of Hydrofluoro carbons (HFC) gradually and it was adapted at the all Parties to the Montreal Protocol, on 15<sup>th</sup> October 2016 in Kigali, Rwanda. Accordingly, Cabinet Memorandum No 17/1104/704/017 dated 30<sup>th</sup> May 2017 for the approval of Cabinet of Ministers and as per the Cabinet decision, National Ozone Unit is holding discussion and taking necessary measures with the Ministry of Foreign Affairs to ratify to the Amendment and is expected to complete ratification process by the end of October.

Introducing the new technology of recovery, reclaim and reuse technology to control the shortage and demand of refrigerants that may be expected due to the control of import and production of these chemicals. 8 Refrigerant Reclaiming Centers have already been established in geographically most suitable place . Through this reclaiming process. For the establishing of 9<sup>th</sup> centre, funds have been received and preliminary works are being implemented.

Stage by stage, HCFC base refrigerants phase out programme are in action as per the obligation to the Montreal protocol. "Good practices in Refrigeration" workshops were organized in national level with Technical Colleges, Vocational Training Authority training centers, Ceylon German Technical Training Institute for ref/ac service sector in order to train the ref/ac technicians on alternative green technologies.

Apart from this, the Air Resources Management and National Ozone Unit organizes workshops for government officials, forces, police officers, students and teachers in association with District and Divisional Secretariat offices and Zonal Educational offices to create awareness about ozone depletion and other assorted global environment issues with the coordination of various resource persons.

As a prime requirement greening the building construction sector of Sri Lanka from 2017, The Ministry of Mahaweli Development and Environment introduced Green building guidelines of Sri Lanka for Public and semi government building and green building rating system for government constructions. To switch to a blue green era with greening of cities and minimize the environment impacts to building industry with these concepts is the prime objective.

### 3.1.02 Reporting annual ozone depleting consumption data

Reporting annual consumption data of ozone depleting substances to Ozone and Multilateral Fund secretariats are mandatory as per the article 7 of the Montreal protocol. It is one of the main obligations of the Montreal protocol and it was implemented from the inception of the protocol by Sri Lanka. Accordingly 2016 report were also submitted to the said secretariats. Secretariats have these data by all parties and its support to prevent illegal imports of ODSs.

### 3.1.03 Preparation of report on the island-wide survey conducted under the UNEP to verify the use of alternative refrigerants for Ozone depleting substances.

Hydrofluorocarbons (HFCs), Ammonia, Carbon dioxide, and Hydrocarbons are the alternative for ODSs can be mentioned as the commonly used refrigerants in Sri Lanka. The objective of this Survey was to determine the quantity of such alternatives that have been penetrated into Sri Lanka and to prepare a database in order to get an idea about the pattern of consumption. This was an important survey, because decisions of granting of funds to Sri Lanka in future will be taken depend on the outcomes of this survey.

### 3.1.04 Prevention of illegal importation.

Huge demand for ODSs has been created within the country due to control of import. Therefore, Importers may attempt to import these chemical illegally and therefore NOU has introduced several precautionary measures to prevent possible illegal imports. Hence, National Ozone Unit organizes training programmes to train Customs Officers on identifying these ODSs and provide necessary identification equipment to Sri Lanka Customs. Using these equipment, consignment of refrigerant is released only after the checking by the Customs releasing to the market. Illegal import of ODSs is a violation of 8<sup>th</sup> Article of the Montreal Protocol and Protocol has mandate to impose economic sanction against the particular Party. Since all the records of ODS imports and exports are available with Ozone Secretariat, detecting of illegal imports and exports is not a difficult task.

### 3.1.05 Request funds for projects from the Multilateral Fund of the Montreal Protocol

- ❖ As Stage 2 of the Hydrochlorofluorocarbons (HCFC) phase-out Management Plan (HPMP) was completed, necessary documents to be submit to the Multilateral Fund of the Montreal Protocol requesting funds for the Stage 3
- ❖ Preparation of Annual Work Plan for the stage -3 of HPMP and coordination with UNDP office in Colombo
- ❖ Coordination with UNDP – Colombo Office in order to procure equipment for proposed Refrigerant Reclaim Centre

### 3.1.06 Incentive payment programme for purchasing of Air Conditioning working with zero Ozone Depleting Potential (0 ODP) and Low Global Warming Potential (Low GWP)

Capacity Btu/h	Incentive payment (US\$)
9,000	120.00
12,000	150.00
18,000	200.00
24,000	250.00
30,000	300.00

At present, the Split and Package Air conditioners are working with HCFC 22 (R 22) and it is an ODS and high GWP refrigerant. Therefore, in parallel to the global effort to minimize the climate change effect, Sri Lanka too will impose the ban of import of equipment working with R 22 from 01 January 2018.

To encourage the purchase of Air Conditioners working with 0 ODP and Low GWP refrigerant (R 32 and R 290) and having capacity of 9,000 to 24,000 Btu/h, special Incentive Programme has been

implemented as a pilot project by the National Ozone Unit in collaboration with United Nations Development Programme (UNDP).

Accordingly, incentive payment is being paid as follows for the purchase of such environment friendly Air Conditioners. Five Government institutes have been granted under this programme to purchase 62 units of ACs.

### **3.1.07 Preparation of Cabinet Memorandums and submit for the approval of the Cabinet of Ministers**

- ❖ Approval of the Cabinet of Ministers has been granted to the Cabinet Memorandum submitted to further strengthen of the regulations imposed by the Gazette Notification No. 1821/40 dated 0.08.2013 on objective of phasing out of HCFC.
- ❖ Approval of the Cabinet of Ministers has been received for the Cabinet Memorandum No. 17/1104/704/017 for the ratification to the Kigali Amendment to the Montreal Protocol on phase down of Hydrofluorocarbons (HFC) that was adapted on 15.10.2016
- ❖ Since Methyl Bromide is an ODS, Montreal Protocol has banned the use of Methyl Bromide from other applications except Quarantine & Pre- shipment purposes As Methyl Bromide is an effective pesticide, it had been used in Tea Nurseries in Sri Lanka to fumigate soil to eliminate pests. Sri Lanka has converted to environment friendly methods in 2000 and signifying this achievement, under the guidance and leadership of Minister of Plantation Industries, an 'Ozone Friendly Tea Logo was designed by the Sri Lanka Tea Board. It was registered in March 2011 and launched on 5th May 2011 by the Hon. Minister himself.

Since Sri Lanka is the only country to own the Ozone Friendly Tea Logo, in order to gain higher demand and price for Sri Lankan tea, considering the proposal made by the UNEP several times, it is appropriate to add this logo to sportswear of the National Cricket team. A Cabinet Memorandum was submitted to the Cabinet of Ministers to obtain approval for this proposal.

### **3.1.08 Control Mechanism for controlling ozone depleting substances**

It is mandatory to establish a government control Mechanism for controlling ozone depleting substances as per the article 4B of the protocol. Accordingly, National ozone unit (NOU), Import and Export control Department and Sri Lanka Customs are the stakeholders of this mechanism and NOU issue quota for eligible importers to import ODSs and take actions with respective stakeholders to prevent illegal imports. Arrangements have been made to implement a network system with respective stakeholders in order to implement the licensing system efficiently. Current practice for issuing license is obtaining the issues recommendations to eligible importers by NOU and Import and Export Controller issues the license. Customs release the goods after inspect refrigerants that comply with the license conditions. Importers sale refrigerants to ref/ac service sector.

### **3.1.09 Introducing Green Technologies for REF/Ac Service sector**

95% of the Ozone Depleting Substances that have been use in Sri Lanka is R-22 refrigerant and it uses in ref/ac service sector. Releasing of refrigerants to the atmosphere is a normal practice while repairing ref/ac equipment. This practice is caused to deplete the ozone layer and increase the global temperature. Therefore new technologies are introduced to ref/ac service sector. Under this system no refrigerants are released to the atmosphere while repairing ref/ac equipment. This technology is known as green technology. Trainers were trained by United Nations Environment Programme to disseminate this technology in national level.

### 3.1.10 Establishment of R-22 Refrigerant Reclamation Centers



There is a shortage of R-22 refrigerant availability in the market due to phase out programme of R-22 refrigerant under the Montreal Protocol. In order to face this shortage eight R-22 refrigerant Reclaiming centers were established covering eight provinces in the country. Those Reclaiming centers were located at Southern Province (Galle), Western Province (Colombo), Wayamba Province (Kurunagala), Southern Province (Kandy), Eastern Province (Batticaloa), Uva Province (Badulla), Northern Province (Vavuniya), North Western Province (Polonnaruwa) and connected to Technical Colleges and Vocational Training Authority Training Centers in respective provinces. R-22 refrigerant collected by ref/ac service sector in respective provinces could be reclaimed to virgin status by these centers and reuse same repairs of ref/ac equipment. This technology is introduced to the curriculum of vocational syllabuses of ref/ac courses. Arrangements has been made to convene progress review meetings of these centers in order to see the progress.

### 3.1.11 Participation of International Meetings organized by the Ozone Secretariat

- ❖ At the Extraordinary Meeting of Parties to the Montreal Protocol held in July 2016 in Vienna, Sri Lanka declared its stand that a gradual phase-down of use of Hydrofluorocarbons (HFCs) is recommended to mitigate climate change, since HFCs are contributing for the global warming. Further Sri Lanka stated at this meeting that phase-down of HFCs could be accelerated if low GWP and safe refrigeration equipment are introduced to the market.
- ❖ At the 28th Meeting of Parties, held in Kigali, Rwanda in October 2016 to take final decision on HFC Phase-down for which one of the Secretaries of His Excellency the President represented, reiterated the Sri Lanka's stance on this matter
- ❖ Participation for 10th Ozone Research Officers Meeting held from 28 -30 March 2017 in Geneva. At this meeting, a request was forwarded to obtain Ozone Measuring Equipment to Sri Lanka
- ❖ Network Meeting of Ozone Officers of South Asia was held in Agra, India from 23-26 May 2017 and discussed on the progress of ongoing HPMP and practical problems in implementing HPMP. Specially, awareness programmes on implementation of Projects and Activities effective and efficient manner were conducted for Ozone Officers throughout the 3 days.
- ❖ Apart from that, Ozone Officer were educated on ratification to the Kigali Amendment, financial and technical assistance that would be received from Multilateral Fund of the Montreal Protocol.

### 3.1.12 Teacher training programs

Teachers can be considered as a crucial factor who dedicate their humble efforts to make a change in the society. Students create their basic frame of education by primary and secondary education and by teachers, the students are directed into the formal education. The Air Resource Management and National Ozone Unit organizes workshops to teachers to provide sufficient knowledge about Ozone depletion, assorted biodiversity depletion and climate change in various places of the island. To conduct lectures, subject related university lecturers, educationalists and senior government officers are used as resource persons. These workshops are organized in different locations which important as Sinharaja rain forest. The prime goal of these workshops is creating awareness among teachers about global issues and creation of a discussion amongst the various levels of the society via teachers.

### 3.1.13 Student training programs

Despite of teacher training workshops, Air Resource Management and National Ozone unit conducts workshops for students about Ozone Layer and its depletion, biodiversity depletion and assorted global issues island wide. Subject experts are connecting as resource persons to conduct lectures. Moreover, these workshops were conducted in schools at urban areas which has more environment problems and also in rural areas with the support of Zonal Education Offices.

### 3.1.14 Trainings for government officers



Government officials are the back bone cord of the state service. The Air Resources Management and National Ozone Unit organizes workshops island wide representing every administrative division of Sri Lanka coordinating via District and Divisional Secretariat offices. When dealing with issues related to adverse climatic effects, the government officers need such knowledge about the current global problems especially deals with global warming and Ozone depletion to implement decisions and policy making. Apart from this, the Air Resources Management and National Ozone Unit organized a workshop for customs officers of Sri Lanka Customs to give them the knowledge about prevention of importation of illegal refrigerants and illegal refrigerant based equipment. Furthermore it was explained about the Montreal protocol, its legal status and practical situation.



### 3.1.15 International Ozone Day 2016



From 1994, International Ozone Day Celebration was held continuously on 16<sup>th</sup> of September of each year. The Theme of the Ozone Day 2016 was “Ozone Layer and The Climate: Protected by Global Unity” and the motto was “Minimize the Hydrofluorcarbon emission which affect global warming”.



## 3.1.2 Activities implemented during 2016.07.01 to 2017.06.30 under Initiatives on Air Quality Management.

### 3.1.2.01 Introduction:

Air pollution is one of the most serious problems facing today's world, which has far reaching health, environmental and economic impacts. In Sri Lanka air pollution is an increasing problem due to rapid expansion in the industrial and commercial sectors and expanding living standards of the population following the country's economic growth. Mobile source emissions & stationary source emissions are the major contributors for air pollution in the country. Rapid expansion of economic activities results in increasing use of energy which comes largely from fossil fuel sources imported to the country. When considering the Sri Lankan scenario the transport sector is contributing about 60% to the air pollution especially in Colombo City. Others such as thermal power plants already established within the Colombo Metropolitan Area has aggravated this situation. Also other regional cities are increasingly threatened by air pollution and Kandy City being located in a valley takes the lead in this regard. Indoor air pollution is another area of concern mainly because of high level of biomass use in domestic cooking.

Major activities carried out to address the mission of clean air everywhere are given below.

### **3.1.2.02 Stakeholder meetings of the Resource Management Centre (AirMAC)**

Air Resource Management Air Resource Management Centre (AirMAC) was established in the year 2001 under the Ministry of Forestry and Environment as a coordinating body to implement national air quality policy in partnership with all stakeholders related to air quality management. The mission of the AirMAC is to provide leadership to manage air resources by mitigating the air pollution, in order to improve health of the public and the quality of environment as a whole. Normally this Ministry is organizing stakeholder meetings in order to coordinate these efforts, the policies and regulations that were implemented and also to be implemented by the AirMAC and review & improve effectiveness of these policies.

Therefore, Air Resource Management & National Ozone Unit was organized AirMAC stakeholders meeting on 11th October 2016 to discuss ongoing programmes regarding air quality management, fuel quality improvements, establishment of steering committee and on implementation of Clean Air 2025 Action Plan.

### **3.1.2.03 Awareness Programmes on Air Quality Management**

The rewards of addressing air pollution include improved human health, increased productivity and reduced health costs and a healthier, more productive environment. In turn, these benefits will result in a healthier, more sustainable economy. Although the Sri Lankan Government is working to improve air quality through legislation, policies, new programs and specific actions, general public seems unaware on the extent of the air pollution in the country and its adverse impacts. Every human plays a part in polluting the air. Equally, there are so much individual can do to become part of the environmental solution.

On behalf of the Sri Lankan Government the Ministry of Mahaweli Development and Environment plays key role on creating awareness and changing attitude among public communities on air pollution issues, precautionary methods and environmentally friendly technologies. It is necessary to conduct massive programme to aware general public since it was not effective or efficient method to address general public by aware selected social groups. It has been identified that the mass media is the most suitable mode to address community on these issues.

Therefore Air Resource Management & National Ozone Unit of this Ministry was organized and successfully conducted a two days residential awareness program for 35 media personals to enhance public awareness on air pollution and associated health and environmental issues, and increase public concern towards the better air quality, green and sustainable environment through their creations and publications, on 6<sup>th</sup> and 7<sup>th</sup> of December 2016 at Laya Leisure Kukuleganga, Mathugama. Success and Milestone of Air Resource Management in Sri Lanka. Impacts on Ozone Layer Depletion, Global regulatory approach to protecting the ozone layer & its domestic contribution, Progress of Vehicle Emission Testing Programme and way forward, Fuel Efficiency of Vehicles and Fuel Quality Road Map in Sri Lanka, Indoor Air Quality Management, Health Impacts of Air Pollution, Ambient Air Quality monitoring technologies & Sri Lanka status, Concept of Environmentally Sustainable Transport, Stationary Source Emission control Strategies, Waste Management and Air Pollution and Introduction of Proposed Green Building Guidelines were some of the key topics discussed at the workshop.

Three school awareness programs were successfully conducted on air pollution, air quality management and its adverse health and environment impacts covering schools in Homagama, Kandy and Ibbagamuwa educational zones respectively on 29<sup>th</sup> May, 29<sup>th</sup> & 30<sup>th</sup> June for 650 students.



#### **3.1.2.04 Air Quality Monitoring**

Information on air quality is a very important factor in evaluation of environmental impacts of new development activities of the country. It is therefore a prime importance to monitor the ambient air quality at least in major cities in the country taking into consideration the emission data and meteorological, topographical & geographical parameters. Also, it is very important and helpful to monitor the ambient air quality at selected towns at least once in every two years to update this data for the purpose of decision making. This updated set of data is also important as historical data in future.

Three meetings have been conducted in order to review previous details on air quality monitoring activities conducted in Sri Lanka and to prepare comprehensive air quality monitoring mechanism for Sri Lanka.

The Memorandum of Understanding(MoU) was drafted to obtain data on air quality monitoring activities which was conducted by National Building Research Organization(NBRO) since year 2012 and to expand the air quality monitoring activities of Kandy city and to initiate monitoring activities of the Puttalam town using passive sampling technique as an interim monitoring system. It is also proposed to maintain a database on the data obtained here.

Also, discussions were held during Global Environment Centre Foundation-Japan mission visit here in Sri Lanka, and the proposal was prepared to submit for JICA on Technical Assistance project on Air Pollution Control Measures regarding Automobile for the country through Department of National Planning.

#### **3.1.2.05 Fuel quality Improvement for Air Quality Management in Sri Lanka**

As the emission characteristics of a vehicle fleet in an urban environment and resulting ambient air quality degradation are very complex in nature. In consideration of the adverse effects of fossil fuel usage on air quality, particularly in the transport sector, and their relation the quality of fuels, the development process of the roadmap was initiated. A Roadmap for Cleaner Fuels and Vehicles in Sri Lanka is designed to provide decision makers with up-to-date information on how to clean up fuels in Sri Lanka by implementing a set of activities with time-bound targets giving due consideration for regional and international trends in the subject, while addressing the local concerns. Implementation of this road map would help in establishing environmentally sustainable transport (EST) system that lead to a better air quality management in Sri Lanka. In this regard Air Resource Management & National Ozone Unit of this ministry was conducted a technical committee meeting to finalize the fuel quality roads map on 20<sup>th</sup> February 2017.

#### **3.1.2.06 Electrification of 250 two stroke three wheels**

Vehicle emissions contribute 60% of air pollution in Sri Lanka and three wheels are the major components of this. There are 1.2 billion three wheels running on the roads out of 0.2 billion are two stroke three wheels. After finding the two strokes three wheels are heavily polluted the environment by the researches, importation of the two stroke three wheels and its engines were banded in 2008. However 0.2 billion of two stroke three wheels are running with maintaining currently.

Under the poverty alleviation programme in 2017, Air Resource Management and National Ozone Unit of the Ministry have planned a pilot project to electrify 250 no of two stroke three wheels for improving the air quality and enhancing the income level of the three wheel owners.

A meeting was conducted to identify the contributions to introduce green technologies with representatives of government and private banks on 21 February 2017. Accordingly, paper advertisements were published to find out suitable institutes for electrification of three wheels. After that the Technical Committee Meeting was conducted to evaluate the price and systems of these institutes on 20 August 2017. After evaluation of these institutes, technical committee distributed a criteria data sheet to get detail information from these institutes. A paper advertisement was published in Sinhala and Tamil medium newspapers to find out beneficiaries of this project.

### 3.1.2.07 Programme for minimizing of air pollution in Kandy City

Accordingly research on air quality, percentage of adverse air concentration was reported higher than the standard value. It effect on the matters of geographical area, heavy traffic jam and density of people around the city. If around the Kandy City which was published the world heritage city, would not control the air pollution with giving proper solutions, according to the expert idea it will effect on series of problems in future.

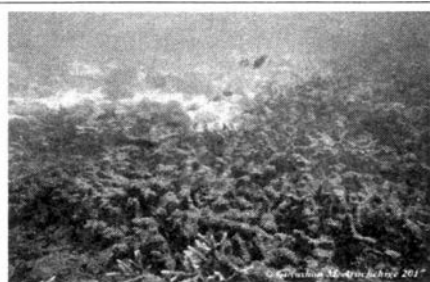
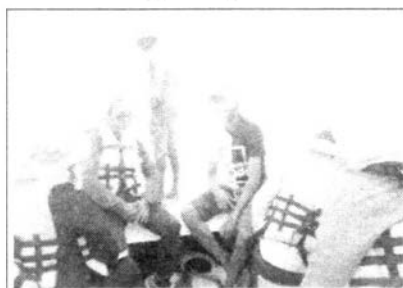
Considering these points, under the “Punarudaya” Programme and National Environmental Conservation Programme of the His Excellency the President, Air Resource Management and National Ozone Unit of the Ministry was conducted an initial meeting with relevant key stakeholders for managing air quality around the Kandy city. Short, medium and long term activities have been initially recognized at this meeting and further meetings will be arranged to implementation of the actions & under the chairmanships of secretary of the MoMD&E & GA, Kandy.

## 3.2.0 Activities carried out to address the Saving Flora, Fauna and Ecosystems

### 3.2.1 National Expert Committee Meeting on Biological Diversity

The Biodiversity Division has established the National Expert Committee for Biodiversity Conservation and Sustainable Uses for Sustainable Development. It has fulfilled with subject expertise and they make decision and guide to national issues on biodiversity .The 4<sup>th</sup> National Expert Committee meeting on Biological Diversity conducted on 13 September 2016 at the “Sethsiripaya” conference hall.

### 3.2.2 Fieldwork of Project on Protecting Environment Sensitive Areas (EAS)



Baseline survey field visit of Bar reef - Kalaoya area

This project conducted the field observation on Biodiversity Baseline survey on 28 February and 04 March 2017 at Kalaoya area and selected expert group was conducted the baseline survey and field visit of Bar reef wave. Secretary, Ministry of Mahaweli

Development & Environment, District Secretaries of the Puttalam and Anuradhapura, officers of the Mahaweli Development and Environment, Central Environmental Authority and Coast Conservation



Department and Field researchers were participated. All the expertise were decided this coastal ecosystem should be conserved.

### **3.2.3 Create New Poster on Commemoration of Internationally Important Environment Days**

Biodiversity Division was launched a Poster on Commemoration of Internationally Important Environment Days on 17 February 2017 at the Programme held on “Suwasara Thakshalawa” organized by the Central Environmental Authority. His Excellency President Maithripala Sirisena was the Chief Guest of that event.

This poster is good effort to aware school children regarding the internationally important environment days. Therefore, Ministry of Mahaweli Development & Environment in collaboration with the Ministry of Education have planned to distribute this poster among all Schools in Island wide.

Biodiversity Division of the Ministry of Mahaweli Development and Environment was officially remarked the distribution of this poster to the Schools at the event of the commemoration of 100 years of Ratnapura Ferguson High School on 27 March 2017. His Excellency President was the Chief Guest of that event.

### **3.2.03 National Steering Committee meeting on National Biodiversity Strategic Action Plan (NBSAP)**



Discussion on the implementation plan of the NBSAP and National Biodiversity Clearing House Mechanism was held at the National Steering Committee meeting on 16 March 2017 at “Saptha Parisara Madapaya” chaired by the Secretary, Ministry of Mahawalie Development and Environment. All stakeholders were represented and discussed the implementation plan of NBSAP.

### **3.2.04 National Policy on Mangrove Conservation and Sustainable Use**

The Ministry has established the National Expert Committee on Mangrove Conservation & Sustainable Use whose responsibility would be coordinated and steer the activities related to conservation and sustainable use of mangrove ecosystems and one of the major activity is to prepare National Policy on Mangrove Conservation and Sustainable Use.

The Biodiversity Division conducted series of workshops for drafting the policy. Accordingly, validation workshop was held on 12 August 2016 at the Center for Banking Studies with the participation of members of National Expert Committee on Mangrove Conservation and Sustainable Use, stakeholder agencies, NGOs and other professionals of the mangrove field.

### **3.2.05 Workshop & Field visit on Mangroves**



Biodiversity Secretariat has organized one day Regional Workshop on Conservation and Management of Mangrove Ecosystem on 24 March 2017 at the District Secretariat, Jaffna.

Government officers of Jaffna were participated and introduction of the world mangroves, how to protect mangroves, mangroves have been the lifeline of North: direct and indirect uses were the main topics discussed at the workshop. One day field visit has been organized to visit the

Sarasalai, Mandaithevu and Thondamanaru lagoon.

### 3.2.06 Preparation of Sabaragamuwa Provincial Biodiversity Profile & Conservation Action Plan

Biodiversity Secretariat was conducted a workshop for preparation of the Sabaragamuwa Provincial Biodiversity Profile & Conservation Action Plan with the relevant stakeholders in Sabaragamuwa Province. This workshop was held on 27 March 2017 at the Samurdhi Reception Hall, Ratnapura. Draft Report prepared by the consultant was discussed at the workshop.

### 3.2.07 Pollinators Conservation Action Plan of Sri Lanka.

Major invertebrate pollinators of Sri Lanka include butterflies, moths and bee species. Many anthropogenic practices including the clearing of vegetation and application of insecticides to control insect, pests and home garden pests destroy or repel the invertebrate pollinators in many habitats of Sri Lanka.

- ❖ The Biodiversity Secretariat has organized a series of workshops on Importance of Pollinators for their Conservation. Hence following workshop series were conducted in collaborated with the Department of Zoology of the University of Jaffna :

The goal of overall workshops were enhanced the knowledge on native pollinators and their significance on agriculture & biodiversity for the community. Recall their knowledge about pollinators, to learn about types, habitat preference and their importance and identify the threats to the native pollinators, to find out the solution to increase the diversity of native pollinators are the specific objectives.

- ❖ Awareness program for school children on Insect Pollinators of Sri Lanka and their Conservation

As it is highly important to incorporate pollinator conservation knowledge in to school education stream, Biodiversity Secretariat has organized the above awareness program on 16 May 2017 at the Minuwangoda Nalanda Boys School. Students of the Janadipathi Vidyalaya and Nalanda Girls School of the Minuwangoda Zonal Education area were participated to this event. Prof. Shriyani Dais, Faculty of Zoology & Environment Management and Dr. Rathnayake, Faculty of Plant Science Education Division in the University of Kelaniya delivered the lectures to aware the student regarding this.



**Pollinator workshop**

### 3.2.08 Celebration on International Biodiversity Day – 22 May 2017

In every year, 22 May commemorate the International Biodiversity Day and this year theme was “Biodiversity and Sustainable Tourism”. This year celebration of the Biodiversity Day under this theme provided an opportunity to raise awareness and action towards the important contribution of sustainable tourism both to economic growth and to the conservation and sustainable use of biodiversity. Furthermore, the theme also provided an opportunity to promote the CBD Guidelines on Biodiversity and Tourism Development.



**Celebration of the Biodiversity Day**

Therefore, the Biodiversity Secretariat was organized a training workshop on “Sustainable Eco-tourism at the Runakanda Rainforest Reserve Centre in collaboration with the Friends of Biodiversity Runakanda Conservation in Kalutara and Sri Lanka Institute of National Tourist Guide Lecturers Association. It was held from 03 - 04 July 2017.

### **3.2.09 Updating National Red List-Conservation status of Fauna and Flora.**

Sri Lanka is considered as a biodiversity hotspot due to richness in flora and fauna and threats to their survival and it is very important to identify and prioritize the species for conservation activities. Accordingly, as per the convention of Biological Diversity, Biodiversity division of this Ministry is in the process of evaluation of conservation status of fauna and flora in accordance with the assessment process. In order to achieve above target, Biodiversity division has initiated a series of expert meetings and data evaluation workshops with the relevant stakeholders. Hence biodiversity division already finalized the floral species conservation status within 13 floral families together with the National Herbarium of the Department of National Botanic Gardens. Further to that there were preparatory meetings of faunal groups to be evaluated using the existing data for faunal assessments. Currently this activity is ongoing.

### **3.2.10 Biodiversity Surveys / Researches**

Field research studies were facilitated related to find the information gaps on flora & fauna conservation.

- ❖ Floristic Survey of 10 acres of the IFS
- ❖ Biogeography and evolutionary relationships of Sri Lankan Thalloid liverworts and hornworts
- ❖ Bio-inventory and Conservation of Mygalomorph Spiders in the wet zone of Sri Lanka
- ❖ A faunal survey in a proposed environmentally sensitive area along the Mahaweli River at Warathenna, Kandy
- ❖ Diversity of Soil Dwelling insect Fauna in Tea under organic and conventional cultural practices
- ❖ Study on migration/movement of selected fish species in their natural environments
- ❖ Propagation on Three Locally Endangered Mangrove or Mangrove Associated Species in Sri Lanka
- ❖ The diversity of bacterial and fungal populations in soils as affected by shifting cultivation in dry mixed evergreen forests
- ❖ Study of Plant – insect pollinator biodiversity in selected habitats in Matara District

### **3.2.11 Biodiversity division of the Ministry of Mahawellie Development & Environment celebrated world environment day and organized several national programs on environment related as follows:**

- ❖ Conducted awareness programs on Biodiversity and Environment Conservation to the Kiriwanagama Central College of Haldummulla Divisional Secretariat and Kahagolla National School of Haputhalle Divisional Secretariat in Badulla District. Established the under-utilized fruit gardens in above schools & the Al/Badriya Muslim Vidyalaya and donated environment related publication leaflets & posters published by the biodiversity division.
- ❖ Biodiversity division of Ministry of Mahawellie Development & Environment conducted the following programs under the funds of BFN project (Biodiversity for Food & Nutrition project) in University of UVa Wellassa)
  - 1) Initial discussion was held to establish the butterfly garden to conserve the Indigenous butterfly species in Sri Lanka.
  - 2) Conservation program on aquatic fish & Aquatic plants for use to research students.
  - 3) Awareness program was held on 23<sup>rd</sup> June 2017 at UVa Wellassa University, Badulla with the participation of Ministry of Mahaweli Development and Environment, Biodiversity for Food & Nutrition project (BFN) and the Uwa Wellassa University to increase the awareness of undergraduates about biodiversity under different disciplinary. The program was

initiated with establishment of an under-utilized fruit garden in the university premises with the name boards for each fruit crop consisting the information of botanical details, nutritional value and health benefits to introduce and increase utilization of underutilized fruits. Vice Chancellor Dr.Jayantha Lal Rathnayake & Academic staff, Director of Biodiversity division Mrs.R.H.M.P.Abeykoon, Officers and university students were participated for this event.

- 4) Detailed lectures were conducted on agro-biodiversity for human nutrition information about invasive species in Sri Lanka, Biodiversity in Sri Lanka and importance of conservation of biodiversity, Climatic changes and their impacts and methods of elimination, sustainable waste management.

❖ Central Environment Authority has organized the school awareness program series in Kalutara district. Biodiversity division of the Ministry of Mahaweli development & Environment participated as resource person and deliver the lecture on Biodiversity in following schools for the World environment day celebration.

- 1) Dodangoda Miriswatta National School
- 2) Bulathsinhala Central College
- 3) Palindanuwara Kamburawela Maha Vidyalaya

250 students were participated from each school and biodiversity division was distributed the publications with poster on International environmental days.

### **3.2.12 Project on Strengthening Capacity to Control the Introduction and Spread of Invasive Alien Species (IAS)**

#### **Symposium on Invasive Alien Species -2017**

Symposium on Invasive Alien Species was conducted on 20 January 2017 at the Waters' Edge, Battaramulla . This Symposium was conducted under the Project on "Strengthening Capacity to Control the Introduction and Spread of Invasive Alien Species in Sri Lanka". Presentations on research subject areas presented by the all researchers who were funded under this project. Chief Guest was Hon Deputy Minister Mr.Anuradha Jayarathne and Secretary of Ministry of Mahaweli Development & Environment. Experts & officers were participated.

#### **Project on "Mainstreaming Biodiversity Conservation and Sustainable use for Improved Human Nutrition and Well-being" (BFN)**

The following are the major activities done under the Project

"Mainstreaming Biodiversity Conservation and Sustainable use for Improved Human Nutrition and Well-being" (BFN)

Workshop on Conservation & Utilization of Local varieties and Traditional knowledge Associated with Genetic Resources & Agriculture conducted by BFN project collaborated with BACC Project dated on 09<sup>th</sup> February & 10<sup>th</sup> March 2017 at Kandy. BFN website is updating with data on traditional knowledge & crops and also grant the funds for following new activities 2017.

- 1) Establishment of a model garden for local root & tuber crops and underutilized fruits in the Niraviya Mahaweli farm.
- 2) Establishment of smallholder growers for root & tuber crops and Home garden diversification for improved nutrition & livelihood in the Aranayaka area
- 3) New Marketing options and guidelines for agro - biodiversity and food with high nutritional value identified and developed.
- 4) Proposal for multiple Media Approach to Promote Conservation & Utilization of Local Agro biodiversity for Improved Human Nutrition & Wellbeing.

#### **Mainstreaming Agro biodiversity Conservation and use in Sri Lankan agro – ecosystem for livelihoods and adaptation to Climate Change project (BACC)**

BACC and BFN projects were jointly organized a workshop on 28<sup>th</sup> February & 01<sup>st</sup> March 2017 at Milleniya village. Ten Bee boxes were distributing to among the farmers in "Ovita ecosystem. Other activities were progress review, conducted meeting on operational committee, project assistants, and reports collecting which were regarding that ongoing pilot projects and conducted practical sessions on indigenous seeds for the farmers in Gampola Cascade system.

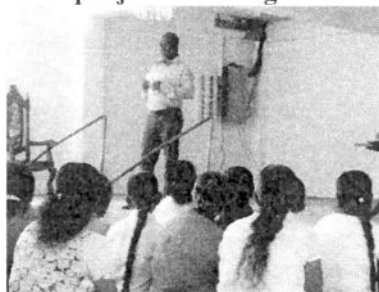
### **Training workshop and knowledge sharing program on Participatory Plant Breeding/ Client Oriented Breeding**

Training workshop and knowledge sharing program on Participatory Plant Breeding/ Client Oriented Breeding was held on 24<sup>th</sup> to 27<sup>th</sup> April 2017 at Plant Genetic Resources Center, Gannoruwa.

Dr. Arnab Gupta, a Scientist for Agro-ecology and seed systems from Biodiversity International, India and Dr. Amita Bentota, Director, Rice Research and Development Institute, Bathalegoda Conducted the training programme.

Farmers, Agriculture instructors, officers from Plant Genetic Resources Centre, Gannoruwa (PGRC), Horticultural Crop Research and Development Institute, Gannoruwa (HoRDI), Department of Ayurvedha and Ministry of Mahaweli Development and Environment was participated to the workshop. Practical session was also conducted in the PGRC field to provide the opportunity to have the hand on experience on plant breeding. This Training programme has made the path for farmers to get a clear idea about crop breeding and the importance of their role in Crop Improvement.

### **Pilot-project “Home garden diversification” at the Niunhella pilot site**

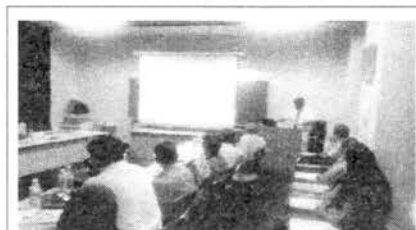


The workshop for initiation of the sub-project on Home Garden Diversification was held on 3<sup>rd</sup> June 2017, from 9.00 a.m. to 12.30 p.m. at the Niunhella Village, Temple, with the participation of 50



villagers selected for the home garden diversification project. The workshop was conducted by the officers at the Department of Agriculture, Assistant Director's office, Ruwanwella. Presentation on biodiversity for food and nutrition through home garden diversification was presented by Dr. W.L.G. Samarasinghe. Assistant director, Mrs. Nilma Rajapaksha addressed the gathering on the importance of organic cultivation promoting the concept of home gardening.

### **Expert Consultation Workshop on “New Marketing Options and Guidelines for Agro Biodiversity and Food with High Nutritional Value Identified and Developed”**



Discussion on “New Marketing Options and Guidelines for Agro Biodiversity and Food with High Nutritional Value Identified and Developed”

The expert consultation workshop for developing new marketing options and guidelines for agro-biodiversity and food with high nutritional value identified and developed, was held on 16<sup>th</sup> June 2017. The workshop was held from 9.00 a.m. to 12.00 p.m. at the Plant Genetic Resources Centre

(PGRC) with the participation of 40 expert from respective divisions of the University of Peradeniya and Department of Agriculture: including Horticultural Crop Research and Development Institute, Rice Research & Development Institute, Field Crop Research and Development Institute and Economics Division. The workshop was co organized by the BFN project and Agri-business center, Faculty of Agriculture, University of Peradeniya.

The main objective of the workshop was to identify the demand and supply for high value agro-biodiversity products of different crops to determine the priority issues related to food product development and understand potential challengers and opportunities for establishment of agro biodiversity marketing system. Presentations were made by experts on selection of priority target agro-biodiversity species and on different aspects of promoting target species. These inputs will be utilized

by the marketing consultancy team at the Agri-business center, Faculty of Agriculture, University of Peradeniya for their future activities.

### **3.3 Activities carried out to address the meeting the challenges of climate change**

#### **3.3.1 Meeting the Challenges of Climate Change**



Climate change which is the ultimate outcome of global warming is now universally recognized as the fundamental human development challenge of the 21<sup>st</sup> century. The Intergovernmental Panel on Climate Change (IPCC) has conclusively established that Climate Change induced by global warming is the direct result of excessive emissions of greenhouse gasses due to human action, particularly due to uncontrolled combustion of fossil fuels. It is a certainty that the present and future generations have to live under the threat of climate change.

For over the past 200 years, the burning of fossil fuels, such as coal and oil, and deforestation has caused the concentrations of heat-trapping "greenhouse gases" to increase significantly in our atmosphere.

Greenhouse gases are required for life, because they keep the planet's surface warmer. But, as the concentrations of these gases continue to increase in the atmosphere, the earth's temperature is climbing above past year's levels. Most of the warming in recent decades is very likely the result of human activities.

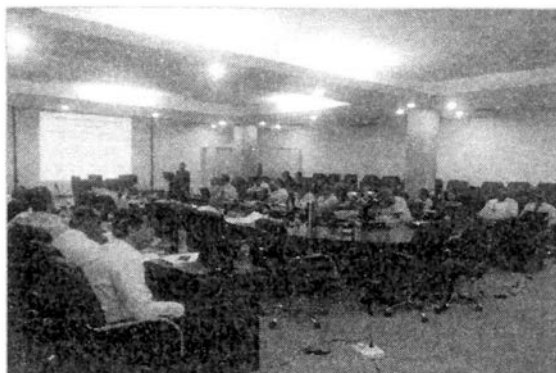


Global warming is expected to lead to a rise in sea level, higher temperatures, more frequent and prolonged droughts, high intensity rainfalls and increased thunder activity. These anticipated changes represent a significant threat to the coastal areas, the different sectors of the national economy and human health.

As a developing country and an island nation, Sri Lanka is especially vulnerable to these impacts. Climate change would produce major impacts on Sri Lanka's natural resources, economic activity and people's well-being. The full extent of climate change impacts on Sri Lanka is being studied, but there is a growing recognition that climate change could threaten the significant achievements the country has made in the last 20 years in increasing incomes and reducing poverty. Preliminary research and projection being undertaken has shown that Sri Lanka is highly vulnerable and could be affected in different ways.

The Climate Change Secretariat of the Ministry has undertaken several measures to address the challenges of climate change in the economic development sectors of the country. One of the main objectives of the Climate Change Secretariat is to facilitate climate change related research and distribution of research results to trigger policy reforms and actions. Major Functions to address the challenges induced by climate change is given below.

### 3.3.2 Preparation of National Adaptation Plan for Climate Change in Sri Lanka



National Adaptation Plan is the country's road map to guide the national efforts for confronting challenges posed by global climate change and its impacts. It envisages moderating and coping harmful impacts of climate change while taking the advantage of any opportunities presented in the path. It offers a practical path of action to reduce the vulnerability and enhance the adaptive capacity of the nation as a whole. NAP preparation process was started in 2014. The objective of preparing NAPs is to reduce vulnerability to the impacts of Climate Change by building adaptive capacity and resilience. The consultancy service for preparation

of NAP was awarded to the Institute of Policy Studies (IPS). In the preparation of the NAP process ten sectors have been identified as the most vulnerable sectors to adverse effects of climate change in Sri Lanka. Consultations also helped to identify priority areas within each sector that needs specific actions of adaptation. In the identification of sectors and priority areas within them, attention was also given to align them with organizational structure of line agencies responsible for catering needs of respective sectors as far as possible.

Among the key components covered in the NAP are: specific actions/interventions with time lines to fulfill sectoral and cross-cutting adaptation needs; an implementation strategy for selected interventions; institutional mechanisms for coordination of actions of stakeholders; key performance indicators (KPI) for each action; system for monitoring and evaluation KPIs.

The identified sectors are: Food security, Water resources, Coastal and marine sector, Health, Human settlements and infrastructure, Ecosystems and biodiversity, Tourism and recreation, Export agriculture sector, Industry energy and transportation, Cross-cutting national issues and areas of interest.

Sectoral workshops have been conducted on Agriculture, Water, Ecosystems and Biodiversity, Tourism and Recreation, Health and Disasters, Human Settlement and Infrastructure, Industry, Energy and Transportation and Export, Agriculture and Plantation sectors and discussed about the cross cutting issues with related to preparation of the NAP.

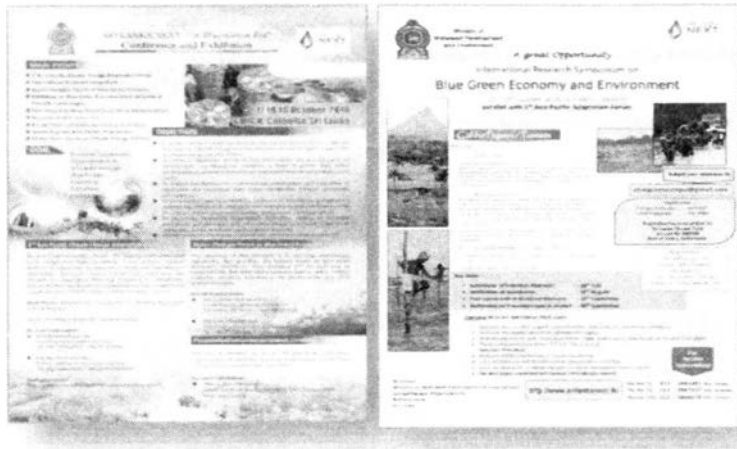
Validation and Finalization workshop was conducted and final draft has been prepared according to the inputs. NAP document printed and launched on 18<sup>th</sup> October 2016 at SRI LANKA NEXT | "A Blue - Green Era" programme. The stake holder consultative workshop was conducted on 7<sup>th</sup> December 2016.

### 3.3.3 SRI LANKA NEXT | " A Blue - Green Era " International Conference and Exhibition 2016

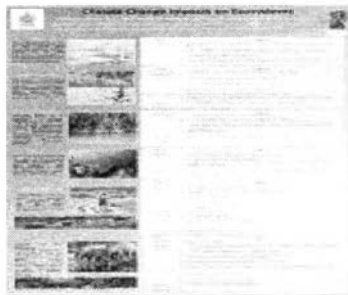
"Sri Lanka NEXT – A Blue Green Era" was formally initiated on 6<sup>th</sup> January 2016 at the BMICH to familiarize all sections of Sri Lankan society on Climate Change and to provide directions on development strategies. Under this event, International Conference on Climate Change was held at the BMICH, Colombo during October 17 - 19, 2016.

The objective of the Sri Lanka NEXT 2016 International Conference on Climate Change is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Climate Change.

### 3.3.4 Conduct Awareness Programmes on Climate Change Impacts

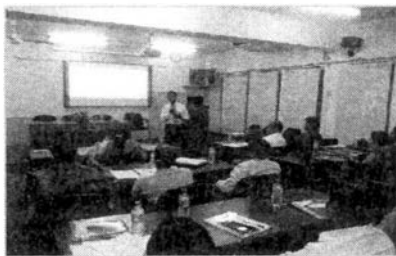


#### 3.3.4.1 Poster on “Climate Change Impacts on Ecosystems”



Printed 1000 Posters on “Climate Change Impacts on Ecosystems” and published in Climate Change Secretariat web site.

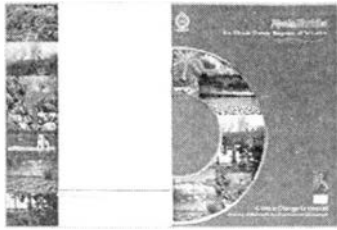
#### 3.3.4.2 Awareness Workshop on Calculation of Grid Emission Factor (GEF)



Awareness Workshop on Calculation of Grid Emission Factor (GEF) was held on 05th October 2016 at the Central Banking Studies, Rajagiriya



### 3.3.4.3 Printing the Climate Change Magazine “NeelaHaritha”



Printed 1000 books on Climate Change magazine “NeelaHaritha” and launched at the Sri Lanka NEXT - A Blue Green Era” programme was held on 18<sup>th</sup> October 2016.

### 3.3.4.4 Printing the Readiness Plan for Implementation of Intended Nationally Determined Contributions (INDCs) 2017-2019



Printed the Readiness Plan for Implementation of Intended Nationally Determined Contributions (INDCs) 2017-2019 and Published in Climate Change Secretariat web site.

### 3.3.5 Preparation of Intended Nationally Determined Contributions (INDCs) for Sri Lanka



The 21<sup>st</sup> session of the Conference of Parties to the UNFCCC was held in December 2015 in Paris with the participation of 195 world leaders and agreed to a universal Agreement called “Paris Agreement” to control the rise of global temperature well below 2<sup>o</sup>C within the century while making all efforts to maintain at a level below 1.5<sup>o</sup>C. Accordingly, member countries of the UNFCCC have consented to follow the strategies to mitigate the rise of global temperature by communicating their Indented Nationally Determined Contributions (INDCs).

Being a party to the UNFCCC, Sri Lanka has prepared and submitted the country's INDCs which consists of mitigation, adaptation, means of implementation (finance, technology development and transfer, capacity building) and loss and damage. Ministry of Mahaweli Development and Environment has been functioning as the national focal point for the UNFCCC and taking climate change related actions and driving agency for coordination of INDCs implementation in the country targeting year 2020-2030 as to meet the commitment of COP 21 Paris Agreement.

According to the Cabinet decision on “Agreement on Global Climate Change and National Strategic Accord (National Contribution towards minimizing Global Temperature)” No: 16/0377/704/011, dated 2016-02-26, it has been decided to prepare strategic policies and implementation plans for the INDCs submitted to mitigate the GHG emission of the sectors such as Power & Energy, Transport, Industrial, Waste Management,



Forestry and Biodiversity, Health, Disaster management, Water and Irrigation, Agriculture, Livestock, Coastal and Marine, Urban, City Planning and human Settlements, Tourism and Recreation. As per the above Cabinet decision, 13 “Advisory Boards” have been established consisting of Hon. Ministers and

Ministers of Provincial Councils in charge of the subject (sector) related to INDCs. Further, 13 “Planning and Regulatory Committees” were established under the Chairmanship of Secretary of the Ministry in charge of the subject related to INDCs.

Hon. Susil Premajayantha, Minister of Science, Technology and Research signed the Paris Agreement on climate change, on behalf of the Government of Sri Lanka, at the high-level signature ceremony held on 22<sup>nd</sup> April 2016 at the UN Headquarters in New York. H.E. the President handed over Sri Lanka’s instrument of ratification on the Paris Agreement on Climate Change, at the United Nations General Assembly at the UN headquarters on 21<sup>st</sup> September 2016. Sri Lanka’s first Nationally Determined Contributions submitted to UNFCCC on September 2016. A committee meeting was conducted on 28<sup>th</sup> February 2017 to discuss implementation of Readiness plan of INDCs of Sri Lanka and establishment of NAMA Institutional Framework for Sri Lanka.

### **3.3.6 National Committees on Climate Change**

#### **3.3.6.1 Inter Agency Coordinating Committee meetings on Climate Change (IACCCC)**

IACCCC was established with members of line ministries and agencies in order to integrate climate change adaptation and mitigation aspects into relevant sectoral policies, strategies and action plans. Last two Inter-Agency Coordinating Committee meetings were held on 22<sup>nd</sup> December 2016 & 27<sup>th</sup> April 2017.

The committee discussed decisions taken at previous expert committee meetings. Outcomes of COP 22 and follow up. Actions taken by the country after the Paris Agreement and Upgraded the Climate Change Expert Committees.

#### **3.3.6.2 National Expert Committee on Climate Change Adaptation (NECCC-Adaptation)**

Considering importance of having a National Expert Committee on Climate Change Adaptation (NECCC- Adaptation) to advice on activities related to climate change adaptation in Sri Lanka. NECCC- Adaptation was established September in 2012.

Objectives of the National Expert Committee on Climate Change Adaptation;

- Sensitize and make aware the communities periodically on the country’s vulnerability to climate change.
- Take adaptive measures to avoid/minimize adverse impacts of climate change to the people, their livelihoods and ecosystems.
- Mitigate greenhouse gas emissions in the path of sustainable development.
- Promote sustainable consumption and production.
- Enhance knowledge on the multifaceted issues related to climate change in the society and build their capacity to make prudent choices in decision making.
- Develop the country’s capacity to address the impacts of climate change effectively and efficiently.
- Mainstream and integrate climate change issues in the national development process.

National Expert Committee-Adaptation was held on 22<sup>nd</sup> September 2016 and Joint committee meeting with National Expert Committee-Mitigation was held on 29<sup>th</sup> November 2016. Last committee meetings were held on 23<sup>rd</sup> January 2017. Three committee meetings were held in the reporting period and discussed the following areas.

- ❖ Provide guidance for
  - preparation and implementation of the National Adaptation Plan (NAPs)
  - preparation of Intended Nationally Determined Contributions (INDCs) for the Adaptation Sectors in the country
  - Implementation of Technical Assistant project on Updating Climate Change Vulnerability Assessment and Piloting Mainstreaming Climate Change Adaptation into National Development Activities
  - IUCN Proposal submission to GCF on “Building Climate-Resilient Coastal Communities and Ecosystems in Asia”
- ❖ Make recommendations for country position and Climate Change Negotiations at COP Meetings
- ❖ Sri Lanka’s Submission on Adaptation Communications to UNFCCC and Adaptation Committee (AC) and Least Developed Countries Expert Group (LEG) mandates stemming from decision 1/CP.21
- ❖ Coordination of conduct of 5th Asia Pacific Climate Change Adaptation forum – (17th -19th October 2016)

### **3.3.7 National Expert Committee on Climate Change Mitigation (NECCC-Mitigation)**

Climate Change division has established the NECCC for providing guidance on issues pertaining to mitigate of Climate Change in the country.

Objectives of the NECCC-Mitigation as follows:

Provide guidance;

- ❖ On climate change mitigation issues in the context of national development agenda.
- ❖ To develop climate change mitigation policies, strategies, legal instruments and action plans.
- ❖ To formulate review and update country positions on mitigation for climate change negotiations.
- ❖ To implement mitigation activities in Sri Lanka based on the outcome of climate change negotiations.
- ❖ To prepare and implement Nationally Appropriate Mitigation Actions (NAMA) in the country.
- ❖ To implement the future sustainable mechanisms under Kyoto Protocol and Clean Development Mechanism (CDM).
- ❖ To review the foreign funded mitigation projects.

National Expert Committee-Mitigation was held on 16<sup>th</sup> September 2016 and Joint committee meeting with National Expert Committee-Adaptation was held on 29<sup>th</sup> November 2016. Last meeting was held on 30<sup>th</sup> March 2017 and discussed the following areas.

- ❖ Proposal for Market Readiness for Partnership for Market Readiness.
- ❖ Proposal on preparing a MRV for transport sector.
- ❖ NAMA institutional mechanism.
- ❖ Monitor the progress of the Readiness Action Plan for Intended Nationally Determined Contributions (INDCs).

### **3.3.8 Preparation of Nationally Appropriate Mitigation Actions (NAMAs)**

Nationally Appropriate Mitigation Actions (NAMAs) are actions taken by respective countries (developing in Sri Lankan context) to reduce greenhouse gas emission in the country. NAMAs are not defined specifically as it is accepted that developing countries have different and diverse NAMAs. The NAMAs can be from any of the sectors which have GHG emissions ranging from energy to agriculture or forestry. The reduction could be from existing levels or from what is projected from the future.

In the global climate change scenario the developed countries have a responsibility or duty for

mitigation of greenhouse gas emission. However traditionally the developing countries had been exempted to a certain extent from this responsibility. But with time, pressure developed and the idea of developing countries also doing mitigation at least voluntarily came in to the focus. In the Climate Change summit held in Bali 2007, under the Bali road map, NAMA's were introduced. It was agreed that Nationally Appropriate Mitigation Actions in the context of sustainable development will be carried out by developing countries in a measurable reportable verifiable manner and would be supported and enabled by technology, financing and capacity building (from developed countries). In order to that, Initial activities were carried out for preparation of NAMAs for Energy and Transport sectors.

#### **Preparation of NAMAs for Energy Sector**

Obtained the NPD approval for GEF funded project on appropriate mitigation actions in energy generation and end use sectors in Sri Lanka. Agreement to be signed by Ministry of Power and Energy, since they will be the executing partner. This project has 4 components. Component 1, 2 & 3 are implemented by the Sustainable Energy Authority and Component 4 is implemented by the Climate Change Secretariat.

The NAMA institutional framework was presented to the 1<sup>st</sup> National Steering Committee on INDCs and the National Expert Committee on Climate Change Mitigation (NECCC- Mitigation). Relevant cabinet memorandum was prepared and submitted to the parliament.

The three pilot projects on High Energy Efficient Motors for tea sector, Installation of biogas digesters and Solar PV net metering systems were initiated.

### **3.3.9 Sri Lanka's Third National Communication on Climate Change (SLTNC)**

The Project of Sri Lanka's Third National Communication on Climate Change document was signed with UNDP and Ministry of Mahaweli Development and Environment on 18<sup>th</sup> March 2016. The approval of the cabinet ministers was obtained for implementation of Sri Lanka's Third National Communication (TNC) Project within three years from 2016-2018.



The fundamental objective of this project is to strengthen Sri Lanka's technical and institutional capacity to respond effectively to climate change challenges and meet its obligations under the UNFCCC. While strengthening institutional and technical capacities of the country to prepare effective climate change adaptation and mitigation strategies and the third national communication report using country's existing technical and human resources capacity.

The preparation of the TNC report will take place of US\$ 500,000 with a grant of GEF through UNDP.

Accordingly,

- ❖ The inception workshop was held on 24<sup>th</sup> November 2016.
- ❖ The Project Management Unit was established with the approval of Department of Management Services.
- ❖ 2017 Annual Work Plan has been prepared and received the approval and LKR 2.3 million has been received to the account.
- ❖ Interviews to select qualified consultants were held.
- ❖ Members for TEC have been appointed and the TEC reports were prepared of the consultants.
- ❖ The process for Tender Approval is ongoing to select suitable consultants for the implementation of SLTNC project.

### 3.3.10 TA Project on Updating Climate Change Vulnerability Assessment and Piloting Mainstreaming Climate Change Adaptation into National Development Activities in Sri Lanka”

Sri Lanka is a highly vulnerable island to adverse impacts of climate change. Taking that into consideration in 2009, this Ministry has carried out a vulnerability mapping and assessment with the Technical Assistance of the ADB. As a continuation of assessing the vulnerability of the country, a technical assistance has been extended by the ADB to upgrade existing profiles incorporating new areas.

The TA activities in Sri Lanka will help to achieve,

- ❖ Increased resilience to climate change impacts through improved government capacity in mainstreaming climate change adaptation into national development policies and
- ❖ Improved ecosystem planning for the Northern and Eastern coastal regions and for the Mountain region. More specifically, the proposed activities will help improve capacity in conducting climate change vulnerability assessment, climate risk identification, and impact assessment.
- ❖ Prepare a set of tools for climate change adaptation policy and planning for the subproject areas.



During the progress reporting period a team of consultants namely Strategic Planning Specialist cum Team leader, GIS Specialist, Mountain Ecologist and Coastal Ecologist were



appointed and the project implementation started in January 2017. Presently data gathering and mapping exercise are in progress.

## 3.4 Activities carried out to address the Wise Use of Coastal Belt & Sea Around

### 3.4.1 Beach cleaning programme for removing of solid waste to commemorate World Water Day at Gurunagar – Jaffna.

International Water Day is annually celebrated on 22<sup>nd</sup> March and Sri Lanka celebrated this event together with all the other countries in the world. Sri Lanka is nourished with waste number of water bodies, most of the surface as well as ground water bodies are contaminated due to heavy environmental pollution. Solid waste is one of the major problems of pollute surface water bodies in many areas in the country. Fresh water bodies are limited resource in the Northern area of the Island. Salinity is increased



in inland water bodies due to shallow lime stone intrusion and sea water. Pollution of water bodies due to solid waste is mostly occurring in Jaffna peninsula due to large population and improper disposal of solid waste. “Gurunagar” is a dominant area to observe polluted water bodies and the large no of solid waste collected at the edge of the lagoonal area. By improper handling of solid waste spread epidemic diseases and un pleasant odours. In addition to that, ground water table in that area is highly contaminated by leachate of collecting of solid waste. The Ministry

of Mahaweli Development and Environment had organised a programme to aware general public on value of protection of water resources and beach cleaning programme in Gurunagar area. This Programme was successfully conducted through the



(MOMD&E), Coast Conservation Department (CCD), Central Environmental Authority (CEA), Public health Inspectors (PHI), Three Forces and the District Secretary of the District Secretariat and the participants of non- government organizations were present at the event.

assistance with Marine Environment Protection Authority (MEPA), Land Resources Division of the Ministry of Mahaweli Development & Environment



## 3.5 Activities carried out to address the Responsible use of the Land Resources

### 3.5.1 Commemoration of World Soil Day -2016

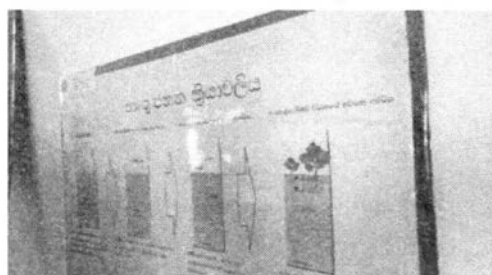


United Nations General Assembly in New York declared the 5<sup>th</sup> December of every year as the “World Soil Day” and the year 2015-2024 as the “International decade of Soils”. The theme of the Soil Day of this year is “Healthy Soil for a Healthy Life”. Soil can be considered as a major component of the natural ecosystem and it also be a part of a food security for all organisms to their survival. The aim to fulfil that target, the celebration of the World Soil Day in this year mainly focus on the creation awareness among global

community on sustainable agricultural management through the correct measures of soil conservation activities. Awareness creation workshop was held at the Pulathisi education collage in Pollonnaruwa district to commemorate the world soil day 2016, based on the theme “healthy soil for healthy life” This programme was organized by the Soil Science Department of the Faculty of Agriculture, University of Peradeniya in collaboration with the Land Resources Division of the Ministry of Mahaweli Development and Environment. Nearly 700 hundred participants were present at the event, which include school children, teachers & general public. Mini exhibition was also organized by the department of Soil Science, Faculty of Agriculture, and University of Peradeniya to aware the students regarding the soil generation, soil conservation and different activities related to the soil. In addition to that, the book on “Soil properties, Plant nutrition and Sustainable Management” prepared under the request of Advanced Level teachers, distributed among school children at this event.



Awareness of general public in every layer in the society regarding the sustainable land management is one of the main responsibilities of the Land Resources Division of this Ministry as well as implementation of the Action Programmes and Punarudaya Environment Conservation Programme. To the aim of fulfilling that aspect, another awareness programme also conducted at Kalutara, Wadduwa Maha Vidyalaya. For that event 200 school children and 20 teachers were participated and awareness materials of soil conservation, biodiversity and booklets related to the subject related matters also distributed among participants.



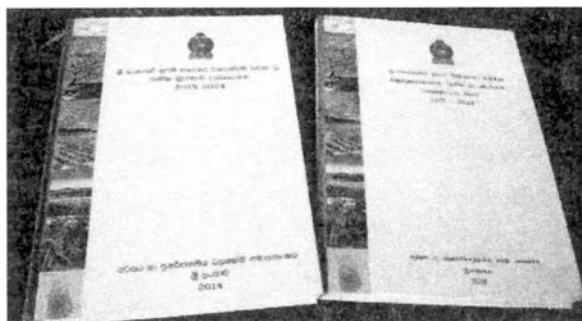
### 3.5.2 Ensuring global environmental concerns and best practices mainstreamed in the rapid development process of Sri Lanka through improved Information Management (Data Project)

The Right to information Act No 12 of 2016 already published and prepared a draft data/information sharing policy. This Act provides the attention for sharing on existing data from stakeholder institutes, gap identification and identification of sharable data. To the aim of fulfilling these aspects, Ministry of Disaster Management was initiate the special project of Ensuring global environmental concerns and best practices mainstreamed in the rapid development process of Sri Lanka through improved information Management (Data/ Information Project) collaboration with the Ministry of Mahaweli Development and Environment.

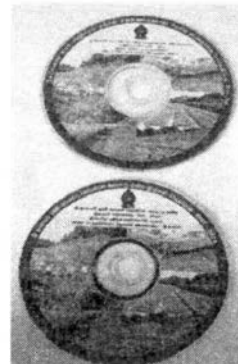
This project is involved to minimize the repetition of data in government and non-government sector and create the efficiency and form the best platform for sharing existing data, updated data and collecting data as well as the revised data. In addition to that this project will provide the facility to sustainable development by taking evidence based decisions and provide the data/information to the framework of Disaster Risk Deduction. Ministry of Disaster Management act as a focal point to the Sendai Framework and collection of data/information relevant for the reporting purposes of framework through this data project. (Sendai framework for Disaster Risk Reduction 2015 -2020 was adopted at the third United Nations Conference on Disaster Risk Reduction was held on 14<sup>th</sup> to 15<sup>th</sup> March 2015 in Sendai, Japan) and it paid the attention the way of disaster risk reduction further.

The Ministry of Mahaweli Development and Environment act as a National Focal Point for the UNCCD and this Ministry has the responsibility to implementation of NAPs. Not only NAPs for combating land degradation in Sri Lanka but other NAPs also related to the Conventions of CBD & UNFCCC. In addition to that, Steering Committee was formed to advice and provide technical knowledge successful implementation of the NAP. Accordingly this project facilitate the identification of data/information, ability to share data, sustainable way of using the existing data and data used for preparing Rio reports.

### 3.5.3 Translating and Printing of Revised and Aligned National Action Programme for combating Land Degradation in Sri Lanka into Tamil and Sinhala language.



Land Degradation can be defined as reduce the productivity of land economically and biologically by the effect of natural causes or anthropogenic activities. Considering facts and trends above Land Degradation, Sri Lanka signed and ratified the United Nations Convention to Combat Desertification and Land Degradation (UNCCD) in 1998 and



became a party to the convention. According to the requirement of the United Nations Convention to Combat Desertification (UNCCD), Sri Lanka prepared its first National Action Programme (NAP) in the year 2002 with the objective of combating Land Degradation and mitigating impacts of droughts in the country. This has been revised and aligned with the UNCCD 10- year strategy (2008-2018) and guidelines in the year 2010 by the Ministry of Mahaweli Development and Environment according to the UNCCD Decision 2/ COP 9 and this will be implemented during the period from 2015-2024. Large Expert group representing the government, non-government and private sector organizations were involved in the process of preparation of National Action programme for combating land degradation in Sri Lanka (NAP). Cabinet approval was granted for this document on 24<sup>th</sup> July 2014 and it was launched on 09<sup>th</sup> December 2014. This ministry has planed the implementation of NAP within the relevant time period through the identified activities under 25 programmes with relevant main and supportive agencies. For easy reference this document was translated in to Sinhala and Tamil languages as well (Sinhala -500 hard copies and 500 CD's, Tamil- 200 hard copies and 200 CD's.)

### 3.5.4 Awareness Programme on Sustainable Land Management for school teachers of the Education Zone–Kegalle and Kalutara

At the present Sri Lanka, land degradation is highly occurred due to various reasons. Land Resources





Division of the Mahaweli Development and Environment has a major responsibility to implement various activities to reduce land degradation in the country and various programmes are conducted annually to aware school children, teachers, rural communities and different agencies. Kegalle District was identified as a landslide, flood as well as other natural disasters prone area. therefore this Ministry was selected Kegalle District to conduct

awareness programme in this year.



Objective of the programme is to reduce land degradation due to natural disasters as well as to maintain different environmental sectors in sustainable manner and conservation of sustainable land management. The

awareness programme was held on 28<sup>th</sup> April 2017 at Swarna Jayanthi Maha Vidyalaya- Kegalle. For that event, 100 of teachers were participated representing 40 schools in Kegalle Education Zone. Second awareness program was held on 29<sup>th</sup> June 2017 at the auditorium of the Wadduwa Central College. This Program mainly aimed for school teachers of the Kalutara Educational Zone and 95 teachers were participated. Resource persons and ministerial officers were also participated to that event.



### 3.5.5. Soil conservation under slope conservation program in Rankethgama model village belongs to Suduwella Grama Niladari Division, Divisional Secretariat - Delthota



Slope Conservation in model villages is directly involved to the Sustainable Land Management activities under annual action program in the Land Resources Division. Ministry of Mahaweli Development & Environment has paid the attention for implementing the soil conservation activities in 3 selected sites of the model villages located in Awissawella, Palindanuwara & Delthota. Rankethgama model village belongs to Suduwella Grama Niladari Division and Divisional Secretariat, Deltota and it is included 25 houses which was built under the financial assistance of Housing Development

Authority.

Field inspection has been done at this village on 13<sup>th</sup> June 2017 for inspecting the current situation with the team of the officers of Housing Development Authority, Natural Resources Management Center of the Department of Agriculture and the Land Resources Division of the Ministry of Mahaweli Development & Environment. For this program, technical assistance and resource contribution has been done by the Natural Resources Management Center of the Department of Agriculture and Coordination and Allocations provided by the Land Resources Division of the Ministry of Mahaweli Development & Environment.



Before implementing this soil conservation activity, awareness programme was conducted for the whole Villages in Rankethgama Model Village, under the coordination of Housing Development Authority, Natural Resources Management Center of the Department of Agriculture and the Land Resources Division of this Ministry. Accordingly, 25 house owners and government officers have been participated in that event represent from Housing Development Authority Natural Resources Management Center and the Land Resources Division of this ministry.

### 3.5.6 Issue soil for development works in Polonnaruwa and Matale Districts



Conducted a field visit to identify suitable locations for mining soil, for the constructional works of government foremost development activities in Polonnaruwa and Matale districts with the participation of expert officers of Central Environmental Authority, Geological Survey and Mines Bureau, Department of Forest, Sri Lanka Mahaweli authority, District Secretarial of Polonnaruwa, Matale Districts.



According to the field observations made by the officials, Elahara and Konduruwewasites were selected for supplying soil and gravel for government development projects.

### 3.5.7 Preparing the National Mineral Policy for Sri Lanka

The mineral policy has been already prepared by the Ministry of science, technology and Research and this policy is being review to avoid the defects and streamline the policy statements with the collaboration of Geological Survey and Mines Bureau and other government agencies.

### 3.5.8 Conduct research Symposiums

In line with Sri Lanka NEXT-2017 program, Land resources Division of the Ministry is planning to



conduct an International mineral symposium on prospects and challenges of minerals - Sri Lanka. More than 30 research papers have already received and organizing activities are in progress.

### 3.5.9 Field visit- Southern Highway project, Hambantota



A field visit was conducted in Southern Province to identify lands for supplying soil/gravel for the construction purposes of Southern Highway. Following sites were identified and forwarded the recommendation to get the approvals from secretary to the Ministry.

- ❖ Proposed land for mine soil at Hondawel Pokuna.
- ❖ Land reserved for grassland in Walsapugala.

- ❖ Purposed land for the excavation of soil in Karambagaha Mukalana.
- ❖ Purposed the land for the excavation of soil within the purposed wild elephant management zone (Elallakelaya, Elalla Mukalana, Gonnoruyaya)
- ❖ Suitable lands for excavating soil in Nimalawa(Sithulpawwa road)

### 3.5.10 Field Visit- Yan Oya Sand Mining area



By constructing a dam through Yanoya which, is streaming through Anuradhapura and Trincomalee Districts, government was implemented Yan oya wewa Project at Wahalkada area, with the broad aspect of providing irrigation and other water requirement of people living in area from collection rain waters



### 3.5.11 Sand extraction survey in wilgamuwa

The construction industry plays major role in the rapid development phase in Sri Lanka. This has inevitably increased the demand for river sand. The construction industry is supplied with this river sand extracted from the areas such as Mahiyanganaya, Wilgamuwa, etc. Because of this reason, river sand extraction in this area has been increased in faults by creating number of socio-economic and political issues. Also this sand extraction which is aimed to supply for sand for the ever increasing demand of sand exert and enormous pressure on extraction sites and to the respective rivers. This pressure created various negative scenarios in the social and political backdrop in the area thereby eventually affect the socio-economic situation and for the political reconciliation. In order to correct this negativity, the secretary of the Ministry of Mahaweli Development and Environment has given instructions to the Land Resources Division to conduct a survey to forward necessary recommendations to formalize this sand extraction activity in wilgamuwa area and create a harmonious situation in soil extraction in Wilgamuwa area. Therefore, as per the instructions given by the the Secretary, a survey has been carried out covering 324 sand extraction sites in 7 Grama Niladari Divisions such as Sonuththa, Perakanaththa, Guruwelayaya, Maraka, Malgammanna, Randunewewa and Dunuwilapitiya. The Land Resources Division has completed this survey and recommendations were forwarded to the Secretary.

### 3.5.12 Awareness programme for Sustainable Natural Resources Management

Sustainable Natural Resources Management is very important in Environmental conservation. Hence, Environment Education and Awareness play a vital role in this context. Creating Environmental Awareness and Education among students has been recognized worldwide as one of the most effective tools for Environment Conservation. Therefore, the Land Resources Division of the Ministry of Mahaweli Development and Environment has planned number of Awareness and Education Programmes for school children on Sustainable Natural Resources Management and Environment Conservation. Hence, the Land resources division in accordance to their mandate conducted an Awareness Program for 250 students of Nalanda College, Colombo on Sustainable Land Management.

### 3.5.13 Solutions for the problems regarding the usage of Natural Resources

Field inspections have been done for nearly 200 public complains and relevant agencies regarding the environmental problems are coming daily to the Secretary, Ministry of Mahaweli Development & Environment. According to that necessary actions have been taken to carry out the field inspections, solving the problems and give the advices and orders to the Secretary coming under line agencies.

### **3.5.14 Agreement for the Mineral Investment**

Mineral investment agreement has been prepared and implemented with the aspect of the exportation of limited mineral resources in Sri Lanka through proper mechanism with three private institutions. Sri Lanka will expect to bring 30 million dollars of foreign investment regarding the mineral resources within this year.

### **3.5.15 Field inspection in Palindanuwara**

According to the request given by the National Housing Development Authority, a field inspection was held on 27<sup>th</sup> April 2017 and 02<sup>nd</sup> May 2017 regarding the Land/Soil Conservation in slopy areas in Weediabandaragama model village, Palindanuwara. This field inspection was done by the Ministry of Mahaweli Development & Environment with the collaboration of Land Use Policy Planning Department and National Housing Development Authority. According to the observations made at the field visit, Land Resources division submitted recommendations to the National Housing Development Authority to take technical advice and support from the Land Use Policy Planning Department (LUPPD) at the organizing stage of every model village projects in future.

With the Ministry request has submitted detailed Report on Soil/Land Conservation of the Weediabandaragama and total cost with structural constructions for this programme is nearly 40 million rupees and Land Resources Division's allocations are not sufficient to carry out this program.

Total cost estimated for soil conservation programme at Weediabandaragama including structural constructions was nearly 40 million rupees and it is observed that Land Resources Division's allocation were not sufficient of carry out this program within 2017. Therefore, this project proposal was forwarded to the Presidential Secretariat to seek the financial assistance through the Punarudaya Environmental Conservation Program.

### **3.5.16 “Dhampal Uyana” model project on Soil Conservation in Pannipitiya Dharmapala Vidyalaya**

This project is initiated by the Past Pupil's Association of Dharmapala Vidyalaya, collaboration with the Divisional Secretariat- Maharagama, Land Use Policy Planning Department and the Land Resources Division of the Ministry of Mahaweli Development and Environment. Total financial assistance and the consultation is provided by the Ministry of Mahaweli Development and Environment. This project will be completed with the end of 2017 by fulfilling the aim of top-up the practical knowledge of school children regarding the Soil Conservation.

## **3.6. Activities carried out to address the Doing Away with Dumps.**

### **3.6.1 Introduction:**

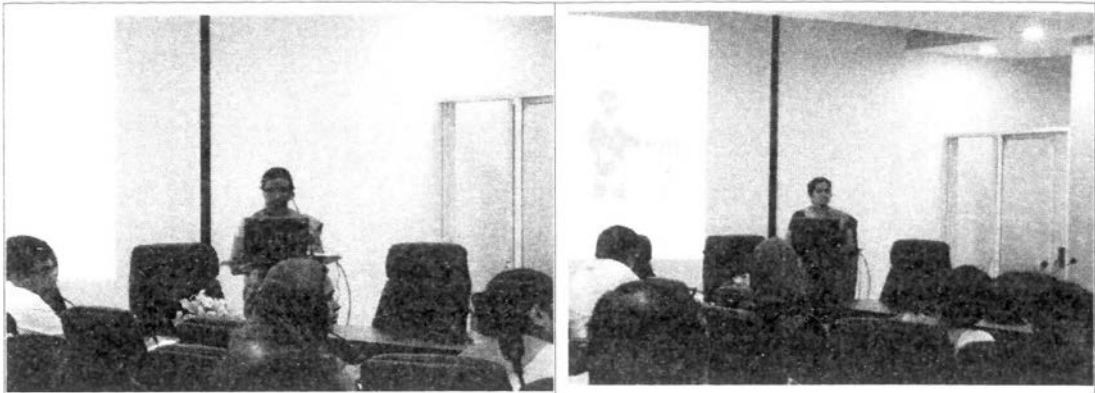
Environmental Pollution Control & Chemical Management division deals with formulation of policies, strategies, action plans and guidelines on pollution control and chemical management.

In addition training and awareness programmes are conducted to different categories of the community to enhance good practices on chemical management and minimize environmental pollution in the country.

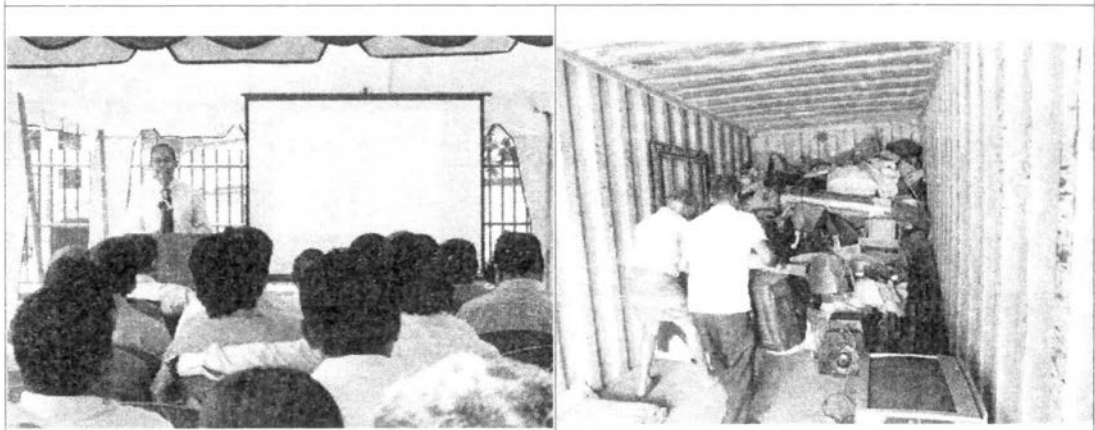
As the National focal point for International Conventions on Basel, Stockholm and Minamata. The National Steering Committees are conducted in order to take collective decisions on trans-boundary movement of hazardous waste, Persistent Organic Pollutants (POPs), Mercury and also the industrial chemicals addressed through Rotterdam Convention.

### 3.6.2 Major Achievements (01.07.2016 - 30.06.2017)

- ❖ Completion of the Updating of National Implementation Plan (NIP) for the Stockholm Convention on Persistent Organic Pollutants (POPs): The National Implementation Plan was updated under. Persistent Organic Pollutant pesticides. Poly chlorinated biphenyls Unintentionally produced POPs ( uPOPs). Perfluorooctane Sulfonic Acid and its Salts (PFOS). Listed polybrominated diphenyl ether ( POPs- PBDEs). The reports are completed and ready for printing.
- ❖ Under the “Environmentally Sound Management & Disposal of Polychlorinated Biphenyls (PCBs) Waste & PCB contaminated equipment” project preparation of awareness material (leaflets, caps and T shirts etc) and conducting awareness and training programmes on POPs & PCBs were completed.
- ❖ Consultants were appointed under the above project for development of curriculum, preparation of Inventory on Polychlorinated Biphenyl, legal gap analysis of PCBs, development of a web site on Persistent Organic Pollutants (POPs).
- ❖ Under the project “Initial Assessment of Mercury under Minamata Convention” conducted island wide survey on Mercury use in Education, Health and Industrial sectors and draft inventories prepared based on the survey data, where Steering Committee on MIA monitored the progress of the activities.
- ❖ Two days Toolkit training programme for Minamata Initial Assessment (MIA) project team was conducted by UNIDO and BRI experts.
- ❖ Conducted an awareness programme for 200 school children (Environmental Brigades) on safe use of Mercury, phasing out mercury, safe storage & safe disposal of mercury.
- ❖ Conducted National Steering Committees on Basel, Rotterdam, Stockholm and Minamata conventions.
- ❖ Institutional Gap analysis report on Mercury usage, storage and disposal was submitted to United Nations Industrial Development Organization.
- ❖ Created awareness on “Electronic Waste management and its Health Impacts” and a policy was drafted.
- ❖ Organized programmes for waste inspection and introduction of environmental friendly bags for “ Mithuru Siripa Samaya”
- ❖ The following activities were carried out to commemorate “World Environment Day”.
  - Awareness programmes were conducted on Hazardous and Solid waste management in schools and General Hospital in Kalutara and Uva Wellassa University Badulla to commemorate World Environment Day.
  - An event was conducted for promoting organic farming and management of empty agrochemical containers in Welimada Divisional Secretariat area.
  - Electronic waste collection programme was organized in Badulla district in order to commemorate World Environment Day 2017 in collaboration with Central Environmental Authority, 05 metric tons of e-waste
  - Participated in the exhibition and walk organized by Sri Lanka Medical Association to commemorate **World Environment Day**, World No-Tobacco Day & World Asthma Day
- ❖ Concept paper developed for the “Dhara TV” documentary program on Persistent Organic Pollutants.
- ❖ Extended Producer /Consumer Responsibility concept was developed and discussions were held with relevant stakeholders and chamber of commerce, to initiate implementation.
- ❖ Initiated obtaining mercury monitoring equipment from Korea to be utilized by the University of Peradeniya for rain water monitoring purposes.



Training Programmes for workers of the Ceylon Electricity Board on Management of Poly Chlorinated Biphenyle



E-Waste Collection Programme in Badulla

### **3.7 Water for everyone – water forever**

#### **3.7.1 Awareness program for rural people about the conservation of Water Resources in Dankotuwa area.**

World Water day is held on 22<sup>nd</sup> March in every year. Various programs are conducting annually to aware the general public on behalf of the commemoration this day. Accordingly, the first program was held successfully in Gurunagar Beach in Jaffna to with the collaboration of Marine Environment Protection Authority, Coast Conservation and Coastal Resources Management Department, Central Environment Authority and other government & non- government organizations. As per the request from the Divisional Secretary in Dankotuwa, second program was held with paralleled to the Environment day program which was held on 5<sup>th</sup> June 2017. That program was organized by the Ministry of Mahaweli Development & Environment to aware the members of the environmental Societies in Dankotuwa area and the village people, regarding the importance of the water resources. That message was forwarded to the rural people through the members of the Environmental Society in the Divisional Secretariat in Dankotuwa. In addition to that awareness program was conducted for the villages in that area under following topics: proper usage of Land, Importance of the conservation of land for Biological Diversity and Soil erosion, Soil conservation and Buddhism and the Environment. For this programme, 110 officials were participated including the members of the environmental

societies, resource persons and the officials of the Ministry of Mahaweli Development and Environment.

### **3.8 Activities carried out to address the Green Cities for Health and Prosperity**

#### **3.8.1 “Wanaropa” National Tree Planting Programme**



“Wanaropa” national tree planting programme has been introduced as an annual programme implemented with active contribution of governmental, non-governmental and private stakeholders with a view of achieving the objective of increasing the forest cover in the country up to 32% at the end of the year 2018. Under this programme, every year, the month of October has been named as the “Wanaropa” national month for tree planting for the purpose of regular introduction of tree planting. Accordingly, the main national event of “Wanaropa” national tree planting programme in

2016 was held on 21<sup>st</sup> October, 2016 at Morawewa in Tincomalee District presided over by H.E. the president. At this programme, 2000 native plants were planted in two hectares of reserve which belonged to the Department of Forest. In parallel to the above programme, 170,472 plants have been planted throughout the country with active contribution of governmental, non-governmental and private stakeholders.



#### **3.8.2 Providing Fruit Plants for Tree Planting Programmes**

Rupees six million were granted to the Department of Agriculture by this Ministry for providing fruit plants for tree planting programmes held in various parts of the country during the year 2016. The number of 41,014 plants equivalent to the above value have been issued to District Secretariats, Divisional Secretariats, Three forces, Schools and other state agencies by the Department of Agriculture under the coordination of this Division.

#### **3.8.3 Developing Urban Green Canopy Programme**

The Developing Urban Green Canopy Programme is implemented under three activities.

- ❖ Preparing a Hand Book including Scientific and Technical Information

Although the increasing forest cover up to 32% by 2018 is a national requirement, there is a need for alternative tree planting promotion programs to address the environmental challenges such as limited spaces, urbanization and development targets. Therefore, the objective of this book is to introduce guidelines and scientific and technical information for tree planting for the urban population where there is a limited space.

A Committee has been appointed to discuss the contents of the book and drafted the template of the book through the committee and experts. Data collection and article preparation have been completed and articles are reviewed by the experts at present.

- ❖ Conducting 03 Training Programmes on Nursery Management

Arrangements were made to conduct training programmes with the Department of Agriculture, Forest Department and the Mahaweli Authority. A training program on nursery management was conducted for 40 trainees from Medirigiriya / Siyambalangamuwa Green Village.

- ❖ Conducting 02 awareness programmes on establishment of Urban Green Canopy in the next two quarters. action is being taken to conduct awareness programmes on urban green canopy.

### **3.8.4 Tree Planting Programmes conducted with other Institutions**

Planting of 790 (forest, fruit, coconut and jak) plants at the premises of 11 hospitals and 04 nursing schools of the Ministry of Health was coordinated.

An internal circular has been issued by the Agriculture and Environmental Education Division of the Ministry of Education to select schools for gardening under-utilized fruit trees. Accordingly, the selected schools will be assisted to develop fruit gardens.

Two discussions were held with the Department of Railway for planting fruit and other plants in railway stations and quarters. Accordingly, an internal circular has been issued to collect requirements of plants by the Department of Railway.

Tree planting in new housing schemes under the National Housing Development Authority is in progress and these programs have been carried out in 35 such housing schemes.

Coordination of providing fruit plants from the Department of Agriculture and Niraviya farm at Mahaweli Authority and forest plants from the Forest Department, to the institutions for tree planting was done.

### **3.8.5 School Awareness Program for Commemorating the International Forest Day**

An awareness program and a tree planting program were conducted on 07th March 2017 at the school, Rajanganaya Yaya 15 in Anuradhapura District for Commemoration of the International Forest Day on



21st of March. The main objectives of this commemoration program were tree planting, distributing new knowledge through practical activities on forest conservation, bio-diversity conservation and developing attitudes on proper waste management in school and home. Around 170 students and teachers from 7-11 grades of the school attended this awareness and practical program.

Under this program, two plants of "Na" were planted in the school premises with the participation of the officials and the school children. And also 50 high quality mango plants were provided to the school for planting in the school premises. Those plants were produced by Niraviya farm of the Mahaweli Authority under the provisions given by the Forest Resources Division.

### **3.8.6 Acquisition of Lands for Forest Conservation**

Acquisition of lands for forest conservation is done in 3 zones.

- ❖ Acquisition of lands for conservation of Knuckles mountain range.
- ❖ Acquisition of lands for the protection of the Sinharaja Forest.
- ❖ Acquisition of lands for other forest plantations.

As the existing data base and around 500 files have not been updated for years, this acquisition process had to be restarted. Accordingly, modernizing more than 500 such files and categorizing the database



for the areas mentioned in the above and divisional secretariats have been done. Divisional Secretariats of Udadumbara and Laggala Pallegama were visited for collection of updated information. Submission of recommendations under the Section 4 for 8 files of land acquisition, handling inquiries on acquisition of mangrove lands at Pannila Trinkowatta and Beruwala under section 4 of land Acquisition Act have been done. Acquisition of 84 land plots have been completed. 17 land plots were abandoned on section 50 of Land Acquisition Act.

### **3.8.7 Coordination of Public Complains**

Field inspections have been done for public complains on forest lands and mini hydro power plants in the Kalutara, Mullaitivu and Rathnapura districts for submission of observation. In addition, the officers of this division have participated as a member for the Environmental Evaluation Committees of the Central Environmental Authority and the Department of Forest Conservation.

### **3.8.8 Tree Felling on Private and Government Lands**

Under the guidance of the Minister of Environment, the letter of directions No. 03/02/02/TF dated 31.03.2017 for tree felling was issued, in order to make the available system for tree felling is more effective. Accordingly, the actions are being taken for requests on tree felling.

## **3.9 Activities carried out under the Mission of Greening the Industries**

### **3.9.1 Implementation of the programme to develop 10,000 Blue Green Beautiful Lanka Villages.**

The 21<sup>st</sup> session of the United Nations Framework Convention on Climate change was held in Paris, France from 30<sup>th</sup> November to 11<sup>th</sup> December, 2015 and the Paris Agreement was declared by the nations of the world. Accordingly, the Member countries of the United Nations have agreed to declare an Intended Nationally Determined Contribution, strategies followed by these countries to control global warming on the aforesaid agreement, and act in line with that.

Through the summits and workshops of experts in the sector held before and after the Paris Summit, necessary arrangements are being made to determine the Intended Nationally Determined Contribution to Control global warming. A programme to make the people aware of climatic changes and future development strategies called Sri Lanka NEXT - A Blue Green Era was presented through that effort as a guide for the direction of future development of Sri Lanka and to initiate a dialogue on that.

In accordance with that programme, with the aim of creating people sensitive to climate change and environment friendly Green Smart villages, to implement the 'Blue Green Beautiful Lanka villages in 10,000 villages of Sri Lanka within the period from 2016-2020 in collaboration with community organizations such as the SANASA movement of Sri Lanka, and the Sarvodaya movement and the organizational network of Divi Neguma Department, approval has been received as per the Cabinet decision bearing No. CM/16/0377/704/011 dated 24<sup>th</sup> March, 2016.

Following activities were done under the 10,000 Blue Green Beautiful Lanka Villages.

Lassana Lanka 10,000 Green villages programme was lauched under the patronage of his Excellency the president.



### 3.9.2 Promotion of Resource Efficiency and Cleaner Production Concept

Unsustainable consumption patterns continue to result in increasing demand on natural resources threatening to ecosystem stability globally and locally. It is globally accepted that application of cleaner production practices facilitates the improvement of productivity thereby depletion of natural resources, pollution and production cost. This in turn will facilitate industrial and service sectors to be competitive in the international market.

Accordingly, the National Policy and Strategy for Cleaner Production was developed in collaboration with all relevant stakeholders including the National Cleaner Production Centre in year 2005. The National Policy on Cleaner Production aims at achieving sustainable development, enhanced environmental quality, improved eco-efficiency, improved living standards and poverty alleviation. Later on, The National Policy and Strategy on Cleaner Production for Health Sector was developed in 2007 and National Policy and strategy on Cleaner Production for Tourism Sector and National Policy and strategy on Cleaner Production for Fisheries Sector were developed in year 2008 and policy and strategy on the Agriculture sector was developed in Year 2010.

Following activities were carried out under the promotion of resource efficiency cleaner production concept

- ❖ Third meeting of the National Steering Committee for Cleaner Production

Third meeting of the National Steering Committee for Cleaner Production was convened on 22.12.2016 at the Center for Banking Studies, Rajagiriya. The meeting was chaired by Mr. M.G.W.M.W.T.B. Dissanayake, Additional Secretary (EP&P) of the Ministry of Mahaweli

Development and Environment. Progress reviewing of sectoral Cleaner Production Policies and Strategies for Health, Tourism, Fisheries and Agriculture and progress of formulation of National Cleaner Production Policy and Strategy for Plantation sector was presented at the meeting. The draft Action Plan on Cleaner Production also presented and obtained the comments from the members.

❖ Broachers for Cleaner Production initiatives in Sri Lanka

The broacher for Cleaner Production initiatives in Sri Lanka developed in 2015 to distribute among industry community, public institutes and other interesting groups in order to aware them on Cleaner production Concept, objectives, benefits and Strategies of the National Policy and Strategy for Cleaner Production was translated into Sinhala and Tamil Languages and printed.

❖ National Action Plan for Cleaner Production

The National Action Plan was initiated to develop conducting a mini workshop on 06.09.2016 and identified some activities. Second workshop was done on 30.09.2016 and drafted the Sectoral Action Plan Plans for Health, Agriculture, Tourism, Plantation and Fisheries sectors. Based on the sectoral plans and strategies of the National Policy and Strategy on Clenaer Production, the National Action Plan was developed. Both sectoral and National Action plans were presented at the Third meeting of the National Steering Committee for Cleaner Production.

### 3.9.3 Establishment of Green Accounting Mechanism in Sri Lanka

The Ministry of Mahaweli Development and Environment is developing a Green Accounting Mechanism to integrate the real contribution of natural resources to the System of National Accounts of the country. The present system of National Accounts neglects the contribution of the environment as well as the damages, losses and benefit inflicted by economic activities on the environment. Failure to incorporate the role of natural capital in SNA has led to neglect contribution of environmental



Awards were presented to best green reporters at the Sri Lanka Next Blue Green Era Programme

resources by policy makers, thereby, resulting in further degradation of environment and natural resources. It is, therefore proposed to incorporate environmental benefits under the concept of Total Economic Value (TEV) in to the UN sponsored System of Economic Accounting (UN-SEEA).

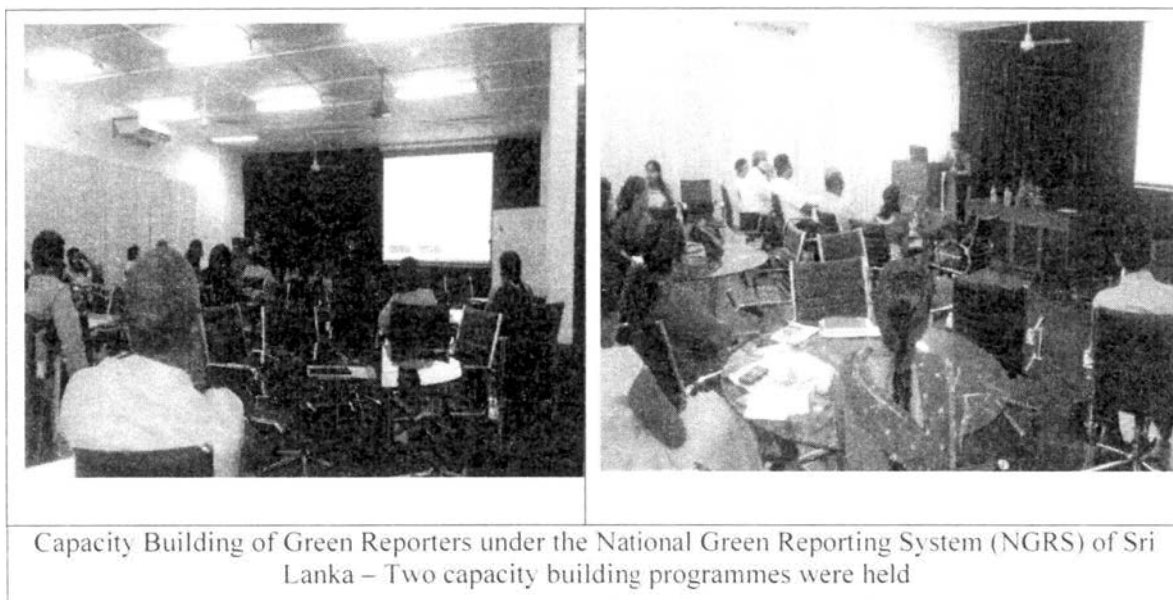
Following activities were done under the Green Accounting Mechanism

- ❖ A capacity building programme was held for the members of the Water, Mineral & Industry and Waster Sectors.
- ❖ Implementation of the National Green Reporting System of Sri Lanka

The Ministry of Mahaweli Development and Environment established a National Green Reporting System (NGRS) with a view to promote reporting of sustainability performance in manufacturing and services sectors in 2011. Green Reporting is an effective communication tool for transmission of the information on the sustainability performances of the manufacturing and services sector.

The overall objective of this programme is to recognize, appreciate and reward based on their sectors to quantify and report on sustainability performance. Nearly 120 manufacturing and services sector organizations have been associated with the reporting system and green reports have been submitted annually.

Following activities were carried out under the implementation of the National Green Reporting System of Sri Lanka.



### **3.9.4 SWITCH-Asia Sustainable Consumption and Production National Policy Support Component for Sri Lanka**

A SWITCH-Asia Sustainable Consumption and Production (SCP) National Policy Support Component (NPSC) for Sri Lanka was granted through a tender to AETS(French Consultancy Firm) led consortium in January 2015 by the European Union Delegation (EUD) following the request from the Sustainable Development Division (SD) of the Ministry of Environment (MoE). The objectives of this joint EU-Government of Sri Lanka 4-year comprehensive programme are to enhance capacity, skills, knowledge and understanding of key policy makers, stakeholders and the public.

To support MoE, a Project Expert Team (PET) comprising of a Team Leader, Key Expert and a Focal Point was established in the Sustainable Development Division of the MoE and is operational from 26 January 2015. The project is governed by the PSC consisting of key Ministries and other State sector agencies, which is co-chaired by the Secretary to the State Ministry of Environment and the Head of the Delegation of European Union to Sri Lanka & Maldives. Project Steering Committee meets once in 6 months to provide guidance and direction to the project expert team while monitoring the project progress..

Following activities are done under the project in Year 2016 - 2017

- ❖ Some 80 existing policies and policy related documents identified and collected
- ❖ 46 national SCP related policies reviewed
- ❖ 3 sub-sectors (Rice, Tea, Dairy) F&B industry selected for project's deeper intervention

- ❖ Baseline study commenced in the 3 sectors and among consumers
- ❖ Sectoral and national SPC indicators being developed
- ❖ Raising awareness on SCP to continue
- ❖ Policy formulation process standardization final draft sent to MoMDE & MoNPEA – Policy Format, Policy Protocol and Policy Screening Tool.
- ❖ Project Expert Team (PET) contributes at the Steering Committee to Sri Lanka NEXT: Blue Green Era programme.
- ❖ PET is arranging a full day Switch Asia Networking Event in Colombo to share Asian experience on SCP for the Sri Lanka NEXT: Blue Green event on 18 Oct. 2016.
- ❖ PET participates and contributes at various committees of MoMDE projects
- ❖ Awareness workshop on SCP for key government officials of the North Western Province.
- ❖ Technical and financial support extended to MoMDE's 10,000 Green Village (GV) programme by way of capacity building of key officials of SANASA and training of 100 change agents for implementing the GV programme
- ❖ Stakeholder consultations for SCP Policy Formulation carried out
- ❖ Draft SCP Policy being prepared



### 3.9.5 Parisara Mawatha Programme



The Ministry of Mahaweli development and Environment has planned to construct environment lanes for all cities as one of the main steps under the sustainable city development programme for sustainable management of urban and semi urban environment. Under this environment lane programme it is expected to create an arch shape tree canopy layer within a short period of time, by planting suitable plants in an area not less than 500m of one road in an urban area. And it is assumed to minimize the cost incurred for constructing jogging tracks and exercising areas as this tree cover facilitates for those activities as well. It has been planned to enhance the

environmental conditions of these roads according to the area and by securing the uniqueness of the location

Following activities are done under this programme in Year 2016-2017

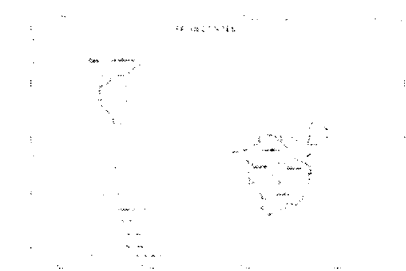
- ❖ Parisara Mawath were established in Mathale, Gampola, Kahatagasdigiliya, Hakmana, Ja Ela and Trincomale
- ❖ Samandarawa road in the Matale Divisional Secretariat division was developed as a Parisara Mawatha in accordance with the commemoration of the World Environment Day 2016.

### 3.9.6 Enhancing Biodiversity Conservation and Sustenance of Ecosystem services in Environmentally Sensitive Areas Project

This project will assist the Government of Sri Lanka to safeguard biodiversity in multiple land use areas of special ecological significance (high biodiversity values) through the operationalization of a new land use governance framework called “Environmentally Sensitive Areas” (ESAs areas), which will be primarily outside protected. The primary objective of this project is “To operationalize Environment Sensitive Areas (ESA)—as a mechanism for mainstreaming biodiversity management into development in areas of high conservation significance”. In order to achieve this Objective, the project plans on achieving the two major Outcomes, and four Outputs under these. The two Outcomes are:

- Outcome 1:** National Enabling Framework Strengthened to Designate and Manage Environmentally Sensitive Areas (ESA)
- Outcome 2:** Biodiversity-friendly ESA management for long term integrity and resilience ensured at two sites in the Kala Oya Region

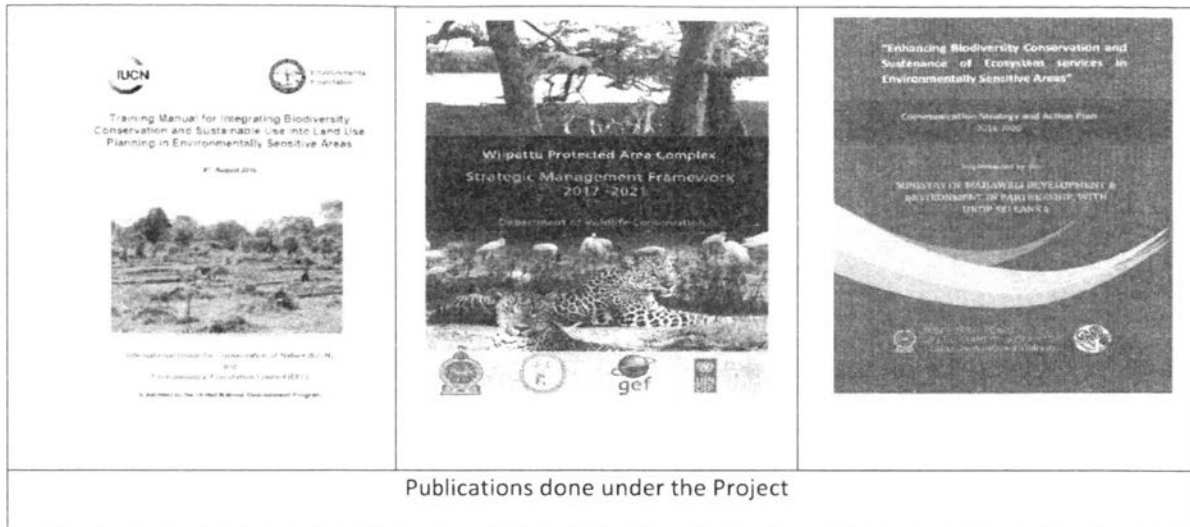
#### Project Sites



Within the Kala Oya Region, two sites have been identified as proposed ESAs. The first site – Kala Wewa falls towards upper reaches of the river basin and encompasses a large water body (reservoir or tank) called Kala Wewa. The second site – Wilpattu is located in lower part of the basin and encompasses marine area including the Bar Reef and the estuary of the Kala Oya River.

Following activities are done under the project in Year 2016-2017

- ❖ Established Kala Oya River Basin based 6 Management Committees at Divisional Secretariat level and 02 District Facilitation Committees at Anuradhapura and Puttalam Districts, the establishment of the National Committee on sensitive environmental land zones at the national level.
- ❖ Land use planning process was updated and the training manual was tailored to include a biodiversity component, training and capacity building of relevant stakeholders
- ❖ Strategic Management framework was prepared for the Wilpattu National Park Complex
- ❖ Reviewed the national policy on the conservation and management of elephants
- ❖ A survey was initiated around Kala Oya River Basin on Bio diversity.
- ❖ Awareness programmes on the project was conducted at the district and provincial levels
- ❖ Preparation of communication strategy for awareness of environmental sensitive zones
- ❖ The identification and conservation of the ecosystems which are rich in bio diversity and outside the protected habitat areas.



Publications done under the Project

### 3.10 Activities carried out to address the Knowledge for Right Use

#### 3.10.1 Project for awareness of the Government Teachers on Environment Education introduced under the new syllabus

The main objective of the project is to provide sufficient knowledge on Environmental sensitive subject areas introduced under the new syllabus for science teachers in Government schools by providing theory and practical knowledge. Accordingly, it is planned to reduce knowledge gap on Environmental sensitive subjects among teachers while introducing effective teaching strategies to make attitudinal change of school children. This project is planned to be implemented in island wide for science teachers of grade 6-11 during next 5 years with the collaboration of Ministry of Environment. This project has been approved by Department of National Planning under the consolidated fund. It has been given a provision of Rs. 10 M from "Punarudaya" National Environmental Conservation Programmes of Presidential Secretariat. It is expected to train 1950 teachers in 2017 under 13 programmes in provincial level. It has been planned to print additional Reading material on Environmental Sensitive subject areas and to disseminate among teachers who participate for the workshops. 700 teachers were trained under 5 workshops in Wayamba, Uva, and Sabaragamuwa, Southern and North Central Province.

#### 3.10.2 Environment Training and Education project for Promoting Sustainable Development

The main objective of the project is to implement participatory environmental education and promotion to improve the living standards of rural community while safeguarding the local ecosystem. Small and Medium scale entrepreneurs who involve in environmentally friendly industries and those who are willing to employ in those industries were trained to do their industry in a sustainable manner and reduce usage of polythene and Plastics by introducing This project is implemented in 17 divisional secretariat divisions. 190 small and medium scale entrepreneurs in Nuwaraeliya and Kegalle Districts were given practical training on creation of products from materials which collect from Natural Environment

### **3.10.3 Commemoration of World Environment Day**

World Environment Day National ceremony was cancelled due to bad weather conditions and Environmental clean-up Programme was conducted in Kalutara District on 5th District with the patronage of His Excellency the President Maithreepala Sirisena.

- ❖ Environmental Education Programme to aware School Children

Awareness workshops were conducted with special attention on Environmental Sensitive subjects with the objective of creation of awareness on Environment among school children in grade 9 to 12 in Government schools. The subject areas including Solid Waste Management, Land Degradation, Soil Erosion, Climate Change. 350 Officers of Forces in Minneriya Camp were trained.

- ❖ Short Film Competition “Soba Chalana Sithuwam”

Short Film Competition “Soba Chalana Sithuwam” was conducted to build fair social dialogue on Environmental Conservation among young film producers for 4th time. This film competition had been conducted since 2014. 42 short films were collected and top 8 films were ranked for awarding prizes. Selected films are planned to be shown in national Environmental celebrations.

- ❖ Printing Ministerial News Letter “Soba Hasuna”

Each year ministerial News Letter called “Soba Hasuna” is printed quarterly. In year 2017 also this was printed and distributed among people.

- ❖ Soba Annual Magazine

Annually two volumes of soba magazines are published by this division. First volume be printed on mid of the year (June – July) and 2nd volume be printed at the end of the year (December – January) .2500 copies of 1st volume of the year 2017 is in progress.

- ❖ Media Coordination

Media linkage with MoMDE is carried out by Education Training and Research Division. Further, this division coordinates activities related to “Dhara documentary programme for preparation of environment related documentaries by collaboration with line agencies under this ministry. Video documentary was prepared by this Division for the occasion of launching of Green Building Manuel prepared by National Ozone Unit. Video advertisement was created for world Environment Day. Media conference was coordinated for giving publicity on banning Polythene for journalists.

- ❖ Observation of Environment related news

Environment related news telecast in Television media is being observed daily for immediate action to be carried out by this Ministry. The main objective of this task is to make awareness on current environmental issues among line agencies under this Ministry and to take necessary actions

## **3.11 International Cooperation**

### **3.11.1 Facilitate the Government of Sri Lanka for signing bi-lateral and multi-lateral environmental agreements and assist to implement relevant provisions;**

- ❖ Proposed MOU on the cooperation in the field of environment between Sri Lanka and Vietnam

A draft MOU had been submitted to the Embassy of Sri Lanka in Vietnam by then Ministry of Environment in 2011 to obtain comments and observations from the Vietnam counterpart.

The embassy of Sri Lanka in Viet pursued the views and suggestions of the Government of Sri Lanka to proceed and make necessary arrangements to sign this MOU during the state visit of Hon. Prime Minister of Sri Lanka in mid April 2017. As this Ministry is interested in



pursuing this line of cooperation in the field of environment between Sri Lanka and Vietnam. the Ministry reviewed, amended and submitted the proposed draft MOU with relevant agencies.

❖ Official Visit of the Hon. Prime Minister to the People's Republic of China

Activities are in progress to implement relevant discussion points of the above meeting with the assistance relevant agencies. Accordingly, the Ministry of Mahaweli Development & Environment has the responsibility to convene the second meeting of the Joint Committee on Coastal and Marine Cooperation and convene the first workshop on Marine and Coastal Cooperation at an early date.

❖ State Visit of H.E. the President to Indonesia from March 06-09, 2017

A working document was prepared in consultation with relevant agencies which contained areas identified for mutual cooperation in the field of Environment between two countries. The items proposed, in the said document, for bilateral cooperation/MOU has significant importance in achieving sustainable development goals which comes under the purview of the Ministry of Mahaweli Development & Environment.

❖ Memorandum of Understanding (MOU) on Technical Cooperation between the Democratic Socialist Republic of Sri Lanka and the Republic of Colombia

A draft text was submitted by the Embassy of Colombia in New Delhi on the MOU on Technical Cooperation between the Democratic Socialist Republic of Sri Lanka and the Republic of Colombia. The draft text of the MOU relevant to the subject of Climate change was reviewed and sent necessary comments to the Ministry of Foreign Affairs.

On the initiative of this MOU under the area of Climate Change, several matters were considered, such as experience sharing, lessons learnt and good practices on national level initiatives, capacity building & technology need assessments and supports, technology transfers and technical visits, research collaboration and exchange of experts.

❖ The 3rd Foreign Office Consultation (FOC) between Sri Lanka and Bangladesh in Dhaka, Bangladesh

The indicative list suggested for cooperation between Bangladesh and Sri Lanka on mineral resources was amended and discussions points were prepared for the FOC in consultation with relevant agencies.

❖ Identify, facilitate and execute projects relevant to environmental conservation/protection in Sri Lanka

### **3.11.2 Global Environmental Facility (GEF) projects**

The following two project PIFs endorsed by the Government of Sri Lanka are awaiting GEF VI assistance.

- ❖ Managing together: Integrating community-centered, ecosystem-based approaches into forestry and tourism sectors
- ❖ Promoting Sustainable Forest Management and Improving Livelihoods through Integrated Land Use Planning and Forest Landscape Restoration

Due to the recent shortfall of funds the GEF OFP Sri Lanka had to endorse one proposal out of the two proposals.

Following key points were considered while prioritizing the project proposals;

- accessibility of additional resources of SFM
- Whether the proposal is technically cleared by the GEF.

Therefore, this Ministry coordinated with relevant agencies and took action to prioritize above projects to utilize remaining funds under the current GEF cycle (Cycle VI).

### 3.11.3 Provide comments and observations for United Nations Ministerial level documents and other policy documents

- ❖ Re-submission of UNDP's Country program (2018-2022) for Government Clearance
- ❖ United Nations Sustainable Development Framework (UNSDF) 2018-2022
- ❖ Proposed WFP Country Strategic Plan 2018-2022
- ❖ Contribute for the preparation of National Environmental Policy
- ❖ Relevant policy strategies were prepared for the chapter under international Relations.

### 3.11.4 Facilitating Environment Conventions

- ❖ Settled the Contribution payments for the year 2017 for IUCN, Stockholm, Basel, UNCCD, UNFCCC conventions.
- ❖ Made the 1st and 2nd installments of the host facility to SACEP
- ❖ Already forwarded the Contribution Payment voucher of SACEP.SACEP-SASP and Kyoto Protocol for the year 2017

## 3.12 Legal Division

No.	Main Activity	Sub activity	Physical Progress
1	Hearing of Statutory Appeals under Mines and Mineral Act, National Gem and Jewellery Authority Act, Coast Conservation and Coastal Resource Management Act & National Environmental Act	1.1 Hearing of Statutory Appeals under National Environmental Act	53
		1.2 Hearing of Statutory Appeals under Mines and Mineral Act.	58
		1.3 Hearing of Statutory Appeals under National Gem and Jewellery Authority Act	31
		1.4 Hearing of Statutory Appeals under Coast Conservation and Coastal Resource Management Act	12
2	Provide assistanc for Ministry related Court Cases, Human Right Cases and Ombudsman Cases	-	37
3	Provide assistance in preparing legal documents specially in obtaining concurrence and approval from Legal Draftsman and Attorney General	Amending of National Gem and Jewellery Authority Act. No 50 of 1993	Draft cabinet paper is reviewing by the National Gem & Jewellery Authority.

No.	Main Activity	Sub activity	Physical Progress
		Amending of National Environmental Act No. 47 of 1980 as amended by Act No.56 of 1988 and No.53 of 2000	Draft cabinet paper is reviewing by the Central Environmental Authority.
		Amending of Forest Ordinance as amended by Act No. 13 of 1966 and Several other amendments	Cabinet paper is reviewing.
4	Preparing Agreement and MoUs/ Drafting Cabinet Papers related to the Ministry and Line Agencies	-	64
5	Attending Public Complaints	-	71

### 3.13 Cabinet Memoranda of Ministry of Mahaweli Development & Environment

#	Cabinet Paper No.	Head
1	16/1123/704/027	Approval request for to pay an additional USD 50 Million Advance. Recovery of a delayed fee of US \$ 6.6 million will be refunded and the extensions of the contract to be completed by 30 June 2018 to the Iranian Farab Company which get the Baseline work contracts of the Uma Oya Multipurpose Development Project
2	16/1274/704/034	Tax concessions on commercial lands excluded on lease under the State Land Ordinance.
3	16/1679/704/043/TBR	Drinking water supply project for Residence of Weheragalatenna Makuluella and Kurundu-gola who are affected by the drain on the main tunnel of the Uma Oya project.
4	16/1650/704/042/TBR	Construction of Roads in the Downstream Development Areas under the Moragahakanda - Kaluganga Development Project
5	16/1797/704/051	Assigning a Turn Key Basis to the Central Engineering Consultancy Bureau (CECB) for Engineering activities excluding the general procurement process
6	16/1723/704/046	Declaration of 'The National Marine Resources Conservation Week'
7	16/1726/704/047	Establishment of Southern Provincial Office and Galle Distric Office with a Laboratory for Marine Environment Protection Authority.
8	16/1737/704/050/TBR	Maduru Oya Right Bank Development Project
9	16/1883/704/053/TBR	Improvement of the Main Road, that runs towards Nedunkerni Town from Gajabapura area of Welioya. Mullaitivu District
10	16/1914/704/054	Strengthening the Farmers of the Dry Zone to face up to the impacts of climate change
11	16/1915/704/023- 1	Expediting the additional compensation to be paid to the land owners affected by the Moragahakanda - Kaluganga Development Project
12	16/2566/704/068	Dam Safety & Water Resources Plans which could be utilized for the Future Development Activities

#	Cabinet Paper No.	Head
13	16/2054/704/056	Project on the Preparation of Sri Lanka's Third National Communication (TNC) Report on Climate Change.
14	16/2013/704/055	Mahaweli Authority of Sri Lanka - Annual Report 2013
15	16/2006/704/024 - I	Sand nourishment project in the Marawila Beach (Phase II)
16	16/2077/704/027 - I	Repayment of late fees to the Contractor of the Uma Oya Multipurpose Development Project.
17	16/2224/704/059	Claim for Compensation in terms of International Convention for damages caused by spills of bunker oil carried by ships.
18	16/2119/704/057	Construction of a new three storeyed building for the Negombo Regional Engineering Office of the Department of Coast Conservation.
19	16/2236/704/061	The Responsibility of the Producer/Trader and Consumer for Waste Management in Sri Lanka.
20	16/2225/704/060/TBR	Construction of the North - Western Canal under the Mahaweli Water Security Investment Program
21	16/2223/704/058/TBR	Construction of the Upper Elahera Canal under the Mahaweli Water Security Investment Program.
22	16/2343/704/011/ - II	Making Use of the Mahaweli Economic Zones for the Development of Renewable Energy.
23	16/2384/704/062	Professional Allowance for Officers in the Central Environment Authority.
24	16/2384/704/062	Exploration and Assessment of Gem Deposits in Sri Lanka.
25	16/2505/704/065	Introduction of a new act to prevent the access of dangerous invasive species of plants and animals into country.
26	16/2513/704/067	Variation payments for installation of four electric generators in Moragahakanda Reservoir Project.
27	16/2512/704/066	Construction of the Tunnel of the Upper Elehara Canal under the Mahaweli Water Security Investment Program.
28	16/2504/704/084	Exploration and Assessment of Gem Deposits in Sri Lanka.
29	16/2514/704/024 - II	Beach Nourishment Project at Marawila through off-shore Sand Mining - Phase II
30	16/2566/704/068	Dam Safety & Water Resources Plans which could be utilized for the Future Development Activities.
31	16/2567/704/069	Training Programme in Skills Development associated with the Gem & Jewellery Industry.
32	16/2568/704/070	Acquire Warapitiya old Building with land in Kundasale Divisional Secretariat and Construct of New Building for the Central Provincial Office for the Central Environment Authority.
33	16/2616/704/072	Settlement of Case No. CA Case 673/2011 of the Appeal Court Case against the Mahaweli Authority of Sri Lanka by Informatic Agrotech (Pvt) Ltd.
34	16/2613/704/071	Construction of new building for Mahaweli Development and Environment Ministry and prepare the office furniture form State Timber Corporation.
35	16/2631/704/074	Implementation of professional and post graduate allowances proposal - Central Engineering Consultancy Bureau (CECB)
36	16/2630/704/073	Central Engineering Consultancy Bureau (CECB) - Annual Report 2013
37	16/2648/704/075	Construction of the Knuckles Information Center – Forest Conservation Department
38	16/2649/704/076	Assigning the feasibility study report in consultation with the Central Engineering Consultancy Bureau (CECB) on engineering activities excluding the general procurement procedure
39	16/2650/704/077	Extension of Service Period for the Uma Oya Multipurpose Development Project Engineer Mr.G.A Dayaratne
40	16/2679/704/078	Implementation of the National Biodiversity Strategic Action Plan.
41	16/2680/704/054/ - I	Strengthening farmers in dry zone to face Climate Change on Intergraded water Management System.
42	16/2728/704/080/TBR	Awarding of contracts for the construction of Eheliyagoda regional office building of National Gem and Jewelery Authority.

#	Cabinet Paper No.	Head
43	16/2706/704/079	Award the Construction of Development of roads and infrastructure facilities of Digana town development phase I in Kandy District to Central Engineering Consultancy Bureau (CECB) in Design and Build Basis.
44	16/2731/704/002/- 11	Implementation of the Guidelines for the Construction and Maintenance of State Buildings as widely Environment friendly Green Buildings.
45	16/2747/704/08	Performance Pre-Payment Bond and Professional Protection shall pay for the award of the contract outside the tender procedure.
46	17/0008/704/002	Creating Awareness on Environment Education of the Teachers in accordance with the New Syllabus introduced.
47	17/0071/704/002	Making relief to house owners who were affected by the Uma oya Multipurpose Development Project.
48	17/0166/704/003	Implementation of the Bibile Sugar Development Project.
49	17/0348/704/004	Expediting the additional compensation to be paid to the land owners affected by the Moragahakanda - Kaluganga Development Project
50	17/0366/704/005	Implementation of National Biosafety Framework Project Conforming to the Cartagena Protocol on Biosafety.
51	17/0414/704/006	Establishment of Floating Solar Power Energy Plants in the Mahaweli Reservoirs.
52	17/0414/704/007	Land for Agricultural Purposes - Sivemek Agro (Pvt) Ltd
53	17/0486/704/008/TBR	Awarding the Contract for Rehabilitation of Stage 3 of Minipe Left Bank Canal under the Mahaweli Water Security Investment Programme.
54	17/0530/704/009	Supplying of stone, sand, earth and gravel required for development activities from the area under the management of Institutions of Ministry of Mahaweli Development and Environment.
55	17/0575/704/010	To provide a risk allowance for the staff of the Central Environmental Authority.
56	17/0638/704/012	Strengthen the Management Mechanism for National Environmental Development and Conservation.
57	17/0629/704/011	Mining of Quartz Deposits in Kotikambokka Forest of Wellawaya impacted due to the construction of the Alikota Ara Reservoir.
58	17/0775/704/704/013	Implementation of Resettlement Plan for the Mahaweli Water Safety Investment Programme.
59	17/0776/704/014	Extension of compulsory retirement age limit up to 61 years for engineers serving in statutory bodies and corporations under the Ministry of Mahaweli Development and Environment.
60	17/1104/704/017	Measures taken to limit the usage of (Hydrofluorocarbons - HFC) for the protection of the Ozone Layer.
61	17/1103/704/016	Ratification of the Minamata Convention on Mercury.
62	17/1102/704/015	Sri Lanka Mahaweli Authority - Annual Report 2014
63	17/1211/704/018	Establishment of national mechanism for Greenhouse gas reduction in Sri Lanka.
64	17/1212/704/019	Central Engineering Consultancy Bureau (CECB) - Annual Report 2014
65	17/1280/704/020	Implementation of the National Adaptation Plan for the adverse Impacts of Climate Change.
66	17/1281/704/021	Marine Environment Protection Authority - Annual Report 2015.
67	17/1298/704/009/- 1	Supplying of stone, sand, earth and gravel required for development activities from the area under the management of Institutions of Ministry of Mahaweli Development and Environment.
68	17/1476/704/023	Implementation of the measures to removal of Ozone Depletion hydro chlorofluorocarbon (HSFC) in Sri Lanka.
69	17/1477/704/024	Compensation for affected land owners due to acquire the lands to Moragahakanda Development Projects from the land obtained under the Wemedilla reservoir scheme.
70	17/1405/704/022	Proper Management of the use of Polythene to minimize environmental issues caused by Polythene.



## **PART IV**

# **Action Plan 2018 - Ministry of Mahaweli Development and Environment**

## 4.1.1 Clean Air – Everywhere Action Plan 2018

Main activities	Sub activities	Targets	
		Physical	Financial (Rs.) '000'
Providing incentives to purchase A/C machines which produced with the use of zero Ozone Depleting substances and low global warming potential	1. Awareness Creation Programs 2. Providing Incentives	02 Air Conditioners 125	200  3900
Purchasing equipment from UNEP for refrigerant reclaim centers to measure the purity of refrigerant	Preparation of relevant specifications	02	1,800
Awareness creation program for Sri Lanka Customs officers to give knowledge about HS Codes which was revised by World Customs Association	Preparation of priority list for awareness with Sri Lanka Customs	02	250
Conducting awareness creation programs to introduce regulations regarding Ozone depleting hydrochlorofluorocarbon phasing out from 2018.01.01	Preparation of priority list of institutions for awareness	03	400
Preparation of Annual work plan for the stage IV of Hydrochlorofluorocarbon phase out project and coordination with UNDP Colombo	Recognition and listing of projects for year 2019		0.0
Preparation of secure standards with Sri Lanka Standards Institution regarding Ozone friendly refrigerants	Organizing of meetings with stake holders	02	075
Introducing Green Technology for refrigerant/ air conditioning sector in provincial basis to poverty alleviation	Awareness Creation Programs	06	0.45



## 4.1.2 Saving Flora, Fauna and Ecosystems Action Plan 2018

Vote	Project Name	Financial (Rs.) '000'
58—GEF	Mainstreaming Biodiversity Conservation and sustainable use for Improved Human Nutrition and Well-being	25.563
60-GEF	Mainstreaming Agrobiodiversity Conservation and use in Sri Lankan agro –ecosystem for livelihoods and adaptation to Climate Change	31.500
160-02-03-104.3-2507-11-BD (a)	<b>Sustainable Management of Biodiversity and Natural Resources</b>	10.500
160-02-03-1.2-2507-11-BD	<b>Formulation, Review and Gap Analysis of Environment Policies</b>	500
160-02-03-5.5-2507-11-BD	<b>Environmental Protection and Conservation</b>	2.950
New	Value of Biodiversity and Ecosystem Services in Sri Lanka	1.100

### 4.1.3 Meeting the Challenge of Climate Change Action Plan 2018

Sub Activities	Financial (Rs.) '000'
1. Implementation of the National Adaptation Plan on Climate Change and preparation of Provincial Climate Change Adaptation Plans	270
2. Implementation of appropriate technologies for climate change adaptation and mitigation	40
3. Conducting National Committees on Climate Change	210
4. Awareness and capacity building on climate change	1350
5. Implementation of National Low Carbon Development Strategy and Preparation of Action Plan	250
6. Submission of Project Proposals for the Green Climate Fund	50
7. Coordination with the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Alliance	50
8. Implementation of Climate Smart Cities & Climate Resilient Villages programmes	100
9. Implement the cabinet decision - "Agreement on Global Climate Change and Local Strategic Conventions"	30
10. NDCs Implementation	200
11. Sri Lanka Next: A Blue-Green Era programme	450
<b>Total</b>	<b>3,000</b>

#### 4.4.4 Wise Use of Coastal Belt & Sea around Action Plan 2018

Main activities	Financial (Rs.) '000'
1. Commemoration of Land related World Environmental Days (WEDS) (04 WEDS : World Oceans Day – 08 <sup>th</sup> June : World Day on Combating Desertification – 17 <sup>th</sup> June; World Water Day – 22 <sup>nd</sup> March : World Soil Day – 05 <sup>th</sup> Dec)	500
2. Monitoring the Implementation of Activities identified in the National Action Plan (NAP) on Land Degradation Neutrality (LDN) and Sustainable Land Management (SLM) SLM experts Committee Meetings (03 SLM/ECM) : SLM Technical Coordinating Committee Meetings (03 SLM/TCCM); SLM inter Agency Coordination Committee Meetings (04 SLM/IACCM)	700
<b>Total</b>	<b>1,200</b>

#### 4.1.5 Responsible use of the Land Resources Action Plan 2018

Main activities	Financial (Rs.) '000'
1. Use of appropriate strategies for land restoration for land erosion	4,500
2. Monitor the identified activities in National Action Plan on Minimizing Land Degradation and Sustainable Land Management	500
3. Conducting 04 research studies on gem mining and minerals, sustainable land management and land degradation.	1400
<b>Total</b>	<b>6,400</b>

## 4.1.6 Doing Away with Dumps Action Plan 2018

	Project/ Programme	Activities	Financial (Rs.) '000'
1	Environmental conservation	1. National Coordinating Committee Meeting on Basel, Routing, Stockholm, Minamata Conventions 2. Solid Solid Waste Management in the new premises of the Mahaweli Development and Environmen 3. Activities of national, provincial and district level on environmental control and control of chemicals	900
2	Basic assessment project of Minimata	1. Surveys on the use of mercury in the jewelry industry 2. Field inspection on the use of mercury in health, technical and educational fields and providing necessary technical advice 3. Awareness and capacity building programs for school children, public officers and the public 4. Preparation of books, posters and information cards for the awareness	8.800
3	Project on Environmentally Sound Management and disposal of Polychlorinated Biphenyle (PCBs) Wastes and PCB Contaminated Equipment in Sri Lanka Through the establishment of environmentally healthy landscapes	1. Prepare guidelines for Polychlorinated Biphenyle (PCBs) 2. Publish the Guidelines for Polychlorinated Biphenyle (PCBs) Distributing those Guidelines among the relevant parties 3. Sample Test and Analysis of transformers 4. Database on Polychlorinated Biphenyle (PCBs) 5. Awareness programs 6. Legislation on Polychlorinated Biphenyle (PCBs) 7. Established laws and strategies for the use of Polychlorinated Biphenyle (PCBs)	60,000
4	Creating human health and food security Ensure a prosperous Living Stands by creating human health and food security through the establishment of environmentally healthy landscapes	1. Basic survey and assessment 2. Initial workshop and training workshops 3. Procurement of commodities for the project	10,000

## 4.1.7 Water for All and Always Action Plan 2018

Main activities	Financial (Rs.) '000'
1.Print and publish awareness materials pertaining to Sustainable land Management (SLM) and Land Degradation Neutrality(LDN) (STATUS OF SLM IN SRI LANKA – 1000 Copies; STATUS OF MINERAL ECONOMY IN SRI LANKA – 1000 copies; MINERAL PROSPECTS OF SRI LANKA – 1000 copies)	1,500
2.Conducting Awareness Programs on Sustainable Land Management (SLM) for School Children and Teachers (10 Programs)	900
<b>Total</b>	<b>2,400</b>

## 4.1.8 Green Cities for Health and Prosperity Action Plan 2018

Main Activities	Targets	
	Physical	Financial (Rs.) '000'
Conducting Training Programmes on Nursery Management and Coordinating Activities related to Establishing and Maintaining Nurseries	Conducting 03 Training Programmes	465
Establishing a Model for Urban Green Canopies	Establishing one Model for Urban Green Canopies	250
Awareness Programmes for School Children	02 Awareness Programmes	135
Tree Planting Programmes Conducting with other Institutions	30 Tree Planting Programmes	300
Coordination of Public Complains related to Forest Sector	Number of complins to be received.	50
"Wanaropa" National Tree Planting Programme	01 National ceremony	800
Acquisition of Forest Lands	Acquisition of 50 land plots.	60
Green Gardens Promotion Programmes	Reserving and distributing 40,000 plants	6,000

#### 4.1.9 International Relations Action Plan 2018

<b>Main Activities</b>	<b>Financial (Rs.) '000'</b>
Making the payment / Collect project proposals/ Conduct stakeholder workshop / Submission of prioritized project proposals to the GEF	25,380
<b>Total</b>	<b>25,380</b>

#### 4.1.10 Low Division Action Plan 2018

<b>Main Activity</b>	<b>Financial (Rs.) '000'</b>
Awareness creation Programmes on Environmental related Laws for Police Officers (Badulla, Matara, Anuradhapura)	600

# Action Plan 2018 of State and Statutory Institutions in the Ministry of Mahaweli Development and Environment

## 4.2.1 Forest Department Action Plan 2018

### Social Forestry and Forestry Extension Division

Main Activities	Targets	
	Physical	Financial (Rs.) '000'
Production of planting materials.	Seedling production 400000 Maintenance of Farmers' Woodlots 225 ha Home garden development & tree management programs. 6,000 home gardens 100 tree management programmes	22000
Education & Extension	1,200 Extension programmes 03 "Ruk" magazines 03 Newsletters Establishment of 100 ha of New Farmer's Woodlots - new	15,000
<b>Total</b>		<b>37,000</b>

### Silviculture & Forest Management Division

Main Activities	Targets	
	Physical	Financial (Rs.) '000'
Reforestation of clear felled plantations.	900 ha	112,950
Silviculture Operations	5433.74 ha	198,775
Enhancement of forest cover	9761 ha	328,317
<b>Total</b>	<b>16,094.74 ha.</b>	<b>640,042</b>



### Silviculture & Forest Management Division

Main Activities	Targets	
	Physical	Financial (Rs.) '000'
Forest fire protection	150	17,500
Establishment of hill top Plantations in watershed Areas.	153.9 ha	13,997
Conversion of Pine plantations in to Broad Leaves	642.4 ha.	75,661
<b>Total</b>	<b>796.3 ha.</b>	<b>107,158</b>

### Research, Education & Development Branch

Main Activities	Targets	
	Physical	Financial (Rs.) '000'
Sri Lanka Forestry Institute (SLFI)		12,000.00
Research and Development	141 ha.	10,000.00
Capacity Building	-	7,000.00
<b>Total</b>		<b>29,000</b>

### Forest Protection and Law Enforcement Division

Main Activities	Targets
	Financial (Rs.) '000'
Uniforms	17,000.00
<b>Total</b>	<b>17,000.00</b>

### Environment Protection and Management Division.

Main Activities	Targets	
	Physical	Financial (Rs.) '000'
Environment Management	15 Locations	20,000
Eco Tourism industry	14 Tourism industry	30,000
<b>Total</b>		<b>50,000</b>

## Forest Inventory & Geographic Information System

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
Enumeration of forest plantations	-	700 ha.	4,000.00
Survey and boundary demarcation	Forest boundary surveying	500 Km.	25,000.00
	Erection of posts.	2500Km.	504,000.00
	Maintenance of forests boundaries	4000Km.	60,000.00
	Erection of name boards	1000	20,000.00
<b>Total</b>			<b>613,000.00</b>

## Planning and Monitoring Division

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
Construction of new buildings island wide.	Identifying the location. Call bidding. Construction.	20	85,000.00
Building Repair and Maintenance.	Identification of buildings Call for biding. Repair.	70	60,000.00
Purchase office equipment	Identifying necessary equipment. Call bidding. Purchase.	-	-
Purchase office equipment	Identifying the furniture needed Call bidding. Purchase.	120	8,000.00
Purchase of Plant Machinery equipment	Identification of machinery. Call bidding. Purchase.	50	2,500.00
<b>Sub Total</b>			<b>155,500.00</b>
<b>Total</b>			<b>1,648,700.00</b>

## 4.2.2 Department of Coast Conservation and Coastal Resource Management Action Plan 2018

#	Main Activities	Financial (Rs.) '000'
1	Coastal Investigations, Research & Designs.	64,000
2	Coastal Protection and Stabilization	1,211,000
3	Coastal Zone Management	33,000
4	Environmental education and awareness programs	4,000
5	Coastal Monitoring Program	4,500
6	Rehabilitation & Improvement of Capital Assets	41,500
7	Acquisition of Capital Assets	90,500
8	Capacity Building	800
Total		1,449,300

## 4.2.3 Central Environment Authority Action Plan 2018

Recurrent and Capital

Activity	Sub Activity	Financial Target (Rs.in Million)
<b>1. Environmental Management and Assessment</b>		
	1.1 Environmental Impact Assessment	2,200
	1.2 Natural Resource Management & Monitoring	1,650
	1.3 Research & Development	2,750
<b>2. Environmental Pollution Control</b>		
	2.1.Environmental Pollution Control	825
	2.2 Monitoring System of Key Environment parameters	1,650
	2.3 Waste management	825
<b>3. Environment Education &amp; Awareness</b>		
	3.1 Media Unit	550
<b>4. Environmental Law Enforcement</b>		
		1,650
<b>5. Planning &amp; Monitoring Unit</b>		
		275
<b>6. Management of Environmental Service delivery</b>		
		3,300
<b>Total Recurrent</b>		15,675
<b>Total Capital</b>		794,500
<b>Special Projects</b>		
Pilisaru Programme		2,095,000
Environmental Pioneer Program		72,000
Strengthening of Laboratory of CEA and Improvement of Environmental Quality of Sri Lanka		10,000
Monitoring of the Water Quality of Major Water Bodies Funded by JICA		1,000
EDCF Project (Construction of Sanitary Landfill Sites)		2,250,000
Environmental Awareness and Green Awards		42,050

## 4.2.4 Sri Lanka Mahaweli Authority Action Plan 2018

#	Activity	Sub Activity	Financial (Rs.) '000'
1	Technical Services (Infrastructure Rehabilitation Improvement and Maintenance	Irrigation Rehabilitation & Maintenance Work 995 k.m. Buildings improvements & Maintenance 445 Maintenance of playground 10, Maintenance of Water supply schemes 6 Roads constructions & Maintenance 25 k.m.	1,056,673
2	Administration	Office equipments, Building maintenance	179,500
3	Land Development	Land Survey and Blocking out 10,021 lots, Grant awarding Programme 51,000 deeds, Land Clearing and Rough Leveling 236 ha., Land Acquisition 96 Lots.	112,000
4	Institutional Development	Irrigation System Management and Community Development programmes 915.	152,890
5	Environment Conservation	Plant Production and maintain 270,000 Plants Natural Resource Conservation for the Upper Catchment Management & the mahaweli Down streams. Tissue Culture Production in UMC. Environment Education & Training and promotion, UMC, Mahaweli Systems Environmental Promotion Center Doragala, Pallekale, Hydrological Monitoring Flow of UMC	69,000
6	Land Use Planning	Field surveys for Land Use update on digitalization of the scanned plans	10,000
7	Business Development	Entrepreneurship Development (GYB.IYB) Skill Development and transfer technology Market Promotion SME Loan Schemes.	42,710
8	Headworks Administration Operation and Maintenance		323,000
9	Head Quarters Operations	IT Related Infrastructure Development	10,000
10	Mahaweli Centre	Rehabilitation and improvement (Building & Structures), Education & Publication Unit , Sports ,Social & Cultural Development	73,037
11	Mahaweli Security Organization		31,942
12	River Basin Management	Water quality analysis in six reservoirs Water quality analysis in river & streams maintaining of Herbal garden, Office premises & camp.	2,000
<b>Total</b>			<b>2,062,752</b>

## Mahaweli Projects

Main Activity	Sub Activities	Targets		
		Physical		Financial (Rs.) '000'
<b>Mahaweli Consolidated Project (Rs. M. 640)</b>				
Infrastructure Development	Construction and Rehabilitation of Distributery Channels	k.m.	10	60,000.00
	Construction and Rehabilitation of Field Channels	k.m.	80	410,000.00
	improvement of main channels, branch channels,	k.m.	6	30,000.00
	Construction of main channels and rehabilitation.	k.m.	40	45,000.00
	Rehabilitation of small tanks.	No.	6	20,000.00
	Construction and Rehabilitation of rural road.	k.m.	6	20,000.00
	Improvement and rehabilitation of water supply schemes	No.	2	5,000.00
	Building Repair and Maintenance	No.	5	14,000.00
Agriculture and Livestock Development	Development of Agricultural Farm	Projects	5	8,000.00
Institutional Development	Community participated Irrigation Schemes	k.m.	5	5,000.00
Forest and Environment Protection	Electric fence and Bio fence	Projects	5	3,000.00
Administration	Maintenance and Administration			20,000.00
	<b>Total</b>			<b>640,000.00</b>
<b>System B Maduru Oya Right Bank Development Project Rs.M. 60</b>				
Infrastructure Development	Construction and Rehabilitation of Distributery Channels	k.m.	1	15,000.00
	Construction and Rehabilitation of Field Channels	k.m.	9	30,000.00
	Construction of market and rural road	k.m.	3	4,000.00
	Release Retention			5,000.00
Institutional Development	Conducting an Awareness programme for Faemers	Projects	5	2,000.00
Environment and wildlife Conservation	Construction of Bio fence	k.m.	4	2,000.00
Administration	Maintenance and Administration			2,000.00
	<b>Total</b>			<b>60,000.00</b>
<b>Welioya Integrated Development Project -System L Rs. M. 2,097.22</b>				
Infrastructure Development	Constnution of Road	k.m.	155.0/30	1,200,000.00
	Construction of buildings	No.	15/6	86,750.00
	Irrigation – Field channels	k.m.	6	22,700.00
	Distributery Channels Kambili wewa wehera wewa hansavila gajabapura.	k.m.	4	20,000.00
	water supply schemes and Agri wells	No.	100	50,000.00

	Electric supply	Item		20,000.00
	Dams and Anicut mahakambiliwewa, Kalyanapura iv	k.m.	50.0 /	460,000.00
	Agriculture division Milk collecting center Animal shed	No.	37	6,000.00
	Land clearing Forest	Ha.	500	35,000.00
	Release retentions			20,000.00
Land Development	Preliminary plans - Mahaveli lands, paddy lands and agricultural lands (Helabawewa, Veheratenna, Janakapura)	Lots	1,300	4,440.00
	Supervision fees for the Survey Department	Lots	1,300	1,012.00
	Divisions of 1 acres of paddy lands	Lots	60	120
	Basic Plans (Commercial)	Lots	60	670
	Rehabilitation of rural roads	k.m.	50	2,000.00
	Land Kachcherri	Programme	2	100
	Divisional Day	Days	48	200
	Marking reservoirs reservation	No.	10	5,000.00
Institutions Development	Institutions Development	Programme	164	6,250.00
	Community Development	Programme	144	1,900.00
	Development (farmers, women, culture)	Programme	25	600
	Training courses for residents	Programme	26	1,650.00
	Emergency relief for residents	Programme	1	1,000.00
	Promotion of Farmer Organizations	Programme	23	5,700.00
Agriculture Development	Purchase of plants	Farms	500	3,000.00
	Excavation of Agricultural Wells	Wells	100	1,000.00
	Providing water pumps	Pumps	18	1,500.00
	Granting Alkaline tubes	Roles	150	1,500.00
	Water supply to agricultural land	Ac	180	1,500.00
	Giving farm subsidies	Farmers	200	2,000.00
	Training Field days	Training	10	500
	Harvesting survey	Survey	20	40
	Provision of wire	Wire	240	1,500.00
	Crop farm	Farm	1	2,000.00
	Mushrooms programme	Houses	3	450
	Provide transportation facilities	Farmers	100	1,000.00
	Pumps and accessories for irrigation systems	Farmers	100	13,000.00
Livestock Development	Finger storage	Finger	750,000	1,500.00
	Ornamental fish program	Programme	1	1,000.00
	Livestock farms	Farms	1	2,000.00
	Training	Trainings	5	500
Environment and wildlife Conservation	Plant production - from schools and farmers	Plants	20,000	700
	Annual planting for bio fences and plant distribution	Programme	6	900
	Cleaning of reservoirs	Reservoirs	5	400
	Environment Education Programmes	Programme	4	300
	Establishment of electric fences at Elephant Pass	No.	1	6,500.00
	Residential office and landscaping at Sampathnuwara	Programme	2	2,000.00
		Programme	1	200
Administration	Administration			4,340.00

Providing transportation facilities	Vehicle purchasing , Maintenance, Repairs and Fule	No.	21	96,800.00
	<b>Total</b>			<b>2,097,222.00</b>
<b>Redeemaliyadda Integrated Development Project Rs.M. 238</b>				
Infrastructure Development	Rehabilitation of rural road.	k.m.	10	100,000.00
	Construction of buildings	No.	5	25,000.00
	Irrigation – reservoirs and Dams development	m.	160	50,000.00
	Maintaining camps			5,000.00
Institutions Development	Institutions and community development	Programme	25	2,000.00
	Training and Development (Farmers, Women, Cultural)	Programme	25	2,000.00
	Cosntruction of Latertrine	Programme	100	5,000.00
	Drinking water Projects	Wells	40	3,000.00
	Emergency relief for residents	Programme	5	1,000.00
Land Development	Land Survey and boundary demarcation	Lots	200	2,000.00
	Land Acquisition and Compensation	Lots	200	2,000.00
	Resettlement and settlement	Residents	200	1,000.00
Agriculture Development	Agro wells programme	Wells	40	4,000.00
	Provision of irrigation facilities	Ha.	30	2,000.00
	Seed production program	Ha.	50	2,000.00
	Training and extension program	Programme	50	1,000.00
Livestock Development	Livestock Programme	Programme	50	10,000.00
	Fisheries development program	Programme	50	5,000.00
	Animal farm development	Programme	50	5,000.00
Business Development	Entrepreneurship Development Program	Programme	5	1,000.00
	Skills Development and Technology Transfer Program	Programme	15	3,000.00
	Investment promotion	No.	120	6,000.00
	<b>Total</b>			<b>238,000.00</b>
<b>Rehabilitation of Major and Medium Irrigation Schemes including emergency Infrastructure Rehabilitation Works Rs. M. 200</b>				
Rehabilitation of Irrigation Infrastructure	Basic work and Repair and maintenance of lower valley irrigation infrastructure	Reservoirs 8 / Zones		200,000.00
<b>Rambakenoya Integrated Development Project Rs.M. 290</b>				
Infrastructure Development	Rehabilitation of rural road.	k.m.	5	80,000.00
	Rehabilitation of buildings	NO.	5	30,000.00
	Dams and reservoirs development			65,000.00
	Maintaining camps			5,000.00
Land Development	Land Survey and Land Use Planning	Lots	2,000	27,000.00
	Lots	Lots	500	3,000.00
	Rural centers and stacking out	Center	3	15,000.00
	Resettlement and settlement	People	1,500	3,000.00
Land Use Planning	Planning and improving urban centers	Center	3	1,000.00
Institutions Development	Institutions and community Development	Programme	50	4,000.00
	Post settlements Training and Development (Farmers, Women, Cultural)	Programme	25	1,000.00



	Drinking water Project	Wells	20	2,000.00
	Emergency relief for residents	Programme	5	1,000.00
Agriculture Development	Agricultural Model	Programme	40	4,000.00
	Agro wells programme	Programme	40	4,000.00
	Provision of irrigation facilities	Ha.	50	2,000.00
	Seed production program	Ha.	50	4,000.00
	Training and extension program	Ha.	50	1,000.00
Livestock development	Livestock Programme	Programme	20	4,000.00
	Fisheries development program	Programme	20	3,000.00
	Animal farm development	Programme	10	3,000.00
Business Development	Entrepreneurship Development Program	Programme	5	1,000.00
	Skills Development and Technology Transfer Program	Programme	15	3,000.00
	Investment promotion	No.	120	4,000.00
Environment and wildlife Conservation	Plant Production Program	Plants	100,000	5,000.00
	Annual planting program	Plants	100,000	5,000.00
	Soil conservation program	Programme	100	3,000.00
	Water quality monitoring program	Programme	100	2,000.00
	An elephant fence	k.m.	5	5,000.00
	<b>Total</b>			
<b>Agriculture &amp; Livestock Development Project Rs. M. 221.35</b>				
Agriculture Development	Improvement of paddy production (average yield 6.2 - 6.7mt / ha)	Programme	2,672	8,030.00
	Crop diversification program (increasing diversification from 35% to 42%)	Programme	2,811	28,778.00
	Improvement of fruit production	Programme	430	4,296.00
	Local economic development program	Ha.	14,640	7,320.00
	Promoting the use of organic fertilizer	Programme	1,210	1,210.00
	Agriculture extension	Programme	603	6,090.00
	Officers training	Programme	342	3,370.00
	Improving communication facilities	goods	10	1,850.00
	Farm Development	farms	18	79,085.00
	Production of seeds and planting material	Plant	87,800	9,685.00
	Adaptation to climate disadvantages	Programme	7	500
	The Poverty Reduction Program	Programme	1,675	9,800.00
	Management expenses			4,335.00
Livestock Development	Dairy Product Development Program	farmers	2,500	15,900.00
	Poultry Control and Production Program	farmers	5,000	8,000.00
	Inland Fisheries Development Program	farmers	1,500	6,000.00
	Improvement of ornamental fish production	farmers	600	3,500.00
	Promotion of goat farming	farmers	200	1,500.00

	Animal Hazard Development Program - Programs for students leaving school	schools	15	500
	Training	Programme	225	4,000.00
	Field visit	No.	20	500
	Research & Development, Annual Competition, Banners, Posters	No.	10	800
	Mahaweli Livestock	No.	10	15,000.00
	Management expenses			1,300.00
	<b>Total</b>			<b>221,349.00</b>
<b>Implementing a mechanism to protect river bank of Mahaweli – Gatambe Rs. M.10</b>				
	Construction of gabion retaining wall	m.	12	10,000.00
	<b>Total</b>			<b>10,000.00</b>
	Grand total			<b>3,756,571.00</b>

## 4.2.5 National Gem & Jewellery Authority Action Plan 2018

#	Main Activities	Sub Activities	Financial (Rs.) '000'
1	Regulatory Activities	Gemming, Dealers, Lapidary, and Gem Auction License and Raids (20000)	124,213
2	Gem Exports	Gems, Jewellery, Diamond Jewellery, Diamond re exports and Geuda/GeudaKatta	250,000
3	Certification	Gem Testing – National - International Assaying & Hallmarking - National	137,000
4	Continues supply of required Gem stones for the Gem Industry.	Auctioning Gem Barred Lands and Gem Gravel, Conduct Special Gem Mining Projects	850,000
5	Discovering new gem deposits	Introducing new technology through research and development (3), Providing Consultancy services – Local 250, Providing Consultancy services – foreign 10	269,000
6	Introducing social security systems	Conducting Environmental Rehabilitation Activities, Rehabilitate Destructed Areas Introducing Social Welfare System (Scholarship Programme) Introducing a Compensation scheme for gem mining workers.	21,000
7	Enhancing Gem & Jewellery re-exports	Promoting Gem & Jewellery re-exports	20,000
8	Manufacturing high quality value added gem & Jewellery products	Introducing Modern Technology (12)	5,800
9	Export promotion	Conciliate in existing markets and entering to new markets 14, Facilitating Gem & Jewellery Exporters by introducing online auction system.60 Encourage to establish Gem Emporium	80,430
10	Value adding to Gem & Jewellery products through certification	Establishing new Gem and new Assaying laboratories and upgrading existing laboratories to international standards	52,000
11	Standardization of Gem & Jewellery industry	Standardizing laboratories, Obtaining ISO Standardization to NGJA	1,200
12	Introducing enforceable legal mechanism	Amending Act Laws/ By Laws, Registration of Gem & jewellery Industries, Appreciation of Gem & Jewellery industry stakeholders.	4,030
13	Improve Authority to star class organization	Training and development of Human resources, Improving employee productivity by granting incentives and motivating employees.	6,776
<b>Total</b>			<b>1,815,649</b>

## 4.2.6 Jewellery Research and Training Institute Action Plan 2018

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
Training Programmes	Course fees charged Programmes	670 Trainees	1,000
	Programms that do not charge for Course fee	730 Trainees	15,000 Provision is made by National Gem and Jewellery Authority
Development Programme	New Training Units / Centers	One unit/Center	500
<b>Total</b>			<b>16,500</b>

## 4.2.7 Marine Environment Protection Authority Action Plan 2018

Activity	Target	Financial (Rs.) '000'
	Physical	
1.Improved marine pollution control mechanisms	Improve 12 beaches and 17 selected bathing sites in 12 coastal districts	16,540
	Implement "National strategy for marine pollution from fishery sector" in main fishery harbours in 12 coastal districts	3,850
	Four marine debris surveys and publish reports	700
	Update pollution inventory, Pollution load calculation, Preparation of environmental profile and issuing dumping permits	5,580
	Mangroove and coral restoration, Implement 5 projects related to Intended National Determinant Contributions (INDCs),	13,570
2.Improved marine pollution preventive measures	Amendment of Act, Gazzett 4 regulations, Sign 1 International Conventions	1,600
	Supply Waste Reception Service (WRS), Take ISO certificate to WRS procedure, Issuing bunker licence	2,080
	Development of National Action Plan for Marine environment	800
3.Increased knowledge and awareness on marine environment, pollution impact	Awareness for school marine groups, Teachers awareness programmes, Samuduru puwath newsletters 24000, Sath samudura magazine 3000	3,280
	Commemoration of World Environment day, World Ocean day, International Coastal Cleanup week	7,000
4.Efficient implementation of National Oil Spill Contingency Plan	Five provincial workshops, Seven regional workshops, Two IMT meetings, Purchasing of skimmer powerpack	18,000
5.Enhanced capacity of Marine Environment Protection Authority	Improve Galle and Colombo laboratory facilities, Purchasing chemicals	10,000
	Rehabilitation and Implementation of capital assets	6,000
	Purchasing office equipments for head office, Kilinochchi, Mulativ and Galle regional office	18,500
	Provide training, Purchasing books, Develop welfare facility	2,500
Total		110,000

#### 4.2.8 State Timber Corporation Action Plan 2018

Activity	Target	
	Physical	Financial (Rs.) '000'
Logs M <sup>3</sup>	162,000	3,100,000
Sawn Timber M <sup>3</sup>	5,800	340,000
Imported Sawn Timber M <sup>3</sup>	6,000	780,000
Transmission Poles No.	35,000	420,000
Sleepers No.	50,000	500,000
Round Poles No.	85,000	9,350
Fence Posts No.	105,000	8,400
Firewood M <sup>3</sup>	115,000	89,700
Furniture Rs.Mill.	350	440,000
Elephant Poles No.	42,000	134,400
<b>Total</b>	<b>606,150</b>	<b>5,821,850</b>

## 4.2.9 Geological Survey and Mines Bureau Action Plan 2018

### Activities of the Action Plan for the year 2018 - Geology Division

	Main Activity	Targets	
		Physical	Financial (Rs.) '000'
1	Soil Geochemical Mapping	1 Soil Geochemical Maps (Scale 1:100,000) 2 Nos Soil Geochemical Atlas (Scale 1:100,000) 1 No	3,500
2	Quaternary mapping (coastal zone)	Quaternary Maps (Scale 1:50,000) 3 Nos	1,561
3	Construction of Laboratory complex in GSMB	Two floors of new Laboratory	300,000
4	Provincial mineral surveys	Provincial Mineral maps 01 No (Northcentral Province)	3,137
5	Mineral processing (lab scale)	Preparation of one (01) Investors Guide Book (or Mineral quartz )	1,000
6	Establishment of engineering geology laboratory and geotechnical data repository	Establishment of engineering geology laboratory Lab and geotechnical data repository	5,000
7	Subsurface modelling of bed rock in Colombo Metropolitan area (Kolomba Polowa )	Report including maps and model of Subsurface bed rock morphology of Colombo Metropolitan area	1,000
8	Nuclear raw material Survey (Car borne gamma ray Survey of Aluthgama-Galle 1: 100000 sheet area )	Radiometric report and map showing distribution of radioactive element concentration	3,000
9	Research on geology	Contribution to Geology of Sri Lanka.	3,000
10	Professional development of Geologists, Geophysicists, Chemists, Mining Engineers.		3,650
11	Institutional memberships		700
12	Participation for workshops, Seminars (national and		2,000
<b>Total</b>			<b>327,548</b>

Activities of the Action Plan for the year 2018 - Mines Division

	Main Activity	Sub Activity	Targets	
			Physical	Financial (Rs.) '000'
1	Issuing of Licenses according to the MMA No.33 of 1992	1.1 Artisanal Mining Licenses (AML)		
		A	1,667	5,000
		B	2,400	3,000
		1.2 Industrial Mining Licenses (IML)		
		A	1,000	20,000
		B	5,312	42,500
		C	5,000	20,000
		1.3 Trading Licenses (TDL)		
		A	66	0,500
		B	1,600	8,000
		1.4 Transport Licenses (TPL)	833,323	75,000
		1.5 Export Permits	600	3,000
		1.6 Exploration Licenses (EL)		15,000
		2	Collection of Royalty	
3	Inspection Charges of Mining		245,000	
4	Conducting of Test Blast		10,000	
5	Refund and Bank Guarantee		0,500	
6	Sundry Income Mining		0,500	
8	Export of Samples		1,500	
9	Conducting of Blasting Courses		0,500	
	<b>Total Income</b>		<b>4,000,000</b>	
10	Expenditure	10.1 Awareness Programme for Licensing Procedure		20,000
		10.2 Organization of Rehabilitation		15,000
<b>Total Expenditure</b>				<b>35,000</b>



## Activities of the Action Plan for the year 2018 - LEGAL SECTION

#	Goal	Strategy
1	Sustainable Use of Mineral Resources of Sri Lanka	Enforcement of the provisions of the Act to regulate mining of minerals through prosecution
		Encourage model mining sites with environment friendly (less impact) manner
		Establishing an accurate, and a moderate license issuing system.
		Encouraging maximum value addition for export of minerals and upgrading the present export Policy
2	Establishing Mining and Minerals Act through education and awareness	Conduct seminars and workshops for Police Officer about the Act and Regulations on the licensing procedure
		Conduct training programme for Regional Mining Engineers, Assistant Registrars and Field Assistants.
3	Advisory services	Provide legal advice to the Management and respective Divisions on legal issues as and required.
4	Staff Requirements	Preparation of a structure for the Legal Division by expanding the staff requirement and promotional prospects for existing staff.

## 4.2.10 Central Engineering Consultancy Bureau Action Plan 2018

NAME OF THE PROJECT	BRIEF DESCRIPTION	Scope	Consultancy Fee Rs. (000)
Employers Quality Representative (EQR) for Infrastructure Development of Port City	CECB is providing design review & supervision.	Consultancy	250,000
Metro Colombo Solid Waste Management Project at Aruwakkalu.	CECB is providing construction supervision services.	Consultancy	180,000
Construction of Proposed Head office Building for the Gem & Jewelry Authority- No.25 ,Galle Face Terrace , Colombo 03.	CECB is providing the total consultancy services for the construction of this building Total Cost of the Project – LKR 867 Milion	Consultancy	43,400
Construction of Proposed Golden Jubilee Auditorium & Refurbishment of Gymnasium for the University of Sri Jayawardanapura.	CECB is providing the total consultancy services for the construction of this building. Total Cost of the Project – LKR 618 Milion	Consultancy	28,000
Extension of Southern Expressway Project-Matara to Beliatta and Mattala to Hambantota	Contract administratio, supervision, quality controlling.etc... Total Cost of the Project – LKR 255 Bilion	Consultancy	258,000
Central Expressway Project – Meerigama to Kurunegala	Contract administratio, supervision, quality controlling.etc... Total Cost of the Project – LKR 137 Bilion	Consultancy	197,000

## 4.2.11 Mahaweli Consultancy Bureau Action Plan 2018

### CONSTRUCTION DIVISION

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
Rehabilitation of Small Irrigation and Damaged Anicuts in Medirigiriya Divisional Secretary	Palu wewa	To be Completed	5.923
	Ralapanawa wewa	To be Completed	5.849
	Mirishena wewa	To be Completed	7.344
New Construction work – Development of Polonnaruwa General Hospital		To be Completed	188.829
Proposed Visitors Centre & Toilet Block View Point at Moragahakanda Kaluganga Project		To be Completed	137.054

### CONSULTANCY DIVISION

No.	Main Activities	Sub Activities	Targets	
			Physical	Financial '000'
1	Strategic Environment Assessment (SEA) of Water Resources Development and Irrigation Development	Provincial and district level stakeholders consultations, Cost Benefit analysis and preparation of Draft final report	100%	11.921
		Preparation of final water resources plan linking with forest, wildlife and physical plan for the entire country and submission of final report.	100%	15.895
2	Environmental Impact Assessment (EIA) for proposed Gin-Nilwala Diversion Project	Geological, Ecological, Biological and Sociological field surveys and completion of interim report	100%	4,177
		Preparation of draft final report	100%	5,222
		Preparation of final report and to obtain CEA approval	100%	7,310

# Action Plan 2018 Multi-Purpose Projects in the Ministry of Mahaweli Development and Environment.

## 4.3.1 Moragahakanda - Kaluganga Development Project Action Plan 2018

No	Main Activities	Sub Activities	Targets for 2018	
			Physical	Financial
1	Moragahakanda Headworks		0% (Cum. 100%)	
2	Kaluganga Headworks		20% (Cum 100%)	7,200,000
3	Land Acquisition and Resettlement		10% (Cum 100%)	1,530,000
4	Downstream Development	4.1 Buildings	15% (Cum95%)	1,000,000
		4.2 Roads		850,000
		4.3 Irrigation		2,500,000
		4.4 Others (Survey, Procurement, O/H etc...)		586,000
5	Environmental Mitigation		15% (cum 95%)	334,000
<b>Total</b>			<b>Cumulative 95%</b>	<b>14,000,000</b>

### 4.3.2 Uma Oya Multipurpose Development Project Action Plan 2018

Main Activities	Sub Activities	Targets	
		Physical (Cum)	Financial (Rs.) '000'
Head Works Construction	Water Ways (Tunnels & Shafts)	100%	3,871,279
	Access Roads & Transmission Lines	100%	1,016,558
	Electro-mechanical & Hydro mechanical	96%	3,475,769
	Engineering, Design & Management	-	1,189,557
	<b>Sub Total</b>		9,553,163
Downstream Development Works	Developments within Kirindi Oya Basin	65%	3,300,000
Project Management, Land Acquisition, Environment and Taxes & Levies	-	-	646,837
<b>Total</b>			<b>13,500,000</b>

### 4.3.3 Dam Safety and Water Resources Planning Project

Pro No	Name of project	Targets	
		Physical	Financial (Rs.) '000'
1	Environment Assessments and EIAs related to dam remedial works		4,000
2	Dam Remedial Works in large 31 dams & extra work of dams awarded under original funds		877,000
3	Rehabilitation of Minipe Trans-basin canal and related structure	Complete the Rehabilitation works	12,000
4	Dam Safety Related Special Studies and Installations	Improve the Dam safety Knowledge	3,000
5	Individual Consultants for Dam Safety Review Panel		2,000
6	Procurement of equipment for IAs and PMU		47,000
7	Refurbishment of Water Quality Lab and Improvement of Staff Accommodation		1,500
8	Staff Training and Workshops	Improve the Dam safety Knowledge	25,000
	Sub Total		971,500
Component 2 - Hydro Meteriological Information System Improvement			
9	Supplying equipment and civil works for HMIS stations		53,500
10	Improvement of Ground Water Monitoring Network		142,000
	Sub Total		195,500
Component 3 - Multi-Sectorial Water Resources Planning			
11	Improvement of Training Centers		40,000
12	Improvements and Upgrading of WMS models		110,000
	Sub Total		150,000
Component 4 - Project Management and Monitoring			
13	Office Refurbishment		5,000
14	Project Monitoring and Evaluation		5,000
15	Short Term Individual Consultants		3,000
16	Communication Programme		5,000
17	Incremental Contract Staffing Cost - IAs & PMU		45,000
3	Incremental Operating Cost - IAs & PMU		20,000
	Project Allowance - IAs & PMU		40,000
	Sub Total		123,000
	<b>Total IDA+GOSL</b>		<b>1,440,000</b>

### 4.3.4 Ecosystem Conservation and Management Project Action Plan 2018

#### Component 1

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
I. Preparation of a landscape plan for Dry Zone		Complete the model land scape plans	20,000
	I. Selecting and appointing local level (district & village level) planning committees	9 meetings	
	II. Selecting and appointing local level expert committees	3 meetings	
	III. Data collecting tools development, data collection, data synthesis and analysis	750 sampling units	
	IV. Organize workshops to develop draft management plans	3 workshops	
	V. Management plan validation with relevant stakeholders	1 workshop	
	VI. Develop final management action plans	3 field visits	

#### Component 2-a

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
I. Improve livelihood activities of selected families in buffer zone villages of PAs		No families- Assessment ongoing	50,000
	I. Improve livelihood activities of selected families adjacent Sinharaja Protected Area (FD)	6 villages	
	II. Improve livelihood activities of selected families adjacent Knuckles Protected Area (FD)	22 buffer zone villages	
	III. Improve livelihood activities of selected families adjacent Hurulu Protected Area (FD)	16 villages	
	IV. Improve livelihood activities of selected families adjacent Galwila Protected Area (FD)	5 villages	
	V. Improve livelihood activities of selected families adjacent Galgamuwa Protected Area (FD)	6 villages	
	VI. Improve livelihood activities of selected families adjacent KDN (Kanneliya, Dediya & Nakiyadeniya) complex (FD)	10 villages	
	VII. Improve livelihood activities of selected families adjacent Yala NP (DWC)	8 villages	
	VIII. Improve livelihood activities of selected families adjacent Bundala NP (DWC)	9 villages	

## Component 2-b: Planned activities for the year 2018

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
1. Country-wide Elephant Survey		Wild elephant counts in Sri Lanka and submit Survey reports	50,000
2. Assessment of wild-elephant distribution, ranging pattern and monitoring		Published an assessment report on wild-elephant distribution, ranging pattern and monitoring	
	I. Training DWC officers at each regional level on elephants' health	Train 120 officers	11,000
	II. National and International training for DWC officers	Train 35 officers	17,000
	III. Purchase & installing 40 GPS collars and other equipment and software	Successfully installed 40 GPS collars	35,000
	IV. Establishing monitoring units at DWC-HQ and WASL	Established 2 monitoring units	5,000
	V. Data collection, analysis & reporting	Developed a Data Base on wild-elephant distribution, ranging pattern and monitoring	2,000

## Component 3-a

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
I. Introduction of spatial monitoring and reporting tool (SMART) for patrolling in wildlife protected areas in Sri Lanka		Procurement of SMART patrolling related accessories	
	I. Procurement of computer hardware, handheld devices and field kits & Establishment of Base units and Patrolling units	SMART Patrolling system is in Place (20 PUs established & equipped in all DWC regions)	7,000
	II. Initial staff training programs & refresher training workshops	12 training programs completed. Three refresher training workshops conducted	5,000



Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
2.	Demarcation, establishing of boundary posts and sign boards	900 km	110,300
3.	Restoration/ rehabilitation of degraded areas	1000 ha	163,800
4.	Staff Quarters improvement	Rehabilitate 15 quarters	6,900
5.	Rehabilitation of water bodies		
	I. Rehabilitation of water bodies in Yala National Park (NP) and Lunugamvehera NP	Rehabilitate 6 tanks and 4 mud ponds	57,500
	II. Rehabilitation of water bodies in Hurulu and Galwila PAs	Rehabilitate 6 tanks and 4 mud ponds	19,300
6.	Fire prevention & control	Equipment for 9 FD sites are purchased. 30 km of fire belts are created	21,300
7.	Rehabilitation of road network	140 km	36,900
9.	Improvement of infrastructure & other related facilities	15 buildings	94,000

### Component 3-b

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
1.	Tourism development in Yala and Bundala NP	Implementing of tourism plans	45,000
2.	Improvement of buildings in the parks	16 Buildings	91,600
3.	Improvement of Tourism related Infrastructure & other facilities	Sum	66,900
4.	Development/rehabilitation of Access roads/nature trails	210 km	92,000
5.	Training on nature based tourism	30 Trainings	9,400

**Component 3-c**

Main Activities	Sub Activities	Targets	
		Physical	Financial (Rs.) '000'
NWRTC - Infrastructure and other related facility development		To complete the planned improvements.	180,000
SLFI - Infrastructure and other related facility development		To complete the planned improvements.	180,000
WILDLANKA Symposium		Conduct 1 symposium	5,000
Wildlife Diploma and other capacity building programs		30 Ranger to complete the diploma	25,000
Institutional strengthening and capacity building		25 field vehicles. 60 Motor Cycles and office & field equipment	215,000

### 4.3.5. Addressing Climate Change impact on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka Action Plan 2018

Vote No	Main Activity / Sub Activity	Fin.Targets for the remaining project period(Mn)	Financial (Rs.) '000'
1	Develop house hold food security and build resilient lively hoods for rain-fed farming house holds	410.58	
	1.1Develop diversified home garden based agro forestry in Walapane,Lankapura and Medirigiriya DS to build household adaptive capacity to climate change		29.853
	1.2 Introduce and promote drought tolerant crop varities and agronomic practices to counter effects of rainfall variability		16.129
	1.3Identify and promote climate- resilient alternate income sources among rural farm household dependent on rain-fed agriculture		54.582
	1.4Promote improved post harvest technologies as viable climate resilient livelihood sources for farm women		58.629
	1.5Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures		39.789
2	Build institutional capacity in village, local, regional service delivery to reduce risks associated with climate induced rain fall variability	245.59	
	2.1Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures		17.735
	2.2Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures		15.822
	2.3Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures		48,368
	2.4Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures		8,312
	2.5Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures		15.893
	2.6Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures		13,903
3	Operational Cost	65.59	30.989
	<b>TOTAL</b>	<b>721.76</b>	<b>350,003</b>

### 4.3.6 Mahaweli Water Security Investment Program Action Plan 2018

S.No	Main Activity/Component	Description	Physical Targets (%) 2018	Financial (Rs.) '000'
1	Minipe Left Bank Canal Rehabilitation	Raising of Crest of Minipe Anicut and Water Control and Measurement Facilities for LB and RB canals (MLBCRP-ICB-1)	15	320,500
2		Rehabilitation of Minipe LB Canal (0+000km to 30+140km) - Stage 1 (MLBCR-NCB-1)	30	186,250
3		Rehabilitation of Minipe LB Canal (30+140km to 49+820km) - Stage 2(MLBCR-NCB-1)	25	157,890
4		Rehabilitation of Minipe LB Canal (49+820km to 63+650km) - Stage 3(MLBCR-NCB-2)	25	317,500
5		Rehabilitation of Minipe LB Canal (63+650km to 73+960km) - Stage 4 (MLBCR-NCB-3)	30	113,570
6		Rehabilitation and improvements to Control Gate Structures ( 15 Structures) (MLBCR-NCB-4)	20	68,280
7		Improvements of Field Canals of Minipe LB Canal (MLBCRP-DC-1) (20 Canals) (Various lot no 3 Community works contracts)	10	6,000
			22	1169,990
8	North Wester Province Canal construction	Construction of Mahakithula and Mahakirula resovoures, feeder canal 3.66km from Mahakitula to Mahakirula and inlet tunnel from Mhakithulana to Nabadagahawatta diversion canal	10	1852,270
9		Construction of Main Canal from Nabadagahawatta to Mahakithula Reservoir inlet tunnel (5+250 to 22+500km)	15	370,000
10		Improvements to Wemadilla Left bank Main Canal up to nabadagahawatta (0 to 5+250Km) & Construction of new suec and tail canal (0 to 0+600Km)	30	250,250
			18	2472,520
11	Upper Elahara Canal Construction	Upper Elahera Canal (0+100 to 6+226km)	25	475,500
12		Kalugnaga-Moragahakanda Trance per canal (KMTC) ,Drill and Blast Tunnel (0+292Km to 9+161Km (UEC-ICB-2B)	7	450,000
13		Tunnel No 3 & 4 of Upper Elahara canal by one TBM (27+700Km to 55+400Km) (UEC-ICB-2A)	5	5213,410
			12	6138,910
<b>Sub Total -MLBCRP,NWPCP,UECP and other civil works</b>			<b>18</b>	<b>9781,420</b>
14	Consultancy services	Program management and Design Consultancy	11	379,000
15		Improving System Effencies and Water Productivity" Consultants	10	100,430
16		Expert panel and specialist assistance as required (Environmental Monitor)	10	1,400
			10	480,830
17	Environment and Social Safeguard	Environmental Mitigation	6	48,000
18		Environmental management	11	11,000
19		Implementation of WLMP	11	57,000

			9	116,000
20		MLBCRP- Social Safeguard	5	500
21		NWPCP- Social safeguard and land acquisition	11	1,200
22		UECP- Social safeguard and land acquisition	11	66,000
			9	67,700
<b>Sub Total for Other investment (Consultancy, Environment and social safeguard)</b>			<b>10</b>	<b>664,530</b>
	<b>PMU &amp; PIU Operation &amp; Maintenance (Mechanical and electrical equipments,ot her civil works, strategic communication, training, salaries,E&amp;O M)</b>			
23		Office furniture.IT equipment and software equipment ( 1 set)	10	7,000
			10	7,000
24		Utility shifting and deposit works by government owned entities	10	8,000
25		Field office works (6 Nos)	10	720
			10	8,720
26		PMU -Communication Activities (strategic communication plan)	10	4,000
27		UEC -Communication Activities (strategic communication plan)	10	7,000
28		NWPC -Communication Activities (strategic communication plan)	10	6,000
29		MLBCRP -Communication Activities (strategic communication plan)	5	5,000
			9	22,000
30		Implementation of training plan-International & local Training	10	18,010
			10	18,010
31		Incremental PMU salary uplift		168,000
				168,000
32		Equipment Operation & Management (PMU & PIUs)		30,320
			30,320	
		9.69	254,050	
		13.02	10700,000	



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**Ministry of Mahaweli Development and Environment**  
**மகாவலி அபிவிருத்தி மற்றும் சுற்றாடல் அமைச்சு**



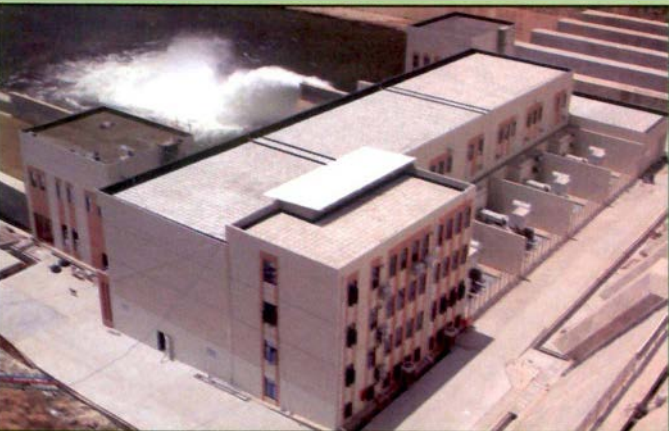
**Sobadam Piyasa**  
New Green Building Complex of Ministry of Environment



**Marine Protection Programme**



**Wana Ropa Programme**  
Increasing Forest Cover from 29% to 34% by 2030



**Moragahakanda Hydropower Plant**  
Contribute 25 M.W. to the National Grid from 2018



**Uma Oya Hydropower Plant**  
Contribute 120 M.W. to the National Grid from 2019

**Renewable Electricity to the National Grid**