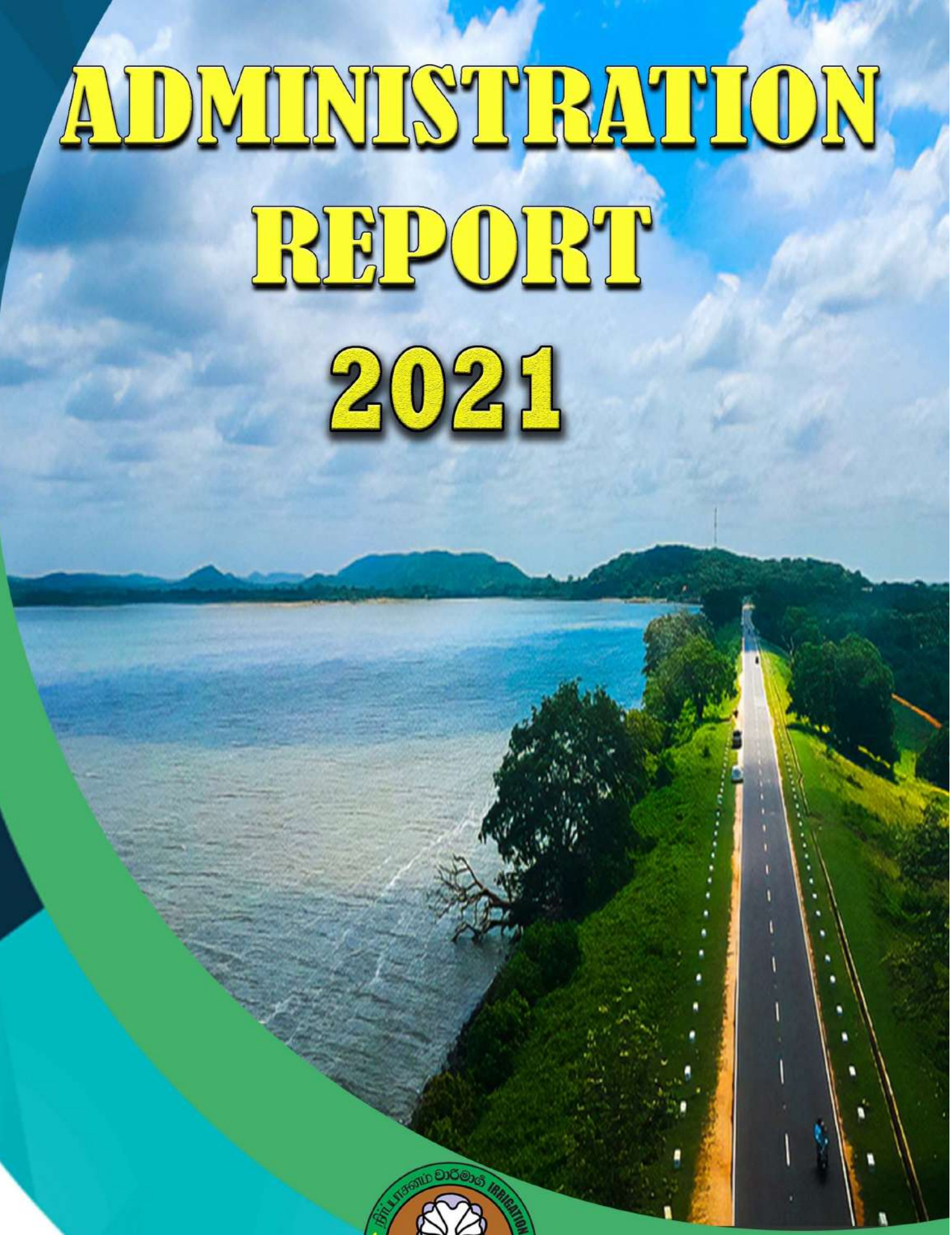
ADMINISTRATION REPORT 2021



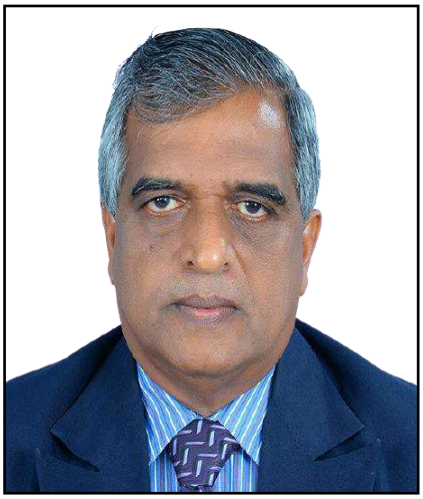
IRRIGATION DEPARTMENT

ADMINISTRATION REPORT
2021

PREPARED BY

PROGRAMME MANAGEMENT BRANCH

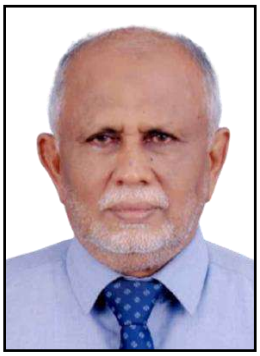
DIRECTOR GENERAL OF IRRIGATION



Eng. K.D. Nihal Siriwardana

Additional Directors General of Irrigation / Chief Financial Officer / Additional Director General (Administration)

Eng. (Ms) I.D.S. Samarasuriya
Addl. DGI
(Investigation, Planning & Design)



Eng. H.M. Junaid
Addl. DGI
(System Management)

Eng. (Ms) H.G.M. Kulasinghe
Addl. DGI
(Reverine Manegement)
Upto 30.05.2021

Eng. (Ms) D.P. Thrimahavithana
Addl. DGI
(Reverine Manegement)
From 18.06.2021

Eng. (Ms) T.J. Meegastenna
Addl. DGI
(Construction & Development)

Ms. P.P.K. Abeysirigunawardena
Addl. DG
(Administration)

Ms. U.A.C. Priyanthi
CFO
(Chief Financial Officer)

List of Directorate 2021
Sri Lanka Engineering Service

No	Name	Designation
1	Eng. (Ms) I.D.S. Samarasuriya	Addl. Director General of Irrigation (Investigation, Planning & Design)
2	Eng. (Ms) H.G.M. Kulasinghe	Addl. Director General of Irrigation (Riverine Management) up to 30.05.2021
3	Eng. (Ms) D.P. Thrimahavithana	Director of Irrigation (Riverine Management) up to 17.06.2021 Addl. Director General of Irrigation (Riverine Management) from 18.06.2021
4	Eng. H.M. Junaid	Addl. Director General of Irrigation (System Management)
5	Eng. (Ms) T.J. Meegastenna	Addl. Director General of Irrigation (Construction & Development)
6	Eng. (Ms) D. K. M. Galappaththi	Director of Irrigation (Planning & Designs) – Uva & Eastern Zone
7	Eng. (Ms) T. Batagoda	Director of Irrigation (Planning & Designs) – Central Zone
8	Eng. Thiruvarudchelvan	Director of Irrigation (Planning & Designs) – North & North Central
9	Eng. A.L.M. Cassim	Director of Irrigation (Regional Development)
10	Eng. S.M.B.M. Azhar	Director of Irrigation (Works General & Building Services)
11	Eng. B.A.K. Chandralatha	Director of Irrigation (Research Support, Process Improvement & Training)
12	Eng. G. Saravanabavan	Director of Irrigation (Contract & Procument)
13	Eng. K.K.A. Piyasena	Director of Irrigation (Hydraulics)
14	Eng. M.W.P. De Silva	Director of Irrigation (Engineering Geology)
15	Eng. (Ms) D.N.H.L. Madawalagama	Director of Irrigation (Engineering Materials) from 04.01.2021
16	Eng. M.S.U. Perera	Director of Irrigation (Project Planning and Design)
17	Eng. W.K.S. Wickramapala	Director of Irrigation (Asset Management)
18	Eng. D. Abeysiriwardena	Director of Irrigation (Water Management)
19	Eng. B.A.M.S. Beligaswatta	Director of Irrigation (Drainage & Flood Systems) up to 22.12.2021, Director of Irrigation (Badulla) from 23.12.2021
20	Eng. (Ms) M.P. Bammunawita	Director of Irrigation (Drainage & Flood Systems) from 23.12.2021
21	Eng. (Ms) S.M.M.R.K. Samarakoon	Director of Irrigation (Programme Management)

22	Eng. (Ms) W.C.N. Wickramasinghe	Director of Irrigation (Water Resource Planning)
23	Eng. S.P.C. Sugeeshwara	Director of Irrigation (Hydrology & Disaster Management)
24	Eng. L.G.A. Edirisinghe	Director of Irrigation (ICT & GIS)
25	Eng. (Ms) I.S. Wickramasinghe	Director of Irrigation (EST/I & PE)
26	Eng. (Ms) A.N.P. De Zoysa	Director of Irrigation (Riverine Management) from 23.06.2021
27	Eng. L.L. Silva	Director of Irrigation (ITI – Galgamuwa)
28	Eng. S.P.H. Gamage	Director of Irrigation (Ampara)
29	Eng. S.D. Mediwaka	Director of Irrigation (Anuradhapura)
30	Eng. N.P. Jayathilake	Director of Irrigation (Badulla) up to 23.12.2021
31	Eng. N. Nagarathnam	Director of Irrigation (Batticaloa)
32	Eng. (Ms) P.M. Jayadheera	Director of Irrigation (Colombo)
33	Eng. L.S. Sooriyabandara	Director of Irrigation (Galle)
34	Eng. D.M.A. Deheragoda	Director of Irrigation (Hambanthota)
35	Eng. K.M.A.P. Karunanayake	Director of Irrigation (Kandy) up to 30.06.2021
36	Eng. (Ms) Kumuduni Dheera	Director of Irrigation (Kandy) from 01.07.2021
37	Eng. K.B.V. Indrapala	Director of Irrigation (Kurunegala)
38	Eng. N. Yogarajah	Director of Irrigation (Mannar)
39	Eng. S.M.A. Nelugolla	Director of Irrigation (Monaragala) up to 12.01.2021 Director of Irrigation (Major Construction) from 13.01.2021 to 30.06.2021
40	Eng. P.L.N. Puranegedara	Director of Irrigation (Monaragala) from 11.01.2021
41	Eng. S.K. Hewagama	Director of Irrigation (Polonnaruwa) up to 02.07.2021 Director of Irrigation (Major Construction) from 04.07.2021
42	Eng. L.N.W. Rathnasiri	Director of Irrigation (Polonnaruwa) from 28.06.2021
43	Eng. I.P.A. Gunasekara	Director of Irrigation (Puttalam)
44	Eng. A.K.A. Jabbar	Director of Irrigation (Trincomalee)
45	Eng. A.J.L.G. Fernando	Director Mechanical (A & HM)

46	Eng.B.H.M.P. Amunumullagama	Director Mechanical (HMS)
47	Eng. K.M.M. Marzook	Chief Engineer Mechanical – North Central Zone
48	Eng. D. P. W. Wijesiri	Chief Engineer Mechanical – Central Zone
49	Eng.H.K.D.W. Gajanayake	Chief Engineer Mechanical - (HQ & Southern)

Sri Lanka Administrative Service

No	Name	Designation
1	(Ms) P. P. K. Abesirigunawardana	Additional Director General (Administration)
2	P. Thayananathan	Director (Administration)

Sri Lanka Accountants' Service

No	Name	Designation
1	Ms. U.A.C. Priyanthi	Chief Financial Officer
2	Mr. K.A.S.S. Piyanatha	Chief Internal Auditor
3	Ms. P.S.N. Fernando	Chief Accountant
4	Ms. U.A.D. Priyadarshani	Chief Accountant (Accounts & Estimates)

Sri Lanka Scientific Service

No	Name	Designation
1	Ms. G.P.R. Silva	Director -Land Use

Table of Content

1 Overview of the Department

1.1 Introduction

Irrigation Department (ID) is the major organization which is responsible for water resources development in Sri Lanka. ID is the only department which carries out planning, designing and construction of water resources related infrastructure without having foreign or any other outside consultations. The Department is currently providing irrigation facilities for 321,724 ha of land for cultivation and has planned to increase the irrigable area to 350,000 ha by year 2030. Also, it provides technical services for all water-related stakeholders such as Mahaweli Authority, National Water Supply & Drainage Board, Agriculture Department, Department of Agrarian Development, Forest Department, Local Governments etc. The Irrigation Department has a huge data base maintained over more than 100 years, enabling to execute water resources development works within the department's own capacity.

The Irrigation Department efficiently handles 80 Major Reservoirs, 163 Medium Reservoirs, 113 Anicut Schemes, 8 Lift Irrigation Schemes, and 25 Drainage Schemes located around the country through a network of 14 Regional Offices headed by Directors and 52 Divisional Offices headed by Divisional Irrigation Engineers. 03 Zonal Director's Offices have also been established to provide services for maintenance and development works. To execute new development projects, 06 Project Director's Offices, 01 Deputy Project Director's Office and 03 Chief Resident Engineer's Offices have been established.

In order to increase the effectiveness of the service provided and to have close communication with the major stakeholders, 240 Field Unit Offices have been established as at the end of 2021. This system enables us to attend to the issues of farmers' immediate requirements related to water distribution, and immediate maintenance & repairs of irrigation schemes.

The Galgamuwa Irrigation Training Institute caters for the training of newly recruited Engineering Assistants and in-service training programs for all staff categories.

During the 2020/21 Maha season and 2021 Yala season, 288,966 ha and 285,618 ha of irrigable extent were cultivated respectively with irrigation water from the major and medium schemes under the purview of the Irrigation Department. The cultivation performance of major irrigation schemes during Maha 2020/21 was 94% and during Yala it was 84% respectively.

The total allocation received for the capital and recurrent votes in the year 2021 was Rs. 14,668.5 million and the expenditure for the capital and recurrent votes during the year 2021 was Rs. 11,737.78 million.

1.2 Vision

Vision of Irrigation Department is, to optimize the returns of the water resources so as to ensure sustainable economic and social development while safeguarding the environment of the country, following the words of the King Parakramabahu the Great of "Not allowing a single drop of water falling from this sky to sea without serving the eco system and mankind."

1.3 Mission

Mission of Irrigation Department is to harness, develop, conserve, regulate, allocate and manage water resources in the country to secure & enhance the returns it produces, directly in the sphere of agriculture and indirectly in other spheres such as environment domestic, industry and power in collaboration with other organizations.

1.4 Objectives

The main objectives of the Irrigation Department are as follows.

1. Development of land and water resources for irrigated agriculture, hydro power, flood control, domestic usage, industrial usage, and aquaculture development, while assuring environmental sustainability.
2. Provision of lift irrigation, irrigation drainage and salinity extrusion facilities for cultivable lands in irrigation and drainage projects.
3. Facilitation of drinking water.
4. Flood protection and drainage facilities for lands affected by floods.
5. Alleviation of poverty in the rural farming community by increasing their farm income and raising their standard of living.
6. Management of water resources economically for sustainable agriculture and other uses.
7. Productivity enhancement of land and water in major/medium/inter-provincial minor irrigation schemes.
8. Integrated water resources management and participatory management in major /medium, inter provincial minor and micro irrigation systems.
9. Integrated water resources management and participatory management in river basins assigned to Irrigation Department.

1.5 Functions of the Irrigation Department

The functions of the Irrigation Department arising from the objectives are as follows.

1. Preparation of a Master Plan for the development of the different river basins for the optimum utilization of land and water resources, giving priority to environmental factors.
2. Collection, development and management of historical data base for water resources and flood management of the country.
3. Project formulation and detailed designs of irrigation, hydro-power, flood control, and reclamation projects.
4. Construction of irrigation and settlement projects for the conservation, diversion and distribution of water under gravity and lift Irrigation of new and existing land for cultivation by farmers for enhanced food crop production and to upgrade their living conditions.
5. Construction of drainage, flood protection, and salt water extrusion projects for the protection of cultivable land to enable the cultivation of such lands with rainfall for food crop production with minimized risk.
6. Providing drainage and flood protection facilities to minimize or mitigate the damage caused by floods.
7. Operation, maintenance, improvements, rehabilitation, and water management of medium and major irrigation schemes, drainage and flood protection schemes, and saltwater extrusion schemes for optimum productivity, ensuring the participation of beneficiaries. Catering of water for inter-sectorial use, domestic, industrial use and environmental requirements.
8. Maintaining and upgrading the water infrastructure, including dams and head works, of the system
9. Carry out research in Hydraulics, Hydrology, Engineering Geology, Geographic Information System (GIS), Engineering Materials and Land Use as applied to Water Resources Development Projects.
10. Human resources development for optimum utilization of human resources.
11. Operation of financial management systems, accounting, reporting, and auditing of systems of the Irrigation Department in accordance with the financial regulations of the Government of Sri Lanka.
12. Providing consultancy services to government departments, statutory boards/corporations, public and private institutions and individuals, in the fields of Water Resources Development, Geo-technical Engineering, Quality Assurance and Control of Earthwork and Concrete, Hydraulic Model Testing and Land Use Planning.
13. Issuing Irrigation Department clearance, whenever necessary for projects handled by other government institutes and the private sector, such as highways, Mini hydro power, industrial and land filling, hotel resorts and drinking water projects, etc.

1.6 Sustainable Development Goals (SDG)

1.6.1 Performance of the achieving Sustainable Development Goals (SDG)

Table 1-1: Performance of the achieving Sustainable Development Goals (SDG)

Goal / Objective	Targets	Indicators of the achievement	Progress of the Achievement up to 31.12.2021
Increased surface water storage capacity	1000 MCM by 2030	Increasing storage	26%
Increased Cropping Intensity	1.8 by 2030	Annual cropping intensity	99%
Increased Irrigable Area	150,000 acres	Extent of cultivation	28%
Reduced Annual Flood	By 50%	Annual flood damage	No flood occurs during 2021

1.6.2 Achievements of the Sustainable Development Goals

- Storage capacity was increased by 216.7 MCM from 2018
- Irrigation facilities were provided for 17,217 ha new and existing land from 2018
- Annual cropping intensity was 1.78
- No flood occurs during the year 2021

2 Organization & Administration

The Director General of Irrigation is the head of the department and there are four Additional Directors General of Irrigation In-charges of technical functions, one additional Director General In-charge of administration and a Chief Financial Officer to assist DGI. Directors who are managing the Branches, Zones and Regions are functioning at the next managerial level. Key posts have been created for middle level Technical Officers to improve the efficiency of the system.

The main functions of the department are covered by the following Sub-Departments

1. Investigation, Planning and Design (I, P & D)
2. Construction and Development (C & D)
3. System Management (SM)
4. Riverine Management (RM)
5. Administration (Admin.)
6. Finance (F)

In addition, the following supporting functions are carried out separately under the direct supervision of DGI

1. Programme Management
2. Contract and Procurement
3. Internal Audit
4. Training
5. Works General & Building Services
6. Mechanical Branch
7. Irrigation Training Institute - Galgamuwa

There is a small Secretariat supporting DGI to manage the records and coordinate with the staff. This Secretariat manages confidential files and correspondence related with the Director's meeting in which DGI participates as an ex-officio member (MASL, HARTI & SLLDC Director boards)

Except the Jaffna, Kilinochchi and Mullativu Districts the whole Island has been divided into 14 Regions and managed by Directors of Irrigation for each Region. Fifty two Divisional Irrigation Engineer's Divisions cover the entire island in maintaining all major & medium and inter provincial minor irrigation schemes and rehabilitation activities. There are 240 numbers of unit offices that have been established to increase participatory management role at grass root level to serve the farming community.

Three Zonal Director Offices covering all parts of island are set up to carry out planning and designing and to frame the new proposals including preparation of feasibility reports.

To manage the ongoing projects, 05 Project Directors have been appointed to Yan Oya, Kalugaloya, Morana, Kumbukkan oya and Mundeni Aru River Basin Development Project under departmental votes and 01 Project Director has been appointed to Lower Malwathuoya Project under ministry votes. In addition, 01 Deputy Project Director has been appointed to Uma Oya Downstream

Development Project and 03 Chief Resident Engineers have been appointed to Ellewewa, Kudawillachchiya and Himbiliyakada Waththegedara Irrigation Infrastructure Development Project.

In April 2021, Project Director of Yan Oya handed over the project to DI (Anuradhapura) and the work is continued to carry out under Resident Engineer (Yan oya). Kalugaloya project completed in February 2021 and the project was handed over to DIE (Ampara) for operation and maintenance work.

Irrigation Training Institute at Galgamuwa conducts pre-service and in-service training for the department staff as well as providing training for other agencies. Irrigation Training Institute is headed by a director.

The Mechanical section plays a vital role in the Irrigation Department. Up to 21st of October 2021, 03 Mechanical Directors supervised the Mechanical section under "Automobile, Heavy Machinery and Central Workshop", "Hydro Mechanical Structures and Regional Mechanical Workshops" and "Head Quarters". After 21.10.2021 the Mechanical Directors are supervising the Mechanical section under “North Central Zone”, “Central Zone”, and “Head Quarters & Southern Zone”. Three Mechanical Chief Engineers are supervising all Workshops around the country under the above mentioned zones.

There are five Main Mechanical Workshops at Ratmalana, Ampara, Rambewa, Halpathota and Lunugamwehera. In addition, there are nine Regional Mechanical Workshops at Kanthale, Minneriya, Batticaloa, Kurunegala, Puttalam, Mapakada, Kandy, Monaragala, and Head Office headed by Mechanical Engineers who are being supervised by Chief Mechanical Engineers in related Zone. The workshops have been established to attend mechanical work in Irrigation hydro-mechanical structures as well as all machinery and vehicles attached to the Department.

2.1 Organizational Chart

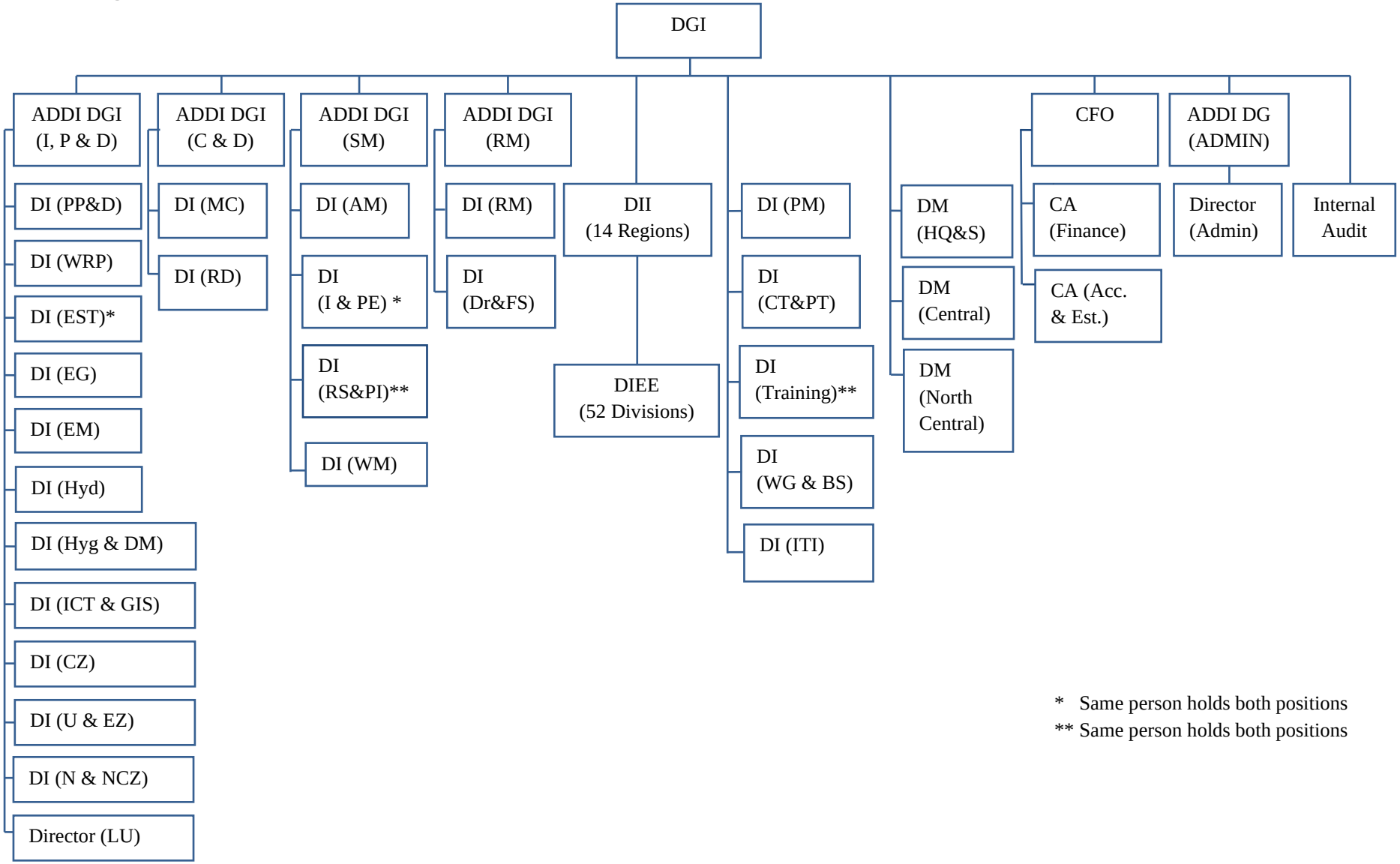


Table 2-1: Abbreviations for the Organization Chart

Abbreviation	Description
DGI	Director General of Irrigation
ADDI DGI (I,P&D)	Additional Director General of Irrigation (Investigation, Planning & Design)
ADDI GDI (SM)	Additional Director General of Irrigation (System Management)
ADDI DGI (C&D)	Additional Director General of Irrigation (Construction & Development)
ADDI DGI (RM)	Additional Director General of Irrigation (Riverine Management)
CFO	Chief Financial Officer
ADDI DG (Admin)	Additional Director General (Administration)
CIA	Chief Internal Auditor
DI (AM)	Director of Irrigation (Assets Management)
DI (I & PE)	Director of Irrigation (Irrigation & Productivity Enhancement)
DI (RS & PI)	Director of Irrigation (Research Support & Process Improvement)
DI (WM)	Director of Irrigation (Water Management)
DI (RM)	Director of Irrigation (Riverine Management)
DI (Dr & FS)	Director of Irrigation (Drainage & Flood System)
DI (PP & D)	Director of Irrigation (Project Planning & Designs)
DI (WRP)	Director of Irrigation (Water Resources Planning)
DI (EST)	Director of Irrigation (Engineering, Scientific and Technological service)
DI (EG)	Director of Irrigation (Engineering Geology)
DI (EM)	Director of Irrigation (Engineering Materials)
DI (Hyg & DM)	Director of Irrigation (Hydrology & Disaster Management)
DI (Hyd)	Director of Irrigation (Hydraulics)
DI (ICT & GIS)	Director of Irrigation (Information Communication Technology & Geo Informatics System)
DI (CZ)	Director of Irrigation (Central Zone)
DI (U&EZ)	Director of Irrigation (Uva & Eastern Zone)
DI (N & NCZ)	Director of Irrigation (Northern & North Central Zone)
DI (ENV)	Director of Irrigation (Environmental Studies)
Director (LU)	Director (Land Use)
DI (MC)	Director of Irrigation (Major Construction)
DI (RD)	Director of Irrigation (Regional Development)
DIE	Divisional Irrigation Engineer
DI (PM)	Director of Irrigation (Programme Management)
DI (CT & PT)	Director of Irrigation (Contract & Procurement)
DI (Training)	Director of Irrigation (Training)
DI (WG & BS)	Director of Irrigation (Works General & Building Services)
ITI	Irrigation Training Institute - Galgamuwa
Director (Admin)	Director (Administration)
DM (HQ & S)	Director Mechanical (Head Quarters & Southern zone)
DM (Central)	Director Mechanical (Central zone)
DM (North Central)	Director Mechanical (North Central Zone)
DI (Region)	Director of Irrigation (Region)

3 Overall Programme

The Sub Departments and other supporting branches carried out the functions of the department during the year 2021. These activities can be broadly categorized as follows.

1. Feasibility studies of major and medium irrigation schemes.
2. Activities of specialized divisions.
3. Major, medium construction projects under foreign funds.
4. Major, medium construction projects under consolidated funds.
5. Rehabilitation and Modernization of major and medium existing schemes
6. Operation and maintenance of major, medium irrigation schemes and irrigation system management.
7. Related Mechanical Engineering works and maintenance of machinery and vehicles of the Department.
8. Work done by the department for other organizations.

Under consolidated funds, the following items were approved in the budget for Construction and Rehabilitation of Major and Medium Irrigation Schemes. Some of these schemes are new works, whereas some are improvements or rehabilitation of existing irrigation works.

The following projects were implemented by the respective officers given in the table under the supervision of the Major Constructions Branch, Regional Development Branch, and Drainage & Flood Systems Branch.

3.1 Major and Medium Irrigation Projects executed under consolidated funds

Table 3-1: Major Medium Projects under consolidated funds

Project	Managed By
Deduru Oya Reservoir	DI (Kurunegala Region) DI (Puttlam Region)
Manik Ganga Reservoir	DI (Hambanthota Region)
Rambukkan Oya Reservoir	DI (Ampara Region)
Yan Oya Project	PD (Yan Oya)
Lower Uva Project	DI (Monaragala Region)
Mahagona Wewa Project	DI (Kandy Region)
Morana Reservoir	PD (Morana)
Ellawewa Reservoir	CRE (Ellawewa)
Kalugal oya Reservoir	PD (Kalugal oya)
Kumbukkan oya Reservoir	PD (Kumbukkan oya & Heda oya)

Project	Managed By
Rugam Kithul Reservoir (Mundeni Aru River Basin Development Project)	PD (Mundeni Aru River Basin Development Project)
Polannaruwa District Irrigation Development Project	DI (Polannaruwa)
Accelerated Irrigation Development in Monaragala District (Wellassa Navodaya)	DI (Monaragala)
Kelani River Bund Protection	DI (Colombo)
Development and Improvement of Godigamuwa tank in Matale District	DI (Kandy)
Flood Mitigation Projects in Kelani Ganga, Mundeniaru Basin, Kalunganga basin, Nilwala Ganga basin & Ginganga	DI (Batticaloa, Colombo, Galle)
Rehabilitation of feeder tank under Giant Tank	DI (Mannar)
Supply Portable Water to the Population in the Jaffna Penisula through the Development of Water Resources in the Vadamarachchi Lagoon	DI (Mannar)
Rehabilitation of Kudawilachchiya Reservoir	CRE (Kudawilachciya)
Rehabilitation of Dematagalla Tank	DI (Anuradhapura)
Wilakandiya Reservoir	DI (Badulla)
Stage 11 – Extension to Damsopura area	DI (Polonnaruwa)
Augmentation of Mahagalagamuwa Tank	DI (Kurunegala)
Construction of Pethiyagoda Pump House	DI (Colombo)
Rehabilitation of Gin Ganga Flood Regulation Project	DI (Galle)
Bentara ganga Right Bank Drainage & Saltwater Extrusion Scheme	DI (Colombo)

3.2 Major Projects under foreign funds

Project	Managed By
Uma Oya Down Stream Development Project	DPD (Uma Oya)
Climate Resilience Improvement Project (CRIP)	DPD (CRIP)

3.3 Summary of the Expenditures of the Department Budget

Table 3-2: Summary of the Expenditures of the Department during 2021

Name of Project	Revised Allocation for 2021 (Rs. '000)	Cumulative expenditure up to end of December 2021 (Rs. '000)	Progress Against Allocation 2021 (%)
Recurrent Expenditure			
Project 1 Administration and Establishment service	737,475.00	707,272.97	95.90
Project 2 Administration & Maintenance of Irrigation Schemes	2,562,435.00	2,506,295.67	97.81
Total Recurrent	**3,299,910.00**	**3,213,568.64**	**97.38**
Capital Expenditure			
Project 1 Administration and Establishment service	83,000.00	81,359.39	98.02
Project 2 Administration & Maintenance of Irrigation Schemes	2,993,300.00	2,821,094.51	94.25
Project 3 Major Irrigation Schemes	7,395,000.00	4,971,380.02	67.23
Project 4 Medium Irrigation Schemes	897,290.00	650,374.58	72.48
Total Capital	**11,368,590.00**	**8,524,208.50**	**74.98**
Total of Recurrent & Capital	**14,668,500.00**	**11,737,777.14**	**80.02**

3.4 Other Works

Table 3-3: Summary of the Expenditures for the works done by the Irrigation Department under ministry and other agencies' votes

Vote	Allocation (Rs.'000)	Expenditure as at 31.12.2021 (Rs.'000)	Financial Progress (%)
Ministry of Irrigation			
198-2-3-32-2506	2,165,000.00	1,708,616.08	78.92
198-2-3-8-2506	311,918.08	209,076.13	67.03
198-2-3-46-2506	672,500.00	368,014.50	54.72
198-2-3-5-2506	2,553.67	2,553.67	100.00
198-2-3-45-2506	65,000.00	34,406.74	52.93
198-2-3-21-2506	365,288.68	150,838.82	41.29
198-2-3-9-2507	23,276.07	22,988.78	98.77
198-2-3-18-2506	40,000.00	11,924.78	29.81
198-2-3-13-2506	25,000.00	11,348.72	45.39
198-2-3-43-2506	40,000.00	17,639.28	44.10
198-2-3-0-2001	311.60	300.53	96.45
198-2-3-0-2104	10,750.00	-	0.00
198-2-3-48-2506	50,000.00	15,737.23	31.47
198-2-3-0-2003	1,264.25	1,130.90	89.45
Total	**3,772,862.34**	**2,554,576.14**	**67.71**
Department of Agriculture			
285-2-2-8-2507	4,595.00	3,592.91	78.19
State Ministry of Urban Development, Waste Disposal & Community Cleanliness			
411-2-3-7-2506	50,000.00	262.32	0.52
411-2-3-33-2506	35,900.00	56.57	0.16
Total	**85,900.00**	**318.89**	**0.37**
Ministry of Water Supply			
166-2-5-97-2201	303,167.33	18,031.72	5.95
State Ministry of canals and Common Infrastructure Development in Settlements in Mahaweli Zone			
428-2-2-0-2506	654,000.00	325,189.27	49.72
State Ministry of Tanks, Reservoir & Irrigation Development Related to Rural Paddy Field			
429-1-2-0-1301	250.00	250.00	100
429-2-3-2-2506	1,708,537.51	1,651,663.78	96.67
Total	**1,708,787.51**	**1,651,913.78**	**96.67**

4 Investigation, Planning and Design Sub Department (I,P&D)

This sub department is mainly responsible for Investigation, planning and Design works of water related infrastructure development. There are 12 branches under this sub department. They are Hydrology and Disaster Management branch, Engineering Material branch, Engineering Geology Branch, Hydraulic Branch, Water resources planning branch, Project planning and Design branch, Environment Studies branch, Land use branch, Engineering Scientific and Technical service branch, Information & Communication Technology (ICT) branch, Geo Informatics Studies branch. Three Zonal design offices are also functioning under this sub department.

4.1 Hydrology and Disaster Management Division (Hyg & DM)

Hyg & DM is a specialized division of the Irrigation Department (ID) which is responsible for maintaining the hydro-meteorological information system of the country. It was formed as a separate division in the year 1942, around 42 years after the formation of the Irrigation Department. However, the collection of hydro-meteorological data in major river basins started a few decades back. The river gauge at 'Nagalagam Street' on the Kelani River is functioning since 1924.

4.1.1 Objectives

- Hydrological Data Collection and Management
- Hydrological Data Analysis
- Flood Forecasting and Early Warning
- Coordination with Disaster Management Authorities for better management of disasters.

4.1.2 Functions

- The operation, maintenance, and Hydro-meteorological data collection from 41 principal gauging stations, 66 peripheral stations, and 106 Automated Stations throughout the country.
- Collection of data from 56 rainfall and weather stations that are governed by some other parties.
- Processing hydro-meteorological data and converting them to useful information
- Archiving and dissemination of hydrological data and information
- Analyzing rainfall and river stage and issuing flood forecasting and early warning for major river basins of the country.
- Coordinate with disaster management authorities of the country such as DMC, District Administration, and Department of Meteorology (DOM) for better management of water-related disasters.
- Modeling of river basins for flood management.
- Establish new river gauging stations where necessary.

4.1.3 Performance

The key performances of the Hyg and DM division for the year 2021 in addition to successful operation and maintenance of Hydrological Stations around the country are;

a. Updating IDF Curves, Iso Yield Curves, Probability Rainfall, and Evapotranspiration for the entire country
b. Data collection, achieving, and management
c. Construction of new gauge houses
d. Flood monitoring and early warning.
e. Current metering for constructing and/or updating rating curves.
f. Publishing Hydrological Annual for the water year 2019/2020.
g. Taking discharge measurements in several Irrigation Schemes around the country for better water management as requested by Water Management Branch.

The above are the evidence for the successful workload carried out during the year 2021 even with the pandemic situation prevailed in the country of the descriptions follows.

a. Updating IDF Curves, Iso Yield Curves and Probability Rainfall

The division had taken the challenge of updating IDF Curves, Iso Yield Curves, Probability Rainfall, and Evapotranspiration for the entire country which are not updated since 1988, under the effort of updating Irrigation Department Technical Guidelines. These recent estimations supersede previous values as the land use pattern and the climate has changed extensively. The division had succeeded in updating all those parameters successfully by using rainfall, reservoir operation, meteorological and hydrological data collected and processed by Hyg & DM division, and data purchased from DoM. This can be considered as the most important performance of the year 2021. In addition, updating of Cp and Ct values were started at end of the year. All the tasks other than calculating Cp and Ct values were completed successfully and submitted for publication under the new Technical Guidelines of ID.

b. Data Collection, achieving and management

41 Principal Hydrological Gauging Stations including 10 weather stations, 66 peripheral stations, and 106 automated stations were successfully operated and maintained during the whole year even with all the restrictions imposed due to the Covid-19 pandemic. The data recording, primary screening, analyzing, and archiving had been carried out continuously throughout the year for the above stations.

Processed Hydro-meteorological data and information collected and archived are used not only by the ID but also by other institutions responsible for water-related infrastructure development for various purposes in the country. In addition, private consultants for their various consultancy works, academics, and students for their research works are too used those data for their respective purposes. It is started in the year 2021 to issue all the available data for a single river basin to students for their academic research free of charge, provided that the respective institution shall come into a written agreement with the division, ensuring the research outcomes are shared with ID. Details of data shared during the year 2021 are given in Table 4-1.

Table 4-1: Data Shares during the Year 2021

No	Description	Quantity
1	Shared with the students for academic reasons	35
2	Shared with government and private agencies	73

c. Construction of New Gauge Houses (Improvements to existing Gauging Stations)

Construction of new Gauge Houses at Siyambalanduwa, Kithulgala, and Giriulla were completed during this year. In addition, some repairs such as security fences and gates of Hydrological Stations, partitioning of head office premises and improving the store room of the division were successfully completed.

Figure 4-1: New Gauge Houses at Siyambalanduwa and Kithulgala Stations

Figure 4-2: New Security Fences and Gates at Badalgama and Giriulla Stations

d. Flood monitoring and early warning

Flood monitoring and early warning activities were carried out for all major river basins of the country throughout the day and night during such events. Forecasting and early warning messages were issued to disaster management authorities and the general public during the flood events given in Table 4-2. Hyg and DM division participated in activities of the Disaster Management Center as Technical Advisor in managing flood disasters during response and recovery phases too.

Table 4-2: Flood Warnings issued in 2021

River Basin	Number of Warnings	Dates of Issues
Kalu Ganga	6	13th & 25th of May / 3rd,4th & 5th of June / 8 of November
Nilwala Ganga	1	13th of May
Deduru Oya	2	25 th & 28 th of November
Attanagalu Oya	5	13 th of May / 3rd & 5 th of June / 8th & 9th of November
Gin Ganga	1	13th of May
Kelani Ganga	4	14th of May / 4th & 5th of June / 8th of November
Maha Oya	3	14th of May / 5th of June / 27th of November
Malwathu Oya	1	9th of November
Kala Oya	1	11th of January

The graphs below are a few examples of showing how accurately and quickly the floods were warned during the year 2021. In most flood events, it was issued Amber and Red warning messages to the public before it reaches to the flood levels as shown in figure 4-3 and figure 4-4.

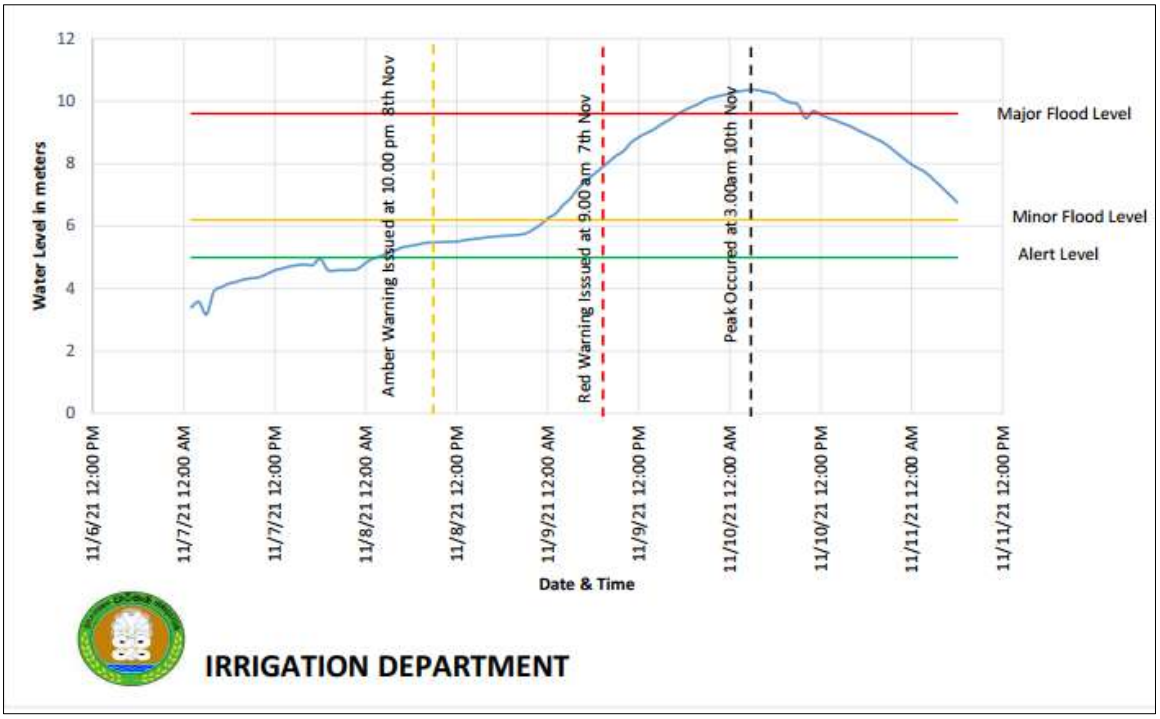


Figure 4-3: Water Level Variation in Badalgama Station – Maha Oya

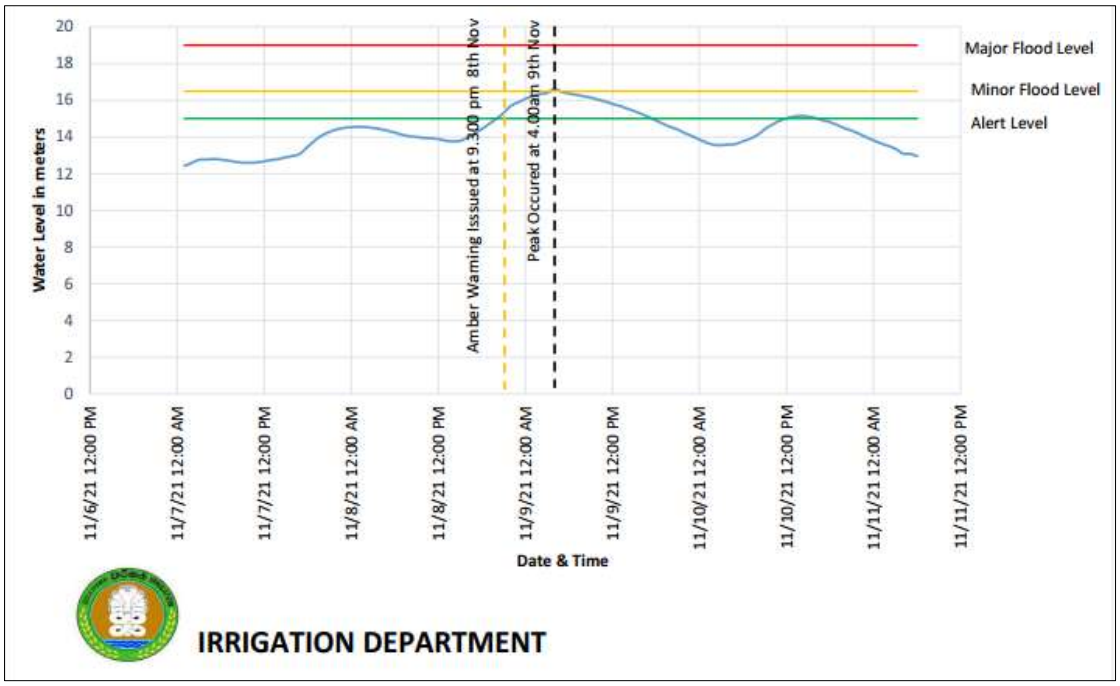


Figure 4-4: Water Level Variation in Glencourse Station – Kelani ganga

e. Current Metering (Updating the Rating Curves)

Current metering at many Gauging Stations during low, normal, and flood flows were carried out for verifying existing Rating Curves and constructing new Rating Curves. This list is given below in

Table 4-3: Current Metering Programme in 2021

No	River Basin	Station	Date
1	Kelani Ganga	Hanwella	Nov 9
		Glencourse	Nov 9
		Holombuwa	March 28
		Kithulgala	March 29
2	Kalu Ganga	Paragoda (HMIS)	Jan 22 / June 3(2)
		Halwathura	June 6,7(2),8,11(2),14 / May 14
3	Maguru Ganga	Magura	June 3,6,12
4	Kalu Ganga	Millakanda	May 4,14, 26 /June 4,5,6,7,8,12
		Halwathura	Jan 22 / May 25,26,27,31 /June 3,4,5,6,7
		Putupaula	April 2
		Anguruwathota Bridge	May 25 (3), 26 (2), 27,31/ June4(2),5,6,7,12 / April 23 /May 14
		Kuruwita	June 11
5	Gin Ganga	Baddegama	May 15, 17(2),18,20
		Thawalama	March 26
		Udugama	March 25
		Lankagama	March 27
6	Kirindi Oya	Thanamalwila	May 3,4,8 / Aug1
		Wellawaya	April 5,28 / May 4
		Kuda Oya (Nugayaya)	May 4,5,10 / Aug 1

No	River Basin	Station	Date
7	Menik Ganga	Buttala	Jan 5
		Kukurampola	Jan5
8	Mahaweli Ganga	Nawalapitiya	May 25(2), 26(10)
		Peradeniya	March 19
		Manampitiya	Jan 5(2), April 21
		Deyabeduma	May 3(2), 4(4), 5
		Yodha Ela	May 25
9	Yan Oya	Horowpothana	Jan 12, 14(2)
		Mora Oya	Jan 12
10	Deduru Oya	Moragaswewa	Jan 23
11	Malwathu Oya	Kala Oya	April 22
		Moraketiya	May 9(2), 12(2)
12	Kachchigal Aru	Thimbolketiya	May 9

Figure 4-5: Current Metering at Kithulgala and Weweldeniya

f. Discharge Measurements in Irrigation Schemes for Water Management

Hyg and DM division has carried out extensive work for establishing Rating Curve in irrigation canals of selected irrigation schemes for Water Management purposes on request of the Water Management Division of ID. In most cases, canal gauges are installed by the officers of Hyg and DM division while in some other cases canal gauges were installed by the relevant irrigation division. All the requests were attended and a complete report including approved rating curves with key maps and locations were handed over to DI (WM) with copies to respective Range Directors and Divisional Irrigation Engineers. The list of completed irrigation schemes is given in Table 4-4.

Table 4-4: Discharge Measurements in Irrigation Schemes for Water Management

No	Irrigation Scheme	Division	Dates of field measurement
1	Namal Oya	Ampara	July 6-11, 14-18, 31
2	Kimbulwana Oya	Kurunegala	July 9-9, 13-16
3	Yudaganawa	Monaragala	Sep 2-12, Oct 29-Nov 3, Dec 7-8
4	Kanthale	Trincomalee	Nov 3-13
5	Kalthota	Colombo	Nov 17-27, Oct 18-24
6	Kaddumurivu	Batticaloa	Oct 18-20
7	Denagama	Galle	July 6-9, 15-20, 24-27Nov 29-Dec9
8	Muruthawela	Hambantota	July 10-12, Dec 16-31
9	Pavathkulam	Mannar	Nov 3-5
10	Mahauswewa	Puttalam	July 23-29, Oct 7-9
11	Ridiyagama	Hambantota	June 18-20, Dec 16-31
12	Muthukandiya	Monaragala	July 28-Aug 4

4.1.4 Staff Position

Table 4-5: Staff Position of the branch

Designation	Present cadre	Approved cadre	Required cadre
Director of Irrigation	1	1	1
Chief Engineer	1	1	2
Irrigation Engineer	3	7	7
Earth Resources Engineer	2	2	2
Draughtsman	2	3	3
Development Officer	1	-	1
Management Service Officer	2	5	5
Hydrological Data Superintendent	1	1	1
Senior Hydrological Assistant	1	2	3
Hydrological Assistant	10	19	19
Hydrological Field Superintendent	1	1	1
Senior Hydrological Field Assistant	-	3	3
Hydrological Field Assistant	28	32	32
Hydrological survey Assistant	76	110	250
Stores Keeper	-	1	1
Stores Assistant	1	1	1
Office Assistant	1	5	5
Driver	1	5	5
Labourer	11	-	11

4.2 Engineering Materials Division

4.2.1 Objectives

To provide supporting service in planning, Design, Construction and Maintenance to assure the quality of civil engineering works for Irrigation department as well as to other organizations such as Provincial Councils, Statutory Boards and Authorities.

4.2.2 Functions

- Foundation investigation for earthen dams (new constructions as well as rehabilitation), anicuts and other irrigation related structures and buildings.
- Locating borrow areas for earth works and selecting sources of material for concrete works.
- Design of earth embankments and foundations.
- Performing quality assurance tests for concrete, cement, steel bars and earth works.
- Maintenance, troubleshooting and remedial measures
- Conducting research on use of available construction materials and improved methodologies
- Providing consultancy services and Laboratory services to private sector and semi government organizations, for site investigations and quality assessment in concrete and earth works.

4.2.3 Performance

a. Borrow Area Investigations and Investigations along the existing dams

- Helawa Reservoir in Pottuvil DIE Division
- Dematagala Reservoir in Rajanganaya DIE Division
- Uraula Reservoir in Bibile DIE Division
- Borrow area investigations were carried for improvement of minor Tanks under Warisubhagya Project in Killinochchi and Mullaitivu districts
- Kalamaduwawa Reservoir in Hiriyala DIE Division
- Wewaththena and Gonamaduwa Reservoirs under Wari Saubhagya program
- About 200 Numbers of borrow area investigations for the dams rehabilitation work under wari Saubhagya Project
- Investigation of Tissa Reservoir bed for establishing the depth of silt dredging.

Figure 4-6: Borrow Area Investigation in Kalamaduwawa Reservoir

Figure 4-7: Borrow Area Investigation in Manadiththa Kulam in Kilinochchi

Figure 4-8: Borrow Area Investigation in Helawa Reservoir

Figure 4-9: Borrow Area Investigation in Dematagala Reservoir

b. Completed Embankment Designs -New

- Watthegedara reservoir in Kandy Region
- Uraula Reservoir in Bibile Division
- Kudavilachchiya Reservoir in Anuradepura Region
- Himbiliyagada Reservoir in Kandy Region
- Ellawewa Reservoir in Rathnapura Division

c. Completed Embankment Designs -Rehabilitations

- Udukiriwala reservoir in Weeraketiya Division
- Morogolla reservoir in Bibila Division
- Debarawewa reservoir in Tissa Division
- Design for the slipped section of Bandaraulpoth Tank in Padaviya Division

d. Stability analysis of Parakrama Samudra

A jogging track was proposed at the section from chainage 1+475 to 3+240 at Parakrama Samudra dam by the Urban Development Authority (UDA). Therefore, with the direction of Director General of Irrigation,

- investigations were done to establish the material type, strength parameters and the permeability of the material which embankment is composite
- Carry out the stability analysis for establishment of stability of Parakrama Samudra dam under the present condition, as well as with the proposed jogging track by the UDA.
- Formulated the proposal to construction of the jogging track, maintain acceptable stability

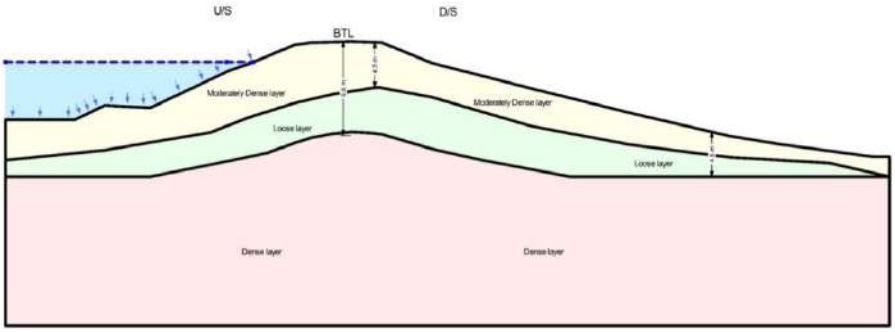


Figure 4-10: Modeled embankment section after analyzing Standard Penetration test results

Embankment materials and the respective shear strength parameters found after conducting required testing are as follows.

Figure 4-11: Conducting SPT

Figure 4-12: SPT Sample Box

Table 4-6: Shear strength Properties used in stability analysis

Shear Strength Property	**Moderately dense layer**	**Loose layer**	**Rip - Rap**	**Foundation Rock**
Soil Type	Clayey Sand	Silty Sand		
Bulk density (γ)/(kN/m^3)	20.80	19.98	27	27
Saturated density (γs) /(kN/m^3)	21.78	20.92	27	27
Cohesion C /(kPa)	3.11	1.98	0	55.1
Angle of internal friction (φ)	36.74	36.64	40	51

As dam slopes are fairly flatter and stability analysis shows marginally stable slopes, additional Rip-Rap layer of 0.6 m (minimum) wide on top of the existing rip-rap is introduced for maintain the stability of the dam and provision of peace of mind of joggers and anchoring of the Jogging track to the dam by a suitable mechanism causing minimal disturbance to the dam, in order to ensure the stability of the structure itself.

e. Quality Control and Quality Assurance works for Major Constructions and Maintenance Work of Irrigation Schemes

Quality control and quality assurance works of following major construction projects, implemented by the Irrigation Department, were carried out in addition to the routine works such as quality assurance work of Maintenance work of Irrigation scheme.

- Construction works for Kuda oya Reservoirs and Canal System under Uma Oya Downstream Development Project.
- Construction works for Wattegedara reservoir project
- Construction works for Lower Malwattu oya reservoir project

- Construction works for embankment of Himbiliyagada Reservoir project
- Construction works for Uraula reservoir project
- Construction works for Ellewewa reservoir project
- Construction works for Uraula reservoir project
- Construction works for Kudavilachchiya reservoir project
- Constructions done under Wari saubhagya Project
- Construction done under the regions under block votes
- Climate Resilience Improvement Project (CRIP) & Productivity Enhancement & Irrigation System Improvement Project (PEISEIP)

f. Field and Laboratory Tests Carried out during the year 2021

Table 4-7: Field and Laboratory Tests Carried out

Central Laboratory	**Nos.**	**Range/Project Laboratories**	Nos.
Soil		**Soil**	
Particle size distribution test	680	Hand Auguring	604
Index Properties test	690	Excavation of test pits	458
Dry density-moisture content relationship test	59	Particle size distribution test	242
Tri-axial shear test	26	Index properties test	99
Particle density test	21	Dry density moisture relationship test	529
Soil resistivity test	02	In-situ density test	2697
In-situ density test	27	Moisture content test	4655
Soil Permeability test	31		
Coarse aggregate		**Coarse aggregate**	
Gradation test	04	Gradation test	220
Specific gravity and water absorption	08		
Los-Angeles Abrasion test	17		
Fine aggregate		**Fine aggregate**	
Gradation test	04	Gradation test	207
Specific gravity	04		
Concrete		**Concrete**	
Extracting core samples	10	Slump test	715
Non – destructive tests	10	Compressive strength of test cubes	3722
Compressive strength of concrete core sample	05		
Compressive strength of test cubes	75		
Calibration			
Calibration of concrete testing machines	05		
Steel			
Tensile strength	30		

Figure 4-13: Tri-axial shear test

Figure 4-14: Soil permeability test

Figure 4-15: Index properties test

Figure 4-16: Particle size distribution test

g. Laboratory services for other institutes:

- Laboratory services for Advance Diploma Stage II Students in Institution of Engineers Sri Lanka, College of Engineering (27th, 28th March 2021).
- Tests for establishing the quality of earth work of 12 numbers of tanks in Yala & Lunugamvehera national park for Department of Wildlife Conservation.
- Inspection and provision of rehabilitation measures for Siyabalankotuwa Tank under Provisional Engineering Department, Wayamba Province.

h. Purchase of Soil and Concrete Testing Equipment

- 3kg Electric balance (10 Nos.)
- Fine aggregate sieve set and sieve shaker (03 Nos.)
- Concrete cover meter (01 Nos.)

- Moisture content Tine (50 Nos.)
- Specimen cutting machine (01 No.)
- Coarse aggregate sieve set and sieve shaker (03 Nos.)
- 30-35 kg Electric balance (02 Nos.)

4.2.4 Expenditure during the year 2021

Table 4-8: Expenditure

	Vote Particulars	Vote	Allocation (Rs. Mn)	Expenditure (Rs. Mn)
1	Engineering Materials Studies	282-2-2- 2507-11-09-5	3.00	3.00
2	Purchase of concrete and soil testing materials and equipment	282-2-2-2103-11-3	2.243	2.243
3	Feasibility Studies for Major, Medium Irrigation projects and surveys/ soil/ Geotechnical investigation	282-2-2-2507-11-008-1	4.748	4.747

4.2.5 Staff Position

Table 4-9: Staff position of the branch

No	Designation	Approved Cadre	Present Cadre	Deficit/ Excess
01	Director of Irrigation	01	01	00
02	Chief Engineer	01	01	00
03	Irrigation Engineer	02	02	00
04	Earth Resources Engineer	02	02	00
05	Draughtsperson	02	01	01
06	Research Assistant	19	12	07
07	Civil Engineering Materials Surveyor	43	19	24
08	Technical Aide	09	09	00
09	Management Assistant	05	03	02
10	Store Keeper	02	01	01
11	Store Assistant	01	01	00
12	Driver	20	01	05
13	Relief Driver		14	
14	KKS	02	01	01
15	Laboratory Attendant	78	17	33
16	Laboratory Labourer		06	
17	Maintenance Labourer		07	
18	Labourer		13	
19	Field Watcher		02	

4.3 Engineering Geology Branch

Engineering Geology Division of Irrigation Department is specialized in geological and geotechnical investigations and foundation treatment works which assists the specialized branches of irrigation department, zonal design offices and regions. Engineering Geology Division provides geological information based on borehole data in combination with geophysical survey data which is the perfect base for sustainable designs and prognosticating of geological and hydro-geological features and conditions.

4.3.1 Objectives

- To provide geotechnical recommendations for the most feasible, safest, economical and sustainable design and improvements, for newly proposed and existing watering storing, conveying and other hydro related structures
- To develop and carry out remedial measures of existing water storing, conveying and other hydro related structures in terms of seepage and stability
- To train the human resources on subsurface investigations, foundation treatment and hydro-geological analysis of the subsurface

4.3.2 Functions

- Geotechnical and Geophysical Investigations
    - Planning of investigation works, preliminary investigations and geological mapping
    - Geophysical surveying
    - Subsurface explorations by drilling into subsurface and collecting samples
    - Monitoring ground water conditions
    - Performing field tests such as Standard Penetration Test (SPT), Permeability tests, Water pressure tests etc. while drilling into subsurface
    - Geological logging
    - Analyzing geophysical data, geological logs and field test results and submitting geotechnical investigation reports with recommendations
- Planning and execution of foundation strengthening works (Grouting)
- Planning and execution of surface strengthening works (Shotcreting)
- Piezometer installations
- Assisting and guiding government and non-government organizations on geological and hydro-geological analysis of the subsurface
- Providing training on geotechnical investigations, foundation treatment and hydro-geological analysis of the subsurface

4.3.3 Performance

a. Comprehensive Geotechnical Investigation

Table 4-10: Comprehensive Geotechnical Investigation

No.	Study and the Location	Period	No of Bore holes.
1	Analyze the present subsurface condition of the existing bund of Mahapaththuwa wewa in Ampara	January	12
2	Analyze the present subsurface condition of the existing bund of abandoned ancient tank Mahasenwewa located in Vilpattu national park.	April	15
3	Determine the suitability of the subsurface for the construction of Bodhiwewa reservoir across Beli -ul oya, tributory of Mahaweli reservoir at Mankola, Padiyapalella in Nuwara Eliya District.	July to September	4
4	Analyze the subsurface conditions of the proposed spill location of new reservoir (amalgamate two major tanks known as Rugam and Kithul) across Mundeni Aru.	May	15
5	Determine the suitability of the subsurface for the construction of the proposed Ambaghawaththa bridge across Kalupela oya.	March to May	6
6	Determine the suitability of the subsurface condition of the proposed Maha Oya reservoir across Maha Oya Tributary of Mundeni Aru at Kekirihena, Mahaoya in Ampara.	June to September	7
7	Analyze the subsurface conditions of the proposed bridge at Palamadu access road under Mundeni Aru Basin Development Project.		3
8	Analyze the subsurface conditions of the proposed bridge and syphon at Kokkothandiyamadu under the Mundeni Aru Basin Development Project.		3
9	Determine the subsurface conditions of Kalamaduwawa tank in Hiriyala Division	February to March	9
10	Determine the subsurface conditions of the site of Andankulam Tank, Batticaloa	April to May	
11	Analyze the subsurface condition of the proposed Anicut site in the spill tail canal near Samiyar Kaddu anicut to control the damage to embankments and paddy fields caused by flood during rainy season	April – May	3
12	Analyze the subsurface condition along the axis of the proposed Nawuththuduwa anicut site in Kaluthara Division	January	3
13	Determine the suitability of the subsurface for the construction of the proposed Saddle dam of Ellewewa Tank which is situated around 350m away from Ellewewa main dam in Embilipitiya.	September-October	5
14	determine the suitability of the subsurface for the construction of the proposed tunnel to divert water from Kaluganga to newly proposed Waththegedara tank in Laggala, Mathale	November 2020 to July 2021	8
15	Determine the suitability of the subsurface for the construction of the proposed Heda oya anicut across Heda oya at Neelawa-Bedda in Dombagahawela, Monaragala Regio	August to October	3
16	Determine the suitability of the subsurface for the construction of the proposed spillway for Katagamuwa reservoir in Nikaweratiya Division	August	4

No.	Study and the Location	Period	No of Bore holes.
17	Determine the suitability of the subsurface for the construction of the proposed Nugamandiya anicut across Kumbukkan oya at Nugamandiya in Okkampitiya	October to December	9
18	Additional investigate to analyze the subsurface condition of the newly proposed part of the bund axis and spill location of the Kudawilacchchiya tank in Wilpattu national park, Anuradhapura district.	June	15
19	Determine the suitability of the subsurface condition for the construction of proposed trough structure at just downstream to the Buduruwagala bund in Alikota ara – Kuda oya transfer canal, under Umaoya Downstream Development Project.	October to November	3
20	Determined the suitability for rehabilitation of existing bund and construction of a spillway in Meegasara tank in Handapanagala in Wellawaya	November to December	9

Figure 4-17: Bodhiwewa tank

Figure 4-18: Maha Oya

Figure 4-19: Andankulam Tank

Figure 4-20: Nawuththuduwa Anicut

Figure 4-21: Waththegedara Tunnel

Figure 4-22: Katagamuwa Tank

Figure 4-23: Nugamandiya Anicut

Figure 4-24: Buduruwagala

Figure 4-25: Magas Ara Tank

b. Foundation Treatment Works

Table 4-11: Foundation Treatment Works

No.	Study and the Location	Period
1	Ethimale	2021
2	Along Bund axis of proposed Waththegedara tank	2021-2022
3	Along the axis of main dam of Ellewewa reservoir	2021-2022
4	Along the axis of main dam of Lower Malwathuoya Reservoir	2021-2022
5	Along left bank spillway of Mavala Tank in Unnachchi	2021
6	Along the bud axis of Morana Reservoir	2021-2022


Figure 4-26: Waththegedara Bund Axis


Figure 4-27: Malwathu Oya Bund Axis


Figure 4-28: Morana Bund Axis

c. Gophysical Survey Works

Table 4-12: Geophysical survey works conducted during the year 2021

No.	Location of the study
1	Kelani Flood bund in Colombo Division
2	Wattegedara bund axis in Laggala, Mathale
3	Jaya wewa, Ambuluwawa
4	Ellewewa, Embilipitiya
5	Morana, Badulla


Figure 4-29: Resistivity surveying at Kelani Flood bund


Figure 4-30: Resistivity surveying at Waththegedara Bund Axis

Figure 4-31: Resistivity surveying at Ambuluwawa


Figure 4-32: Resistivity surveying at Waththegedara Morana

4.3.4 Staff Position

Table 4-13: Staff position of the branch

No	Designation	Approved Cadre	Present Cadre	Deficit/Excess
1	Director	01	01	-
2	Chief Engineer	01	01	-
3	Irrigation Engineer	01	01	-
4	Geo. Technical officer / Geologist	02	02	-
5	Draft Person	01	01	-
6	Drilling Superintendent	01	-	01
7	A.D.S.	03	02	01
8	Drilling Assistant	27	23	04
9	Management Assistants	07	02	05
10	Storekeeper	05	02	03
11	Store Attendant	05	01	04
12	KKS	04	01	03
13	Drivers	11	03	08
14	Mechanics	03	02	01
15	Laboratory Labourers	27	06	08
16	Maintenance Labourers		02	
17	Labourers		07	
18	Lab Attendant		04	
19	Watchers (Day & Night)	03	05	01
20	Cleaner (For Lorries)	02	01	01

4.4 Hydraulics Research Laboratory

4.4.1 Objectives

Hydraulics research laboratory is entrusted with carrying out hydraulics model investigations, field inspections/investigations and to provide consultancy services to the other organizations with respect to hydraulics related issues. Also, it undertakes service & repair of survey & hydrological instruments, issuing conformity certificates for surveying & other precision instruments. In addition, it conducts hydraulics practical for the students in universities and other technological institutions.

4.4.2 Functions

- Construction of hydraulics scalar models including installation of measuring apparatus and precise equipment for carrying out model tests, tabulating test results, preparing diagrams and reports.
- Field inspections on request, to provide technical recommendations and opinions for hydraulics issues.
- Fabrication, installation and calibration of measuring devices for flow measurement.
- Seepage studies in canal distribution systems.
- Calibration of sluice outlets and providing rating curves.
- Exhibition Models preparation and participation for national/international exhibitions.
- Conducting hydraulics practical sessions for students in universities & technological colleges.
- Assisting to final year undergraduate students for their final year research project work.
- Service, repairing and calibration of survey & hydrological instruments.
- Issuing conformity certificates for survey & other precision instruments.

4.4.3 Performance

a. Physical Model Studies

The design of hydraulic structure is based on theoretical considerations in contrast to the actual physical conditions. Therefore, the results of model studies are essential to ensure the hydraulics behavior of structural design and recommending necessary deviations/alterations required to overcome the issues.
To achieve the above goals the following model tests were carried out by the hydraulics research laboratory in the year 2021.

i. Morana Radial Gated Spillway (model scale 1:20)

This study was started in 2020 and completed in 2021. The Scope of the model studies are as follows,

- To optimize the approach area of spillway.
- To investigate and optimize the flow conditions through ogee.
- To investigate and optimize the spill tail channel.
- To investigate bank erosion of the tail channel and mitigation measures to protect the tail canal.

A three dimensional model to a scale of 1:20 was constructed physically to carry out the hydraulics model studies. The following recommendations were proposed subsequent to the testing of alternative modified models,

Approach: Cut the right bank abutment at the approach of spillway towards upstream from the wing wall end about 52m and to the slope of 1:1.
Pier end extension: Pier end to be extended further 2m with a radius of 4m (details were given in the final report).
Tail Canal:

- The tail canal shall be maintained with uniform section with clearing the bottle necks and maintaining bed slope up to the sudden drop from the end sill.
- The tail canal bank and bed to be protected by firmly compacted boulders (size not less than 750mm) from end sill to the sudden drop.
- The bed width of the tail canal shall not be less than 15.9 m
- Side slope of the channel to be maintained with 1:1

Erosion protection at sudden drop and bend:

- To avoid scouring and erosion in the bank and bed, it shall be protected by well compacted boulders (size not less than 900mm).
- Rock outcrops need to be removed so that to maintain the canal section.

Figure 4-33: Completed model of Morana radial gated spillway

ii. Mavadiodai Anicut (model scale 1:25)

Mawadiodai Anicut is constructed across Mundeni Aru river in Batticaloa District. The structure consists with 36 m long 06 bays radial gated Anicut, 170 m long flood bund and RB irrigation outlet canal. The Main objectives of the model studies are to optimize the approach area of spillway to release maximum discharge through the anicut, the flow conditions through anicut and size of tail canal and to investigate and to protect the embankment (flood bund) from scouring & erosion.

The model for the existing condition was completed and testing and analysis are in progress for model investigation. This work was initiated during year 2020 and continues to 2022.

Figure 4-34: Existing condition - Mavadiodai Anicut model

iii. Model studies of Ellewewa uncontrolled chute spillway

The reservoir is constructed across Kadigan ara river in Ambilipitiya in Rathnapura District. the uncontrolled chute spillway is design for this reservoir. The Hydraulics research laboratory was entrusted with the hydraulics model investigation of the spillway structure in November 2021.
Considering hydraulics parameters and site investigations according to the Froude law similarity selected the physical model to a geometric scale of 1:12 of the prototype to carry out all studies. The Main objectives of the model studies are,

- To optimize the approach of the spillway.
- Investigate and to optimize the flow conditions over the ogee.
- Investigate and to optimize the behavior of flow in chute and stilling basin.

The model construction for an existing condition is in progress at the hydraulics research laboratory.

Figure 4-35: Model construction of Ellewewa uncontrolled chute spillway

iv. Continuous research work on “Piano Key” Type Weir

The research on PK weir model was continuously carried out during 2021 and testing is in progress at hydraulics research laboratory for improvements to following conditions in order to obtain the optimum discharge.

- Shape of crest
- Different angle for Inlet and Outlet keys
- Relationship between width and length of keys

Figure 4-36: PK Weir

b. Field Inspections and Observations

- Field inspection of river bank erosion in Mundeni aru and survey data collection of Mavadiodai anicut for physical model construction.
- Field inspection of river bank erosion at Sindrathriya village in Maa oya.
- Field inspection of river bank erosion in Ma oya at Makandura and Mahaweli river at Sooriyapura.
- Field inspections of river bank erosion of Deduru oya at Railway Bridge and Chethiya (Archilogical site).
- Field inspection of river bank erosion at Sippikalana area in Deduru oya.

Figure 4-37: Deduru Oya river section under the Railway Bridge

c. Model Fabrications and Participation for Exhibitions

Hydraulics research laboratory officials participate in exhibitions in island-wide as per the organizer's requests. The HRL is one of specialized division of the Irrigation Department made special attempts to educate the school and university students and the general public about the ancient irrigation system models and structures. The model for displaying in exhibitions was fabricated at Hydraulics research laboratory during year 2021 and unable to attend exhibitions due to Covid pandemic issue.

Figure 4-38: Fabricated exhibition model (Bisokotuwa & other pertinent features)

d. Conducting hydraulics practical sessions

- Practical sessions were conducted for IESL students.
- Practical sessions were conducted for KITI students.

Figure 4-39: Conducting practical sessions

e. Maintenance & Improvements Works in Hydraulic Research Laboratory

Table 4-14: Improvements executed to the Hydraulic Laboratory during 2021

No	Description of the Work
1	Renovation of HS, MA, RA and conference rooms
2	Renovation of General helpers' rest room
3	Renovation of Pump house
4	Repairs and Improvements to Glass flume
5	Repairs & Maintenance of Workshop
6	Renovation of backside boundary wall and Precast slabs for drainage canal

f. Instrument Section

Table 4-15: Repaired and serviced survey instruments during 2021

Station	Total Station	Leveling Instrument
Anuradhapura		6
Rajangana		3
Maha Oya		7
Ampara		13
Sammanthurai		5
Kalmunai		5
Akkaraipattu		4
Pottuvil		2
Ellewewa Project		2
Mannar		7
Murunkan		7
Silawatura		3
Nuwaraeliya		1
DI office – Kandy	1	1
Vavunia	1	1

Conformity checking

1. Automatic Leveling - 100 Nos
2. Total Station - 02 Nos

4.4.4 Staff Position

Table 4-16: Staff position of the branch

No	Designation	Approved Cadre	Present Cadre	Deficit
1	Director of Irrigation	1	1	-
2	Chief Engineer	1	1	-
3	Irrigation Engineer	3	1	2
4	Instruments Superintendent	1	1	-
5	Hydraulics Superintendent	1	1	-
6	Assistant Instruments Superintendent	1	-	1
7	Assistant Hydraulic Superintendent	1	-	1
8	Senior Draughtsman	1	-	1
9	Senior Research Assistant	1	-	1
10	Engineer Assistant	1	-	1
11	Draughtsman	2	1	1
12	Research Assistant	15	13	2
13	Workshop Forman	1	-	1
14	Management Service Officer	7	3	4
15	Storekeeper	1	1	-
16	Minor Supervisor	2	-	2
17	Driver	3	-	3
18	OES	2	1	1
19	Mason	3	-	3
20	Instrument Artificer	2	1	1
21	Carpenter	3	-	3
22	Painter	2	-	2
23	Blacksmith	1	-	1
24	Electrician	1	-	1
25	Machinist	4	-	4
26	Welder	2	-	2
27	Fitter	1	-	1
28	Plumber	1	-	1
29	Watch Repairer	1	1	-
30	Store Assistant	3	1	2
31	Lab Assistant	20	3	17
32	Instrument Repairer	6	1	5
33	Workshop labour	5	3	2
34	Pump Operator	2	-	2
35	Labour/ Maintenance labour	15	11	4
36	Watcher	2	1	1
37	Store Labourer	3	-	3

Project Planning & Designs Branch

Project Planning and Designs branch consists of two separate units; Project planning unit and Designs unit which are having two different tasks to carry out with related to water resources development in Sri Lanka.
Immediate supervision of the works carried out under each unit is done by Chief Engineer (CE). Designs Branch assignments are done under two categories namely Head Works and System Designs due to nature the of works and convenience of managing limited resources. Overall supervision of two branches is done by the DI (PP & D) with the support of CEE.

4.5 Project Planning Branch

4.5.1 Objectives

The scope of the Project Planning Branch is to identify new water resources development proposals and examine the feasibility of the potential multi- use of water resources by providing its optimum benefit to the community. In this process Project Planning Branch gets involved in planning and formulating new project proposals within its scope.

4.5.2 Functions

- Identification of water resource development possibilities
- Project formulation by detailed analysis of projects
- Finalization of feasibility reports
- Providing and sharing technical know-how with other agencies

4.5.3 Performance

a. Feasibility study on proposed irrigation infrastructure development project in Himbiliyakada

The proposed development plan mainly includes the construction of follows.

1. Construction of two new tanks; Waththegedara 1.3 MCM and Dodangolla 2.4 MCM
2. Construction of a 1.8 km long tunnel to divert water from Kalu Ganga to the project area.
3. Construction of feeder canals from the outlet structure of the tunnel to Waththegedara and Himbiliyakada tanks and a link canal connecting Waththegedara and Dodangolla tanks
4. Construction of a supplementary canal to feed the Mailapitiya Wewa and its cascade systems.
5. Development of new area and upgrade the existing irrigation system.

The study was started during 2020 and completed in 2021, finally it was planned to provide irrigation facilities for 1300 acres of existing land and 1010 acres of new land. The present cropping intensity of existing lands is 1.0 and will be increased to 2.0 and the cropping intensity of new lands will be maintained at 2.0 with the introduction of OFCC during both seasons.

b. Pre-Feasibility study on proposed Pankulam Aru Reservoir Project

The study for the proposed project was completed in 2021. It was proposed to construct 30 MCM reservoir across the Pankulam Aru to provide irrigation facilities for 2850 acres of new land and 350 acres of rain fed paddy land located in Kuchchaveli, Veerancholai, Iranaikerni, and Kumpurupity East GN Divisions of Kuchchaveli DS division. The total length of the earthen bund is 2.2 km and the maximum height is about 13m. The total length of the LB canal is about 10 km. The irrigable area is not merely confined to paddy cultivation. Part of the irrigable area is proposed for other crops such as ground nuts, green gram and chili.

The total project cost is Rs. 4495.5 million, of which a major component of Rs. 2,400 million is allocated for Irrigation infrastructure development and Rs. 200 million is allocated for other infrastructure development. It is allocated Rs. 400 million for land acquisition, compensation and resettlement of the project.

c. Continuation of feasibility study on proposed Diggalhela Reservoir Project in Monaragala Region

This study was started 10 2019 and completed in 2021. The proposed project provides irrigation facilities for 3000 acres of new paddy land in the Karanda Oya basin. The capacity of the proposed reservoir is 20 MCM.

4.5.4 Staff Position

Table 1: Staff Position of the branch

No	Designation	Present Cadre	Approved Cadre Requirement	Deficit/Excess
1	Chief Engineers	-	01	01
2	Engineers	02	05	03
3	Management Service Officer	-	01	01
4	Development Officer	01	-	-
5	Draftsman	02	04	02
6	KKS	01	01	-

4.6 Designs Branch

4.6.1 Objectives

The main scope of the designs branch is to carry out detailed designs of the technically feasible projects identified during the studies of the project planning branch and also to undertake major designs of Irrigation Department.

4.6.2 Main Functions

- Carrying out studies related to Hydrological, Hydraulic, Structural Analysis considering the results of investigations done by Engineering Materials and Engineering Geology branches of the Irrigation Department.
- Engineering design of structures and preparation of construction drawings.
- Providing consultation for design and construction issues encountered in regional level.
- Knowledge sharing with other outside agencies.

4.6.3 Performance

a. Design of Eluwankulama Anicut

It was started to design a new Anicut structure in year 2020 and completed during 2021. The structure consists of 3 Nos of 1.5 m x 1.5m control gates and a 52m long weir. This is proposed to be constructed at 30m upstream of the existing causeway in Kala Oya.

At present, this causeway has reached its natural death. This causeway was constructed in 1968 without a deep foundation. The Irrigation Department manages the Eluwankulama irrigation scheme of 650 acres through Nelumwewa tank and NWS&DB get nearly 15,000 cubic meters per day for the Puttalam town water supply project through Achchimale tank by the water diversion of this damaged causeway. The new structure will help for smooth operation for both parties.

b. Design of Syphon Structure for Rambakan Oya - D5 Canal

The design of syphon structure was stared in 2020 and completed in 2021. It will be able to irrigate nearly 3000 Acres of paddy lands by carrying out water from Rambaken Oya Reservoir to Borapola tank on RB side and then to extend the Borapola Main Canal to feed Tampitiya tank.
A 1000m long Syphon structure had been designed to cross Rambaken Oya with a rectangular barrel of size 1.3m x 1.8m. A maintenance chamber was provided at the deepest point of the syphon with special arrangements to release the syphon-water into the river in case of a repair.

c. Design of Diggalhela RB sluice

Diggalhela Reservoir project is proposed mainly to develop 3000 acres of new lands in the Siyambalanduwa DS division. The proposed project increases agricultural productivity and also establishes a strong support for the farmers to continue agriculture as a prominent from improperly used lands. The cropping intensity of the proposed irrigable areas are to be maintained at 1.83 during Maha and Yala seasons.

Two sluices have been proposed for this reservoir, and the Design Branch could complete the Design of RB sluice during 2021. The designed structure is a single barrel tower sluice with 11m high concrete tower and a 49m long rectangular concrete barrel of size 1.1m x 1.4m. It has a discharge capacity of 2.05 m^3/sec, and it is expected to irrigate 1700 acres of cultivable land on right bank through this structure.

d. Ellewewa Reservoir – Concrete Saddle dam

As per the initial proposals of ongoing Ellewewa Reservoir Project, its saddle dam was to be constructed with earth, but due to the scarcity of suitable earth, it was proposed in 2021 to change the same to a concrete dam.

Design Branch having obtained the required information from the site, designed a composite dam consisting of an earth bund supported by a concrete gravity earth retaining structure on reservoir side, so that the bund will not require the scarce clayey sand or high plastic clay to control seepage through the dam. The dam is 224 m long with a maximum height of 6.5 m.

e. Proposed Lower - Malwathu Oya Reservoir Project

The Malwathu Oya is the second largest river (area wise) basin in Sri Lanka and it is flowing through Anuradhapura city. 70% of the catchment is located in Anuradhapura district while the remaining lower catchment is located in Mannar and Vavuniya districts. The upper catchment of Malwathu Oya is intercepted by major reservoirs such as Nachchaduwa, Mahakanadarawa, Pavatkulam, Nuwarawewa, Tissa Wewa and many other medium/minor tanks. The lower catchment is not regulated at all except augmentation of Giant's Tank and Akitamuruppu Tank fed by the implementation of Tekkam anicut. The proposed Lower Malwathu Oya Reservoir will be located upstream of Tekkam anicut in the main river with the capacity of 209 MCM and consists of a 3.59 km long earthen bund in which the maximum height is around 23.5m. Under new irrigation infrastructure it is proposed to provide 700 Acres of lands for paddy/OFC and 1300Acres of land for fruit cultivation. The headworks include spillway (together with River Outlet, Power Intake and LB Sluice) and RB sluice. The Designs Branch completed the design of the spillway structure (together with the River Outlet and Power Intake and LB Sluice) and RB Sluice within the year 2021 and issued the construction drawings in December 2021.

Figure 4-40: Dam Axis of Proposed Lower Malwathu Oya Reservoir

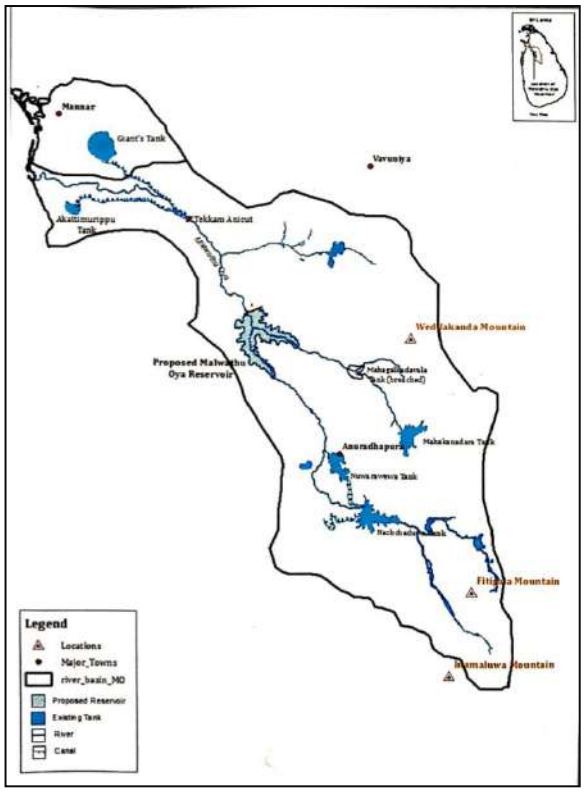


Figure 4-41: Project Location Map

The main features of headworks are given below.

Spillway: Design discharge is about 3506 cumec (with BTL: 58.54 m MSL and FSL: 54.12 m MSL). The number of radial gates is 10 with each having the size of 7.62 mx 7.01 m.

River Outlet: There are two outlets with each having the size of 1.8mx1.8m with a spill level of 43.56 m MSL.
Power Outlet: Power outlet has the capacity of 2turbines with 0.5MW each.

LB Sluice and RB Sluice: Both sluices are having same design discharge of 1 cumec with one opening with the size of 1.1m x 1.4m

4.6.4 Staff Position

Table 4-17: Staff position of the branch

No	Designation	Present Cadre	Approved Cadre Requirement	Deficit/Excess
1	Chief Engineer	02	02	-
2	Engineers	09	10	01
3	Management Service Officer	01	01	
4	Draughtsman	05	05	-
5	KKS	01	01	-

4.7 Water Resources Planning Branch

4.7.1 Objectives

Assessment of water resources in the river basins for river basin planning and development.

4.7.2 Functions

- Development of a National Water Resource Master Plan to achieve the long term economic, social, environmental and development goals of the country.
- Basin studies for prioritized river basins and preparation of river basin plans.
- Reviewing and updating the National Water Resources Master Plan based on river basin studies.
- Identifying water resources development projects and carrying out Hydrological studies.
- Providing consultancy services for other organizations in water resources planning upon request.

4.7.3 Performance

a. Studying water availability for Public Water Supply Schemes on the requests of National Water Supply & Drainage Board

Studies were conducted to evaluate water availability for allocating water for public water supply schemes at following locations in the river basins, using rainfall runoff models and water allocation models.

Table 4-18: Studying water availability for public water supply schemes

River Basin	Location	Project Name	Approved Amount (m3/day)
Kelani Ganga	Pugoda	Kirindiwela WSP	33000 (by 2025)
			66000 (by 2040)
	Yatiyantota	Yatiyantota WSS	2500
	Gurugoda Oya	Moronthota WTP	20000
	Dehiowita	Dehiowita WTP	3500
	Ruwanwella	Ruwanwella WSP	6600 (by 2021)
			11000 (by 2040)
Kalu Ganga	Kethhena	Kethhena Improvement & WSP	55000
	Kuttipitiya	Pelmadulla WSP	5500
	Puwakwatta	Kuruvita WSP	11000
	Doloswala	Doloswala, Nivitigala, Karavita intergrated WSP	5500
	Koswatta	Kalawana WSP	5500
	Dandeniya	Openayake WSP	5500
Maha Oya	Hiriwadunna	Proposed Kegalle WSP	9350 (by 2021)
			19690 (by 2040)
	Kotadeniyawa	Divulapitiya WSP Stage I	26000
	Mawanella	Mawanella WTP	20000
	Warakapola	Warakapola WTP	4500

River Basin	Location	Project Name	Approved Amount (m3/day)
Attanaglu Oya	Yakkala	Gampaha & Yakkala WSS	11550
	Veyangoda	Veyangoda & Nittambuwa WSS	10500
Malwathu Oya	Menik farm	Greater Vavuniya WSP	12000 (until commissioning of Lower Malwathu Oya reservoir)
Gin Ganga	Udugama	Udugama WSS	4400
Nilwala Ganga	Uruboku ara	Urubokka WSS	7500
	Kirama Ara at Ransegoda	Hakmana, Deyyandara-Mulatiyana IWSP	3500

WSP: Water Supply Project, WTP: Water Treatment Plant, WSS: Water Supply Scheme,
IWSP: Integrated Water Supply Project

b. River basin studies for basin planning

- Water allocation model for Gin Ganga basin is developed using WEAP.
- Kalu Ganga basin hydrological modeling using SWAT is initiated and DEM, River network, Land Use, Soil, Rainfall & Temperature input files preparation is in progress.
- Menik Ganga basin water allocation modeling using WEAP is initiated after the SWAT modeling in Menik Ganga. Water Yield, Environmental flow, Potential Evapotranspiration, Precipitation, Effective Precipitation, Domestic Water Demands, Agricultural Demands, Kc file preparation is in progress.

c. Providing technical assistance in Technical Review Panels for the studies/projects under Irrigation Department and Ministry of Irrigation

- Review of feasibility study of "Proposed Flood Risk Mitigation Interventions for Batticaloa district with special focus on Mundeni Aru Basin".
- Review of hydraulic study in "Preparation of detailed design for proposed salinity barrier at Ambathale in Kelani River".
- Review of hydrological study of the "Feasibility study of proposed Gin Nilwala Diversion Project".
- Review of the "Resettlement Action Plan (RAP) of the proposed Kumbukkan Oya Reservoir Project".
- Review of the "Environmental Action Plan (EIA) of the proposed Kumbukkan Oya Reservoir Project".
- Review of the "Feasibility study for the proposed flood control and multi-purpose development project in Gin Ganga basin".
- Participated in the Cabinet appointed review committee to review the proposed "National Water Policy".

d. Technical assistance for other organizations

- One engineer participated in trainings on CLEWs (Climate, Land, Energy and Water) modeling and contributed in developing the country model in collaboration with UNDP and the Ministry of Finance.
- Three engineers participated for the water availability assessment trainings using WaPOR data base and contributed for the Water Productivity Assessment in Malwathu Oya basin conducted by the FAO and IWMI.
- One engineer contributed for "Preparation of Nationally Determined Contributions (NDC) for Sri Lanka" conducted by the Ministry of Environment.

e. Checking the locations of wind, mini-hydropower and solar power projects

Checking the locations for proposed solar, wind and mini hydropower projects submitted by other organizations, for any interference with the proposed water resource development plans stipulated on the Water Resources Master Plan and make recommendations to Environmental Studies Branch to proceed with no objections.

- Solar Power projects :49
- Wind Power projects : 3
- Mini-hydro Power projects : 5

4.7.4 Staff Position

Table 4-19: Staff position of the branch

No	Designation	Approved Cadre	Present Cadre	Deficit	Excess
1	Director of Irrigation	1	1	-	-
2	Chief Engineer	1	1	-	-
3	Irrigation Engineer	4	2	2	-
4	Earth Resources Engineer	1	1	-	-
5	Management Assistant	1	0	1	-
6	KKS	1	1	-	-
7	Labourer	-	1	-	-

4.8 Environmental Studies Branch

4.8.1 Objectives

This branch handles all the environmental matters pertaining to the Irrigation Department.

4.8.2 Functions

- Obtaining the Environmental Approval (EIA/IEE) from Central Environmental Authority or other Project Approving Agency for all the projects under the purview of the Irrigation Department.
- Issuing Irrigation Department clearances, whenever necessary for the projects handled by the other government institutes and private sector such as Highway Projects, Hydropower Projects, Mini Hydropower Projects, Industrial land fillings, Hotel Resort Project, Drinking Water Projects, Railroad Projects, Transmission Line Projects etc.
- Representing Irrigation Department as the TEC member and reviewing EIA/IEE reports and Technical Evaluation Committee Meetings / submit comments / recommendations / suggestions to Central Environmental Authority and other Project Approving Agencies.
- Attending to environmental related matters in the Irrigation Projects.
- Environmental monitoring works in government and private sector projects related to Irrigation Department.
- Issuing recommendations, consent letters for river sand mining and land base sand mining etc.
- Issuing recommendations for de-silting in irrigation tanks.

4.8.3 Performance

a. Environmental Impact Assessments (EIA) & Initial Environmental Examination (IEE) for Irrigation Projects

i. Wilakandiya Tank:

The Project approving agency (PAA) is Forest Department. Final IEE Report was submitted to Forest Department. Environmental approval received from Forest Department.

ii. Reinstatement of Kudawilachchiya Tank:

The PAA is Department of Wildlife Conservation (DWC). Draft final report submitted to PAA. Up to 70% of the contract amount paid to consultant on December 2021.

iii. Kolellawatta Tank:

The PAA is Forest Department (FD). Draft report submitted by consultant and Internal TEC meeting was held on November. Up to 70% of the contract amount paid to consultant on December 2021.

iv. Kumbukkan Oya:

The PAA is Forest Department. Inception report was submitted and interim report has to be submitted by Consultants. Archeological Impact Assessment Report was obtained from Department of Archeology. Final draft EIA report was submitted to Forest Department.

v. Mundeni Aru Basin Development Project:

The PAA is Forest Department. Amended Final Draft EIA report received from the consultant. Internal Evaluation Committee has been appointed to evaluate the EIA Report. Consent from the Forest Department has to be obtained.

vi. Yan Oya:

Omarakada Irrigable Area: Supplementary EIA is in progress as Resettlement site was changed to new location

vii. Mahaweli Left Bank Lower Basin Development Project (Kinniya & Kanthale):

The PPA is Forest Department (FD). Administrative charges paid to FD and mobilization charge was paid to consultant. First draft EIA report project name was changed as "Left Bank Development Project in Kaluganga" by the Cabinet paper. Final EIA Report was submitted to PAA and TEC meeting was held.

viii. Diyaheruma Tank:

The PAA is Central Environmental Authority. Inception Report was submitted. Technical issue on designs has been arisen.

ix. Morana Reservoir:

Extension for environmental approval was received

x. Rehabilitation of Aldamporuwa Tank and Rathnaella scheme:

Draft Terms of Reference (ToR) was issued by CEA. Department of Archeology recommendation received for increase the capacity of tank. Geological Investigation was requested from Engineering Geology Branch. NRMC report was requested from Natural Resources Management Centre. Landslide Hazard Investigation was requested from NBRO. Preparation of IEE Report is in progress by Environmental Studies Branch of ID.

xi. Dematagala Reservoir:

Consent of Department of Wildlife Conservation was received to rehabilitate the access road of project. Reminding letter sent to Department of Archeology for Archeological Impact Assessment Initial consent was requested from District Forest Officer, Anuradhapura.

xii. Galgekandiya Tank:

The PAA is Forest Department. ToR received from PAA. Relevant documents were submitted to the Procurement Branch for select a Consultancy team. AIA report was requested from Department of Archeology. Administration charges paid to the Forest Department.

xiii. Godigamuwa Tank:

The PAA is Department of Wildlife Conservation. Environmental Approval received.

xiv. Jaffna Lagoon Water Project:

The PAA is Department of Wildlife Conservation. Draft ToR was issued by DWC.

xv. Ella wewa:

The PAA is Central Environment Authority. Final IEE Report was submitted to CEA and Environmental approval received.

xvi. Proposed Irrigation Infrastructure Development Project of Himbiliyakada:

The PAA is Department of Wildlife Conservation. ToR received from Project approving agency and preparation of IEE report is in progress by the Environmental Studies branch of Irrigation Department. Landslide hazard investigation and Archeological Impact Assessment requested from relevant Authorities.

xvii. Pekkulama Reservoir Project:

Basic Information Questionnaire (BIQ) and Feasibility Report of Pekkulama Reservoir Project were submitted to Central Environmental Authority.

xviii. Helawa Tank:

Already processed project. BIQ already send and process started.

b. Sand and Gem Mining and De-silting Projects

- Recommendation for sand mining projects is given by Regional Directors' of Irrigation and circulars were issued for time extension by Environmental Studies Branch.
- Illegal sand mining locations reported from regions were sent to Geological Survey & Mines Bureau to take actions to stop.
- Approvals granted for 02 nos. of sand mining projects in Western province, 01 No of sand mining project in Northwestern province and 2 nos of sand mining projects in Uva Province.
- Initial consent granted to Central Environmental Authority for the Proposed Graphite Mining Project at Boralugoda.
- Conditional approval has been given to de-silting of 8 nos of Irrigation tanks.
- Conditional approval granted for 06 nos of Gem mining projects in Rathnapura, Embilipitiya and Balangoda.

c. Transmission Line Projects / Solar and Wind Power Projects

- Clearance granted for transmission line project from Victoria to Rantambe (220 kV)
- Clearance granted for transmission line project from Pooneryn to Vavniya (220 kV)
- Clearance granted for transmission line project in Siyabalnduwa, Monaragala (100MW)
- Clearance granted for transmission line project from Hambanthota to Tissa (132 kV)
- Clearance granted for transmission line project from Hambanthota to Matara (132 kV)
- No objection for Solar power generation projects 2,3,4,5,6 & 7 in Mahiyanganaya
- No objection given for Trincomalee Wind Power Project
- No objection given for Proposed Development of Mannar I (2019/002/C-60)10MW Wind Power Plant in Mannar
- No objection given for Proposed Development of Mannar II (2019/002/C-60)5MW Wind Power Plant in Mannar
- No objection given for Habarana (2019/001/C-150) 3MW solar PV project
- No objection given for Polonnaruwa 10MW solar PV Power Plant with Agriculture Farming
- No objection given for Vavunia 1 SBS II (90) 1MW solar PV project
- No objection given for Ampara 1 SBS II (90) 1MW solar PV project
- No objection given for Ampara 2 SBS II (90) 1MW solar PV project
- No objection given for Embilipitiya 4 SBS II (90) 1MW solar PV project
- No objection given for Proposed Solar Power Project (6MW) at Bendarapitiya, Rideemaliyadda

d. Roads / Highways Projects

- Initial consent granted to Road Development Authority for Construction of Highway road from New Kelani Bridge to Athurugiriya (through Dematagoda)
- Initial consent granted to Road Development Authority for the Kandy tunnel construction project.
- Conditional recommendation granted to Department of Wildlife Conservation for proposed Maduwa bridge construction project of Balapitiya
- Conditional recommendation granted to Central Environmental Authority for the phase I of Proposed Ruwanpura Expressway Project (From Kahathuduwa to Ingiriya)

- Comments and recommendations for the Central Expressway Project (CEP) Section II from Meerigama to Kurunegala sent to Central Environmental Authority
- Comments for the Addendums to the Environment Impact Assessment Report of Kelani Velley Railway Line Improvements Project sent to Central Environmental Authority
- Comments on Draft Final Environment Impact Assessment Report of Kelani Velley Railway Line Improvements Project sent to Central Environmental Authority

e. Mini Hydro Power Projects

- Received - 18 Nos.
- Granted - 13 Nos.

f. Holiday Resort and Hotel Projects (One Stop Unit – Sri Lanka Tourism Development Authority)

- Granted - 01 No

g. Other Projects

- Effluent Discharge - 03 Nos.
- Land Development - 02 Nos.
- Town water supply & Sanitation Projects- 01 No
- Conditional Recommendation granted to Central Environmental Authority for proposed Agricultural Mega Zone- Elpitiya

h. Attending to meeting & field Visit

- Meetings - 102 Nos.
- Field visit/Inspection - 55 Nos.
- Received EIA/IEE Reports - 22 Nos.

4.8.4 Staff position

Table 4-20: Staff position of the branch

Service Category	Approved cadre	Available staff
Director of Irrigation	01	-
Chief Engineer	01	01
Irrigation Engineer	02	04
Engineering Assistant	-	01
Management Service Officer	02	03
Draughtsman	01	-
Development Officer	01	-
Office Employee Service (KKS)	01	01
Labourer	-	01

4.9 Land Use Division

4.9.1 Objectives

Using qualitative and quantitative scientific information perform land use recommendations for irrigation and other development projects.

4.9.2 Functions

- Conducting general purpose and specific soil surveys.
- Determining all possible land use options for a given land and preparing land use plan for the area.
- Producing soil maps, land use maps and potential land use maps in national, provincial, district, project and farm level.
- Providing soil data for planning and designing irrigation projects.
- Making recommendations of crops and other land use types for irrigation projects.
- Providing water quality data of irrigation project and other water resources.
- Making quantitative assessments of potential hazards such as erodibility, potential acidity, alkalinity and salinity.
- Conducting chemical and physical analysis for soil and water.
- Conducting research on soil properties and water quality.

4.9.3 Performance

The following projects and programs were completed in year 2021 and the laboratory analysis were done for samples, which were taken from following projects as well as for samples received from other divisions.
Prepared soil and land use maps of these projects can be used in recent land use planning.

a. Soil and Land Use Survey- Nuwara Wewa Irrigation Scheme (1012 ha)

Soil and Land Use survey in Nuwara Wewa Irrigation Scheme was started and completed in March 2021. A detailed soil survey-medium intensity was carried out. Irrigable area of 1012 ha has been surveyed. The soil map (1:10,000 scale) of the surveyed area was completed and the Land suitability map is being prepared.

Figure 4-42: Collecting soil samples for laboratory analysis in Nuwara wewa irrigation project

b. Soil and Land Use Survey- Wemedilla irrigation Scheme (729 ha)

Under this survey program, a detailed soil survey-medium intensity was carried out in October 2021. Total irrigable area of 729 ha has been surveyed. The soil map (1:10,000 scale) of the surveyed area was completed and the Land suitability map is being prepared.

Figure 4-43: Establishing transects for soil survey work in Wemedilla Irrigation scheme

c. Soil and Land Use Survey- Proposed balance area of Mundeni Aru River Basin Development Project (2000 ha)

On the request made by the Project director (MARBD) and Addl. D.G.I. (I, P&D), a detail medium intensity soil survey was carried out for the proposed balance area of Mundeni Aru River Basin project in order to prepare the land suitability map of the area.

Soil and land use survey of the 2000 ha area was started in April 2021. Although it was planned to be completed in May, due to Covid -19 pandemic prevailed in the country it delayed and was completed in July.

The soil map (1:10,000 scale) and the land suitability map (1: 10,000 scale) of the surveyed area was completed and the soft copies of the maps were handed over to the Divisional Irrigation Engineer (Maha Oya) in November 2021.

Figure 4-44: Examining the soils in Mundeni Aru river area of basin project using a bi-partite type augur

Figure 4-45: Landscape of the Mudagala Mundeni Aru River basin project

d. Water quality and salinity studies in Irrigation Schemes

Water quality studies programme was started in order to prepare a set of data on irrigation water quality in minor and medium tanks under the Irrigation Department. Water samples were taken from the selected major tanks of Hambantota districts at scheduled time periods and were analyzed for pH, EC, Ca^{2+}, Mg^{2+}, Na^{+}, K, CO_3^{2-} and $HCO^{-}_{3.}$ This program is currently in progress and will be continued.

e. Training field staff

Field and theory programs were conducted in following places for soil surveyors recruited in year 2014, 2016 and 2018.

- Anuradhapura district – at Nuwara wewa project area
- Gampaha district
- Wemedilla project area
- Mundeni Aru river basin area

f. Soil and water quality tests performed by the laboratory of Land Use Division

The following analyses for soil and water samples were carried out in the Land Use Division laboratory in 2021.

Table 4-22: Soil Samples Analyzed in 2021

Parameters/methods	No. of samples analysed
pH saturate paste	26
Electrical conductivity saturate	26
Exchangeable Sodium	26
Exchangeable Potassium	26
Exchangeable Calcium	26
Exchangeable Magnesium	26
Cation Exchange Capacity	26
Total exchangeable basses	26
Base saturation	26
Organic Carbon	26
Total Nitrogen	3
Moisture factor	26
Particle size distribution-Hydrometer method	26

Table 4-21: Water Samples analyzed in 2021

Parameters/methods	No. of samples analysed
pH	79
Electrical conductivity	79
Sodium	79
Potassium	79
Calcium	79
Magnesium	79
Carbonate	79
Bicarbonate	79
Chloride	33
Nitrate	33
Sulphate	33

Figure 4-46: Analyzing the water samples using Vis-Spectrophotometer

Figure 4-47: Analyzing water samples for pH and Electrical conductivity Spectrophotometer

g. Digital Map Production

The following digital maps were prepared in year 2021 by the cartography section of Land Use Division.

- Soil map of Nuwara wewa Irrigation scheme (1:10,000)
- Soil map of Wemedilla Irrigation scheme (1:10,000)
- Soil map of balance area of Mundeni Aru River basin Project (1:10,000)
- Land Suitability map of balance area of Mundeni Aru River basin Project (1:10,000)

h. Improvements to the Land Use Division Laboratory

Following improvements were done in year 2021.

- Purchases Vis- Spectrophotometer
- Installing an Acetylene gas cylinder unit.
- Designing and making a Chemical rack to store chemicals
- Partitioning a room of the laboratory

i. Services to other divisions of the Irrigation Department and other organizations

- On a request made by the Dam safety branch, a crystalized mineral sample and a water sample (collected from the Lunugamwehera reservoir) was analyzed for the mineral tests.
- On a request made by Eng. Geology Branch, a rock sample taken from the Kudawilachchiya dam axis was analyzed for the Calcium carbonate percentage.
- The requested maps (Soil map and the land suitability map) of the balance area of Mundeni Aru river basin project were prepared and the soft copies of the soil and land suitability maps were handed over to the Divisional Irrigation Engineer (Maha Oya)
- Requested soft copies of the maps published in the earlier years were handed over to the relevant DI's and DIE's of the irrigation department.
    - DI (Hambanthota)- "Soil map and the Land suitability map of the Ranminithanna farm project (year 2014)"
    - DI (Dr & FS) - "Land evaluation map of Benthara ganga Right bank project (year 2012) "
    - DIE (Nachchaduwa) - "Soil map and the Land suitability map of Nachchaduwa Irrigation Scheme (year 2015)"

4.9.4 Staff Position

Table 4-23: Staff position of the branch

No	Post	Approved Cadre	Present Cadre	Deficit/Excess
1	Director (Land Use)	01	0	01
2	Specialist officer	02	0	02
3	Research Officer	01	0	01
4	Assistant Soil Chemist	05	02	03
5	Superintend	03	0	03
6	Soil Surveyors	28	21	07
7	Soil Cartographers	05	04	01
8	Research Assistants	06	04	02
9	Management Assistants	04	02	02
10	Storekeeper	01	0	01
11	Driver	04	02	02
13	Laboratory Assistants	05	03	02
14	Laboratory Labourer	05	03	02
15	Labourer	02	02	0

4.10 Information & Communication Technology (ICT) Branch

4.10.1 Objectives

The scope of ICT branch is to provide services related to ICT for other Sub Departments, Branches, and Regions & Divisions.

4.10.2 Functions

This extends to minor repairs of ICT equipment, computer peripherals and maintenance, update and upgrade both hardware and software applications. In additions to that identify the equipment requirement, update with the latest technology, preparation of specifications of ICT equipment and issuing of conformity certificates after procurements are done by this branch.

4.10.3 Performance

Table 4-24: Summary of jobs undertaken by ICT Branch during the year of 2021

No	Activity	No. of items repaired / No. of incidents
1	Computer repair	28 Nos.
2	Printer & Other affiliated equipment repair	14 Nos.
3	Repair of Network systems building	Head office & Engineering Material
4	Facilitate to video conferencing established	Room No. 402 (4th floor)
5	Inspection of unserviceable computers & others Equipment's for issue disposal certificate	Head office (159 items)
		Mannar RDI office (37 items)
		Murukkan DIE office (35 items)
		Kalutara DIE office (10 items)

Figure 4-48: Carryout computer repair work

Figure 4-49: Video conferencing facility established in room No. 402 (4th floor)

4.11 Geo Informatics Systems (GIS) Branch

4.11.1 Objectives

Providing GIS technical support and training for other Sub Departments, Regional Offices and Divisional Offices

4.11.2 Functions

- Create, Update and Maintain spatial data repository
- Preparation of GIS maps and databases for existing irrigation schemes and for new projects
- Carrying out special GNSS Surveys for irrigation planning works and the MSL datum transfer
- Carrying out specialized training for GIS for field staff
- Undertake GIS components of special projects
- Developing Web GIS and maintaining and updating the website

4.11.3 Performance

a. Prepared Maps for Special Requirements

- Detailed and accurate map for Colombo Divisional include all scheme details.
- Map indicating detailed contours of the periphery of Kirama wewa and permanent house of surrounding areas.
- Maps of Mee oya, Deduru oya, Menik Ganga, Kirindi oya basins for the Land use division
- Rainfall stations location and river gauges location maps prepared for Kelani Ganga and Nilwala Ganga for Drainage and Flood Systems branch.
- Maps of Reservoirs in Anuradapura, Amparara, Batticoloa, Hambantota, Trincomalee, Kandy, Monaragal and Galle regions for Drainage & Flood systems branch.
- Scheme map of Track 12 Nagadeepa tank
- Project Map of Basnagoda Reservoir
- Map of Malwathu oya Resettlement area- Environmental branch
- Tabbowa Scheme Map – Director of Irrigation Central Zone
- Inginimitiya Scheme Map– Director of Irrigation Central Zone
- Magalla Scheme Map – Director of Irrigation Central Zone
- Nikaweratiya Scheme Map – Director of Irrigation Central Zone
- Kimbulwana Scheme Map – Director of Irrigation Central Zone
- Site layout map of the proposed Kumbukkan oya Reservoir project
- Maps of Land Use of the proposed Ellewewa Reservoir- Environmental branch
- Generated contour map of the proposed Kolellewaththa reservoir for the EIA

b. Publication of Web GIS Site

Following list of Maps have been published in the GIS web site and public can be download as an image file format. These maps include Dam location, Reservoir, River Basin, Access Roads, Irrigable Area and Reservoir catchments.

1. Senanayake Samudraya
2. Ambalan Oya Scheme
3. Namal Oya
4. Radella Scheme
5. Lahugala
6. Thisawewa Scheme
7. Nuwara Wewa
8. Mahawilachchiya
9. Thuruwila Wewa
10. Padawiya
11. Navakiri
12. Kithul wewa
13. Unnichchai
14. Vahaneri
15. Colombo Divisional Map
16. Thalangama tank
17. Bentara Ganga RB Scheme Ittapana
18. BentaragGanga RB Scheme Meegama
19. Kaluganga Flood Protection
20. Bolgoda Scheme
21. Dummalamodara Scheme
22. Kaluwamodara Scheme
23. Uyanwatta Irrigation System
24. Batugedara
25. Damme ela
26. Hulanda oya
27. Kaltota
28. Katupath oya
29. Panamure
30. Walalgoda
31. Wellawa
32. Wewelanda
33. Kiralakele
34. Denagama Tank
35. Rididyagama
36. Bandagiriya
37. Thissa wewa
38. Kandy lake
39. Dewahuwa
40. Wemedilla Irrigation System
41. Hakwatuna Oya
42. Kimbulwana Oya
43. Bathalagoda
44. Nikaweratiya
45. Magalla
46. Galgamuwa
47. Usgala siyambalangamuwa
48. Muthukandiya Scheme
49. Kumbukkan oya
50. Handapanagala
51. Gal Amuna Scheme
52. Weli Oya Scheme
53. Hambegamuwa
54. Polonnaruwa
55. Parakrama Samudraya
56. Minneriya
57. Kaudulla
58. Elahera
59. Eluwankulama
60. Neela bemma Anicut
61. Tabbowa
62. Karawita
63. Inginimitiya
64. Radavi Bendi Ela Scheme
65. Giants tank Scheme
66. Kanthale
67. Allai
68. Mahadivulwewa

c. Web GIS Application 1 - Giants Tank Irrigation Scheme

The Irrigation Department has decided to establish and utilize GIS base Irrigation Scheme Information Systems to deliver more efficient and effective water management by collecting, updating & sharing dynamic data with stakeholders for correct and timely decision making to improve the cultivation yield.

The Giants Tank Irrigation Scheme has been taken as a pilot project for this process. This system introduces GIS and related technique and displays information on the web map. This web map integrated inventory data and operation data with GIS capability to understand the spatial features of scheme hydro data. The Public can access this web- based application through the GIS web portal of the Irrigation Department website.

4.11.4 Staff Position of the Branch

Table 4-25: Staff Position of the Branch

No	Designation	Approved Cadre	Present Cadre	Deficit
1	Chief Engineer	1	1	-
2	Earth Resources Engineer	3	3	
3	Engineering Assistant	6	6	
4	Management Service Officer	1	-	
5	KKS	1	1	-

4.12 Engineering, Scientific & Technological Services (EST) Branch

4.12.1 Objective

To handle the personal files of officers in Sri Lanka Engineering service, Sri Lanka Accountants' service, Sri Lanka Administrative service, Sri Lanka scientific service, Irrigation Department Engineering assistant service.

4.12.2 Functions

- General Administration functions and supervision of Engineering, Scientific and Technical Services.
- Human Resource Development of Engineering, Scientific & Technical Services.
- Assist DGI/Addl. DGI (SM) for the Management of Human Resources of Engineering, Scientific and Technical Services.
- Capacity building of EST services in collaboration with Training Branch.
- Upgrade and update of Irrigation Department manual.
- Preparation of list of duties for EST services.
- Organizing annual transfer board/ appeal board for Engineers and Engineering Assistants & represent as a member of the transfer board.

4.12.3 Performance

- Re- view of Engineers carder requirement of Head Office, Ranges/Zonal Offices, Divisional Offices and Special Projects, according to the approved carder. Present positions of the approved carder of Sri Lanka Engineering Service, Accounts' Service, Administrative Service, Scientific Service, Institutional Development Officer Service and Legal Officer Service are attached.
- Facilitate the newly recruited batch of Engineers by PSC during 2021.
- All the grade promotions were recommended and forwarded to Engineering Service Board for approval of the Public Service Commission and received all the promotions.
- Attending other administration functions such as car permit applications, Retirement papers, Document for Special Grade Promotion, Secondmend release to special projects etc
- Attending for appointing covering up duties and getting approval from the PSC.
- Calling application for the recruitment of Engineering Assistant and Confirmation of 15 number of appointments.

Table 4-26: Performance summary in year 2021

Services Category	Recruitment	Grade Promotions	Preparation & Completion of Pensions
Engineering Service	Civil Engineers - 27 Earth Resource Engineers - 07 Mechanical Engineers - 02	19	7
Account Service	2	5	0
Administrative Service	1	0	0
Scientific Service	1	0	0
IDO Service	0	0	0
Engineering Assistant Service	0	9	6

4.12.4 Positions of approved Carder and Vacancies as at 31st December – 2021

Table 4-27: Positions of approved cadre and vacancies as of 31st December 2021

Designation	Grade	Approved Cadre	Active Service	Vacancies	Remarks
Sri Lanka Engineering Services					
Director General of Irrigation	Civil Special Grade	1	1	-	-
Addl. Director General of Irrigation	Civil Special Grade	4	4	-	-
Director of Irrigation	Civil I	36	36	-	-
Directors	Mechanical I	3	3	-	-
Chief Engineers	Civil I	40	39	01	Acting-14
Chief Engineers	Mechanical I	3	3	-	Acting-02
Engineers	Civil III/ II	229	186	43	-
Engineers	Mechanical III/ II	25	22	03	-
Earth Resource Engineers	E.R. III/II/ I	40	38	02	-
Engineers	Electrical III/II/ I	01	-	01	-
Total		382	332	50	
Sri Lanka Accountants' Service					
Chief Financial Officer	Special Grade	01	01	-	-
Chief Accountant	I	01	01	-	-
Chief Accountant (Accounts & Estimates)	I	01	01	-	-
Accountant	III/II	20	19	01	
Chief Internal Auditor	I	01	01	-	
Total		24	23	1	
Sri Lanka Administrative Service					
Add.Director General (Admin)	I	01	01	-	
Director (Admin)	I	02	02	-	
Asst. Director / Deputy Director (Admin)	III/II	02	-	02	
Asst. Director / Deputy Director (Land)	III/II	01	-	01	
Asst. Director (ICT)	I/III	01	-	01	
Total		07	03	04	
Sri Lanka Scientific Service					
Director (Land Use)	I	01	01	-	Acting
Hydrological Data Superintendent	III/II	01	-	01	
Hydrological Field Superintendent	III/II	01	-	01	
Engineering Materials Superintendent	III/II	01	-	01	
Civil Engineering Materials Survey Superintendent	III/II	01	-	01	
Hydrological Superintendent	III/II	01	-	01	
Land Use Superintendent	III/II	03	-	03	
Chief Drawing Office Assistant	III/II	01	-	01	

Designation	Grade	Approved Cadre	Active Service	Vacancies	Remarks
Specialist Officer (Land Use)	III/II	02	-	02	
Assistant Soil Chemist	III/II	05	01	04	
Research Officer (Land Use)	III/II	01	-	01	
Geologist	III/II	02	02	-	
Instrument Superintendent	III/II	01	01	-	
Total		21	05	16	
Engineering Assistant Service					
Divisional Assistant	Special	65	-	65	
Engineering Assistant	III/II/I	636	538	98	
Total		701	538	163	
Institutional Development Officer Service and Legal Officer Service					
Legal Officer	III/II/I	01	-	01	
Institutional Development Officer	II/I	08	08	-	
Budget Assistant	III/II/I	01	01	-	
Total		10	09	01	

4.12.5 Staff Position

Table 4-28: Staff position of the branch

No	Designation	Approved Cadre	Present Cadre
1	Director of Irrigation	1	1
2	Chief Engineer	1	1
3	Irrigation Engineer	1	1
4	Development Officer	4	2
5	Engineering Assistant	1	2
6	Draughtsman	1	1
7	Management Service Officer	1	1
8	KKS	3	2
9	Multi Development Assistants		1
	Administrative Unit 01		
10	Administrative Officer (Unit 01)	1	0
11	Chief Management Service Officer (Unit 01)	1	1
12	Management Service Officer (Unit 01)	8	4
13	Development Officer	1	3
14	Multi Development Assistants		1
15	(2014/25) Labour (Unit 01)	-	Served as KKS-1
	Confidential Branch		
14	Chief Management Service Officer (Confidential)	1	-
15	Management Service Officer (Confidential)	2	1
16	KKS (Confidential)	1	-
17	(2014/25) Labour (Confidential)	-	Served as KKS-1

5 Construction & Development Sub Department (C & D)

Construction and Development sub department is mainly responsible for the implementation of irrigation infrastructure projects after completion of planning and design. Major Construction branch and Regional Development branch are the two branches under this sub department.

5.1 Major Construction Branch

5.1.1 Objectives

Implementation of large-scale new irrigation infrastructure development and settlement projects and improvements to existing irrigation infrastructure project in efficient and effective manner with minimum resource utilizing for the conservation, diversion, and distribution of water under gravity and lift irrigation for cultivation of new and existing lands.

5.1.2 Functions

- Finalizing, Approval and sanctioning of detail cost estimates of major construction projects
- Finalizing of contract documents, monitoring and administration
- Guidance for the establishment of PD/DPD/CRE/RE's offices
- Ensuring the implementation of approved work programme.
- Monitoring and evaluating physical and financial progress by holding monthly meetings and submission of periodic progress to relevant authorities.
- Revision of cost arising from modification/variations of proposals and designs during execution
- Monitoring land acquisition and resettlement programme and resolves the issues
- Coordination with local authorities/institutions regarding land acquisition and resettlement matters
- Coordination with Forest Department, Wildlife Department, Valuation Department, Archeological Department, Ministry of Lands, Ministry of Water and Geological survey and Mines bureau, Central Environment Authority and Timber Corporations to settle project related issues with stakeholders.
- Coordination with specialized services branches and Contract & Procurement Branch for project activities when needs

5.1.3 Constrains

- Disturbance to the planned work plan due to COVID 19 Pandemic situation,
- Sudden variation of prices of cement and steel.
- Unavailability of some items in the market (ex: Gabion boxers, Rubber water stop, etc..).
- Cash flow problems.
- Delays in land acquisition and resettlement process
- Delays in granting approvals from Wildlife department, Forest Department, Geological Survey and Mines bureau for bund filling materials, sand and construction work.
- Non-availability of foreign currency to settle contract payments.

5.1.4 Allocation of the Projects Implemented under Major Construction Branch

Table 5-1: Allocation of the projects implemented under major construction branch

No	Name of the project	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Cum. Physical progress %
1	Deduru Oya Reservoir Project	565.00	556.105	99.46
2	Rambukkan Oya Reservoir Project	5.00	2.486	100
3	Yan Oya Reservoir Project	4.231	2.689	82.35
4	Morana Reservoir Project	400.00	209.618	95.53
5	Kalugal Oya Reservoir Project	116.00	73.529	99.97
6	Kumbukkan Oya Reservoir Project	100.00	95.379	1.15
7	Mundeni Aru Reservoir Project	180.00	128.325	1.74
8	Wellassa Nawodaya Project	250.00	195.357	51.32
9	Kudawilahchiya Reservoir Project	180.00	102.647	1.51
10	Dematagala Reservoir Project	5.00	0.256	0.01
11	Ellewewa Reservoir Project	250.00	168.652	8.42
12	Himbiliyakada Reservoir Project (Ministry Funds)	200.00	177.20	1.75
13	Uma Oya Downstream Development Project (Ministry Funds)	2,165.00	1,644.55	61.93
14	Lower Malwathu Oya Multi-Sector Development Project (Ministry Funds)	1000.00	259.80	61.93

5.1.5 Projects under Major Construction Branch

a. Deduru Oya Reservoir Project

This project was started in 2005 and complete the construction of Deduru oya reservoir, Left and right bank main canal, branch canal, sengal oya anicut, improvements to main canal and minor tanks along feeder canal and infrastructure in resettlement area. The total estimated cost of the project is Rs.13,540 million. The total expenditure at the end of the project was land Rs. 13,431.85 million.
All the planned work was completed at the end of year 2021. The compensation for 28 number of land lots is to be paid in year 2022 to complete land acquisition. The benefits of the projects are as follows.

- Supplied irrigation water for existing minor tanks through the network of canal system to cultivate paddy in 2400ha of land.
- Develop 243 ha of new land by providing lift irrigation facilities.
- Provided Supplementary water for Inginimitiya reservoir in lower Mee oya basin to increase cropping intensity of 3715ha of existing paddy lands.
- Providing irrigation water to 1000 ha of existing agricultural land along trans basin canal.
- Providing irrigation water to 400 ha of new land in lower reach of Mee oya basin and 400 ha of new land under Ridi Bendi Ella.
- Generation of hydro power from month of April. (Maximum 1.2 MW for 400 cusec and 250 kW for 100 cusec downstream discharge)
- Providing drinking water allocation of 50,000 m^3 per day for the people in Puttalam and Kurunegala District.

Figure 5-1: Spillway

Figure 5-2: Sengal Oya sheet pile construction

b. Rambukkan Oya Reservoir Project

This reservoir was constructed across Rambukkan oya, tributary of Mundeni Aru river having the capacity of 56.1 MCM to provide water for 1417 ha of new land. The project was stared in 2006 and construction of all the head works, main canal, canal network and IFF were completed at the end of year 2021 with the cost of Rs.3,964.8 million. Allocation for the year 2021 was Rs.5.0 million. Total estimated cost of the project was Rs.3,970.0 million.

Figure 5-3: Spillway structure of the reservoir

Figure 5-4: Dam of the Rambukkan Oya reservoir

c. Yan Oya Reservoir Project

This reservoir was constructed across Yan oya at the upstream of existing Yan oya anicut. The length of the main dam is 2.35km and 4 number of saddle dams having total length of 3.618 km. the storage capacity is 169 MCM. The radial gated spill way is having 5 number of gates and the size of each gate is 8m*12m. The design capacity of the LB sluice is 300 cusec whereas RB is 150 cusec. The length of the left bank main canal is 18.2 km. These two contracts (reservoir and LB canal) were awarded to CAMC Engineering co, LTD. The method of procurement used is EPC. The awarded amount for reservoir is 150 million USD and for LB canal is 39.5 million USD. Other than these parts, all the construction works are doing by the Irrigation Department

The right bank canal is having 11 km in length and sluice discharges 150 cusec. The construction of all the head works and main canals were completed at the end of 2021. The initial estimated cost of the total project was Rs. 36,855 million and cabinet approval was granted for the revised cost of Rs. 48,355.3 million in 2021.

The Left bank main canal included siphon of having length of 5.0km and the closed conduit section of having length of 1.5 km. The irrigation water is provided through the existing 5 number of tanks called Sivalakulama, Issan wewa, Omarakada wewa, Kumbuk wewa, and Jayanthi wewa for the total area of 4,500 ha of land.

The Right bank main canal is released water for 6 number of tanks namely Malporuwa, Moragama, Indulhitiyawa, Nebada wewa, Thalagas wewa and Kohombagaswewa. Bellikkadawala and Siyabalagaswewa are along the path of the main canal and function as a level crossing. The total cultivable area under this canal is 2560 ha.

Other than that, Irrigation water is provided for the area of 750 ha of existing land under precent Yan oya anicut. It was agreed to provide drinking water allocation for 50,000 m^3 per day from Yan oya reservoir.

The number of lots acquired for the construction of reservoir was 3660 and for LB main canal was 531. The total number of families re settled in Omarakada, D6 Wahalkada, Malporuwa and Kajuwatta were 289. The number of lots develop under Issan wewa, Omarakaka, Moragama, Indulhitiyawa, and Kohombagaswewa during year 2021 was 524 and handed over to the displaced people.

The work carried out during the year was the part of land acquisition and payment for compensation, development of resettlement area, development of irrigable area and other infrastructure development work.

Figure 5-5: Developed Irrigable Lands

Figure 5-6: paddy land development under Kohombagas Wewa

Figure 5-7: Construction of Issan Wewa Sluice

d. Morana Reservoir Project

This was constructed across Ulhitiya oya in Badulla district. Water is diverted to existing Nagadeepa and Rotagolla tanks to overcome of water scarcity of existing 1,000 acres of land under two tanks and provide irrigation facility for 500 acres of new land. The project was started in 2012 with the estimated cost of Rs. 1,700 million and revised to Rs. 2,900 million.

The remaining work of the conveyance system and part of the land acquisition were completed during year 2021. Total expenditure of the project was Rs,2,572.84 million. The balance part of the land acquisition needs to be completed during 2022 to complete the project.

Figure 5-8: Main canal with Deep cut section at 14 km

Figure 5-9: Main Canal at 10th Km

Figure 5-10: Thissapura Tank

Figure 5-11: Thissapura Tank Spill tail canal

e. Kalugal Oya Reservoir Project

This Reservoir was constructed across kulugal oya stream which carries inflow to Navakiri reservoir in Baticaloa district. The capacity of the reservoir is 10 MCM and provides water for existing 1,125 Acs of land to cultivate both season in Bandaraduwa area in Uhana, Ampara district. The farmers in the area experience savior shortage of water other than the period of northeast monsoon. The estimated cost of the project was Rs. 2,350 million. The construction of earthen dam, radial gated spill way, sluice, main canal, D canal, field canals, agricultural roads and other infrastructure were completed in 2021 with the total expenditure of Rs. 2,307 million. The scheme is operated by the Divisional Irrigation office of Ampara.

Figure 5-12: Sluice

Figure 5-13: Main Canal

Figure 5-14 Spill way

Figure 5-15: Dam

f. Kumbukkan Oya Reservoir Project

The capacity of the proposed multipurpose reservoir is 48 MCM for providing irrigation water for 10,000 acres of land, supplying 16.1 Gwh to the national grid annually, allocating 12 MCM for drinking and industrial purpose and flood control of downstream area. The main components of the project are RCC dam, spillway, sluice, tunnel, 2 power houses, anicut across Kumbukkan oya and Hulanda oya. The total estimated cost of the project is Rs. 32,397.3 and planned to complete in 4 years. The work carried out during 2021 was as follows.

- Land survey and Engineering Survey of alternative roads, tank bed, resettlement area and Canal traces
- Geological Investigation
- Land acquisition & compensation
- Construction of low-level access road
- Construction of project office

Figure 5-16: Surveying work

Figure 5-17: Geological Investigations

g. Mundeni Aru River Basin Development Project

It is proposed to construct new multi- purpose reservoirs Rugam Kithul and Maha oya in Mundeni Aru basin at Batticaloa and Ampara Districts. The capacity of the Rugam Kithul reservoir is 88 MCM and Maha Oya reservoir is 80 MCM. The proposed new irrigable area of 6,756 acres and an existing area of 9,756 acres will be able to cultivate both season under this project. There will be a drinking and industrial water allocation and contribute to control the flood in the downstream area of mundeni aru river.

The total estimated cost of the project is Rs. 24,141.00 and planned to complete in 6 years. The work carried out during 2021 was land survey, Geological investigation, land acquisition, re settlement and establishment of project office.

Figure 5-18: Project Office

Figure 5-19: Geological Investigation

h. Wellassa Nawodaya Project

Wellassa Nawodaya project is implemented to rehabilitate the irrigation and other infrastructure facilities and improve the land productivity in Monaragala District. The total estimated cost of the project is Rs. 2,500.0 million and started in 2016 to complete within 6 years. The total expenditure up to the end of 2021 is Rs. 1,031.06 million.

Figure 5-20: Madiththa Wewa

Figure 5-21:Amunumulla Thalagaha Gedara Road

Figure 5-22: Raththri Wewa

Figure 5-23: Kongaha Wewa

Figure 5-24: Akkara Vissa Wewa

Figure 5-25: Radana wewa

i. Kudawilahchiya Reservoir Project

Kudawilachchiya is an ancient, abandoned tank located inside the Wilpaththu national park in Maha Wilachchiya Divisional Secretariat Division in Anuradhapura District. It has been built across Weli Oya, a tributary of Moderagam Aru which falls into the sea at Pook Kulam in Mannar District.

The main purpose of the restoration of this reservoir is to provide drinking water to the villages in Maha wilachchiya divisional secretariat division. The other benefits are providing water for part of the area under Mahawilachchiya scheme to increase the cropping intensity of up to 2, ensuring the environmental flow of Madaragam Aru which is flowing through the Wilpatthu national park and increasing the water availability for wildlife inside the national park.

The capacity of the proposed reservoir is 23 MCM. The total estimated cost of the project is Rs. 6,000.00 million and planned to complete within 3 years. The construction of access road and supply canal were started and design of spill and sluice were completed. An approval for EIA is not yet granted.

j. Dematagala Reservoir Project

Dematagala tank is an ancient, abundant tank constructed across moragolle oya which carries inflow to Rajanganaya reservoir, Dematagala is in Kahalla village of Palagala Divisional Secretary's area in the border of Anuradhapura District. It is proposed to construct anicut across Hevan Ella oya and divert water to the Dematagala tank through feeder canal. Water stored in Dematagala tank will be distributed to the village tanks through the network of canals.

The capacity of proposed Dematagalla tanks is 2.32MCM and inundate about 90.87 Ha of bare lands belongs to Forest Department. The length of the proposed bund is 533m and the maximum height is 11.79m. The total estimated cost of the project is Rs.2,230.0 million and proposed to complete within 3 years. The consent from the Forest Department is not received up to the end of December 2021 and it is delaying the project implementation.


Figure 5-26: Dematagala Access Road

k. Ellewewa Reservoir Project

Proposed Elle Wewa Reservoir is constructed across Kadigam Ara Viralagala village in Embilipitiya Divisional Secretary area in Ratnapura district. The capacity of the reservoir is 1.91 MCM and provided irrigation facilities for 1127 acs of existing land and 350 acs of new land under Panamure scheme. Other than that, this will supply amount of 7000 m3/day water for Kolonna Water Supply scheme.

The main component of the project includes resettlement, Construction of main dam, saddle dam, Sluice, Bottom outlet, spill way and downstream development. The total estimated cost of the project is Rs. 1,532.00 million and project period is 3 years.

Figure 5-27: Dam Excavation

Figure 5-28: Grouting Work


Figure 5-29 Sluice Construction

l. Himbiliyakada Irrigation Infrastructure Development Project

This project was initiated with the programme of "Gama Samaga pilisadarak" held by the Hon President at Himbiliyakada village, Laggala in Mathale District. The proposed development plan includes the following items.

- Construction of Waththegedara tank capacity of 1.30 MCM across Gemburu oya.
- Construction of Dodangolla tank capacity of 2.40 MCM across Dodangolla oya
- Augmentation of the existing Himbiliyakada tank from 2.10 MCM to 2.46 MCM
- Construction of a 1.8 km long tunnel to divert water from Kalu Ganga to the project area
- Construction of feeder canals from the outlet structure of the tunnel to Waththegedara and Himbiliyakada tanks
- Construction of link canal connecting Waththegedara and Dodangolla tanks
- Construction of supplementary canal to feed the Mailapitiya Wewa and its cascade systems.
- Construction of an irrigation system in new development areas and improvement to the existing irrigation system.

It will provide irrigation facilities for 1300 acres of existing land and 1010 acres of new land and cultivate OFCC in both seasons. It will also provide 1.0 MCM of water from new tanks for the domestic needs of the farming community. There will be many advantages to the environment due to raising the water table and availability of surface water during dry spells.

The total estimated cost of the project is Rs. 7155 million and planned to complete in 2024.

Figure 5-30 Construction of Wattegedara Tank

Figure 5-31 Raising of Himbiliyakada Tank

m. Uma Oya Downstream Development Project

This project was started in 2013 by the irrigation department under the Uma Oya Multipurpose Development Project. The amount of 145 MCM annually diverted from uma oya to Alikota Ara, tributary of Kirindi oya after generation of hydro power. Alikota ara reservoir having capacity of 6.5 MCM was constructed to regulate the flow and diverted to Kudaoya and release to Kirindi oya. Kirindi oya flow is diverted to Handapanagala Reservoir by the anicut constructed in Kirindi oya from early days. The capacity of the Handapanaga reservoir is enhance and extend LB canal to supply water for new irrigable area, Kada oya reservoir is planned in kuda oya, tributary of Kirindi oya and trans basin canal is constructed from Kuda oya to Sinhalayagama.

It is planned to improve 54 numbers of minor tanks and provide irrigation water for 110 tanks. Therefor it will help to provide irrigation water to 4500 ha of new lands and 1500 ha of existing lands within the system. It will provide 30 MCM drinking and industrial water allocation for Monaragala and Hambanthota Districts. There will be many more benefits to the people and the environment on completion of the project.

The total estimated cost of the downstream development is Rs. 9,352.5 million and revised to Rs.17,914.2 million in year 2021. The total expenditure of the project was Rs.9,870.93 at the end of year 2021. All the construction activities are scheduled to be completed by December 2022.

Table 5-2 Item-wise physical progress at the end of year 2021

No	Activity	Progress (%)
1	Construction of Alikota Ara Reservoir (6.5 MCM)	95
2	Construction of Kuda Oya Reservoir	71
3	Improvements to Handapanagala reservoir	95
4	Construction of LB Canal (11 Km) under Handapanagala Reservoir	62
5	Construction of Alikota Ara – Kuda Oya Transfer Canal (24 km)	48
6	Construction of Kuda Oya - Sinhalayagama Transfer Canal (36.1 km)	43
7	Development of Village Irrigation Systems (Minor tanks)	60
8	Handapanagala pickup Anicut	30
9	For land acquisition, resettlement, infrastructure development, reforestation, mitigation of environmental issues etc.	77

Figure 5-32 Hadapanagala LB Main Canal

Figure 5-33 Alikota Ara – Kuda Oya Canal

Figure 5-34 Kuda Oya Singhalayagama Canal

n. Lower Malwathu Oya Multi-Sector Development Project

The reservoir is proposed across Malwathu oya river at Kappachchi, upstream of Tekkam anicut. The capacity of the reservoir is MCM. The main component of the project is as follows.

- 3,590 m long earth dam
- Radial gated spillway of having 10 number of gates (23 ft high x 25 ft wide)
- River release structure incorporated with 1 MW powerhouse
- Both RB and LB sluice of having capacity of 1 cumec.
- Length of LB canal 4 km and RB canal 100m
- Secondary and tertiary irrigation infrastructure for 700 Acres of lands just downstream of both banks
- Improvements to existing infrastructure downstream of Tekkam diversion weir

The total estimated cost of the project is Rs. 22,900.00 million and planned to complete in 2024. The benefit of the project are the providing irrigation facilities for existing area of 24,450 acres under Giants' tank, 6,230 acres under Akithamuruppu tank, 1,300 acres of new lands with drip irrigation facilities for fruit cultivation under commercial agriculture, 2 MCM domestic water supply of Cheddikulam and Tanthirimale town ship, new town ship development projects and generation of hydro power 4.68 GWh annually.

Figure 5-35: Core Trench Excavation

Figure 5-36: Grouting work

Figure 5-37: Dam Axis

Figure 5-38: Core Trench Filling

5.2 Regional Development Branch

5.2.1 Objectives

Implementation of medium scale new irrigation infrastructure development and settlement projects and rehabilitation of existing medium irrigation infrastructure project in efficient and effective manner with minimum resource utilizing for the conservation, diversion, and distribution of water under gravity and lift irrigation for cultivation of new and existing lands.

5.2.2 Functions

- Finalizing, Approval and sanctioning of detail cost estimates of medium and small-scale construction and development projects.
- Implementation of minor and medium construction works according to department standards.
- Guidance for implementation of projects with relevant regional directors.
- Finalizing project work plan and annual action plans.
- Monitoring and evaluating physical and financial progress by holding monthly meetings and submission of periodic progress to relevant authorities.
- Revision of cost arising from modification/variations of proposals and designs during execution.
- Preparation of Cabinet memorandum in the case of revision of estimates and extension of time.
- Monitoring land acquisition and resettlement programme and resolves the issues
- Coordination with local authorities/institutions regarding land acquisition and resettlement matters
- Coordination with Forest Department, Wildlife Department, Valuation Department, Archeological Department, Ministry of Lands, Ministry of Water and Geological survey and Mines bureau, Central Environment Authority and Timber Corporations to settle project related issues with stakeholders.
- Coordination with specialized services branches and Contract & Procurement Branch for project activities whenever necessary.

5.2.3 Allocation for the Projects Implemented under Regional Development Branch

Table 5-3: Allocation for the projects implemented under regional development branch

No	Name of the project	Allocation (Rs. Mn)	Expenditure (Rs. Mn)	Cum. Physical progress %
1	Menik Ganga Reservoir Project	50.00	45.209	99.84
2	Extension of Kaudulla Damsopura Stage II	56.00	56.000	100.00
3	Lower Uva Medium and Minor Irrigation Project	300.00	44.853	77.51
4	Mahagona wewa Project	50.00	36.193	99.03
5	Godigamuwa Tank Project	88.00	87.984	61.93
6	Wilakandiya Reservoir Project	35.00	32.007	86.75
7	Augmentation of Mahagalgamuwa Tank	50.00	13.674	92.50
8	Potable Water Supply Project for Jaffna Peninsula (Ministry Funds)	5.00	4.09	1.16
9	Barrack Plane Lake Development Project (Ministry Funds)	100.00	45.00	26.00
10	Irrigation Development Plan for Peripheral area of settlers in Pelawatta Sugar Plantation area (Ministry Funds)	58.00	32.00	31.00

5.2.4 Project details under Regional Development Branch

a. Menik Ganga Reservoir Project

This project was started in 2006 with the total estimated cost of Rs.2,900.00 million. It continues further to improve the system to avoid water shortage experience in Lunugamvwhera scheme after completion of Weheragala reservoir. The canal system improvements were carried out in Lunugamvehera, Debara wewa, Yoda wewa, Tissa wewa and improvements to Hangun ara feeder canal. This has benefited to 10,000 acres of existing and 250 acres of new land. It was also able to provide drinking water requirement for the sacred city of Katharagama. The project was completed at the end of year 2021.

Figure 5-39 : Improvements to S1 DC7 in TR 1

Figure 5-40: Rehabilitaiton of Weerawila of Lunugamwehera LB DC13 Canal (Tissa)

Figure 5-41: Construction of retaining wall at 1+000 to 1+333 of HLMC in Thissa Wewa

Figure 5-42: Construction of 16m conduit at the end of Humbaskumbura gate HLMC Yodhawewa scheme

b. Extension of Kaudulla Damsopura Stage II

This project is to extend the left bank canal of kaudulla reservoir up to the Damsopura tank, improvements to Damsopura tank, construction of new canal system and provide irrigation facilities to 580 acres of new lands. This was proposed under Moragahakanda reservoir project. This project was started in 2013 with the total estimated cost of Rs. 260 million and all the works were successfully completed at the end of 2021.

Figure 5-43: Bifurcation at L.B.Main canal

Figure 5-44: Construction of trough

c. Lower Uva Medium and Minor Irrigation Development Project

The development work of Watagala Ara wewa, Debara ara wewa and Mallipotha wewa in Monaragala district are planned under this project. It is planned to extend existing feeder canal from Ussalla anicut to Balaharuwa tank, construction of new feeder canal from Balaharuwa tank to Debara Ara wewa and improve 22 numbers of minor tanks including Watagala Ara wewa in the system. The cropping intensity of the system will be increased after completion of the project.

Table 5-4: Project details

Name	Capacity	Irrigable area	No. of Beneficiaries
Watagala Ara	0.2 MCM	52 acres	32 families
Debara Ara	1.2 MCM	210 acres	72 families
Mallipota	0.91 MCM	500 acres	250 families

The total estimated cost of the project is Rs. 1,250 million and expenditure up to the end of the year 2021 is Rs. 673.923 million.

Figure 5-45: Canal Excavation of Debara Ara feeder canal

d. Mahagona wewa Project

Mahagona wewa is an ancient tank built by king Mahasen across atream Kekulagoda, tributary of Mahagona oya in Dambulla Divisional Secretariat area in Matale District. The capacity of the renovated tank is 0.78 MCM to irrigate 40 acres of existing and 350 acres of new land benefit to 101 families.

The project was stared in 2008 with the total estimated cost of Rs. 235.00 million. The construction of all the head works was completed. The balance work of the RB canal and some of the field canals were completed during 2021. Total expenditure was Rs. 221.86 million and This project will be completed within 2022.

Figure 5-46: Bifurcation Structure at 0+000 and lined canal from 0+013 to 0+153 in RB canal

Figure 5-47: RB Canal from 0+165 - 0+800

e. Godigamuwa Tank Project

Godigamuwa Tank has been constructed during the latter part of 1970 in Mathale District. The capacity of the tank is not sufficient to irrigate the defined area fully. The existing spill has been undermined and water leaks through the bund. Wild Elephants have damaged the bund in several places. The existing 66 acres of land have been divided among 33 families at present. There are about 300 acres of land available for cultivation under this tank.

Therefore, it was proposed to increase the capacity of the tank by raising the bund height by about 5.00m. The anicut is constructed and additional amount of water is diverting through feeder canal. All the construction of anicut, feeder canal, LB and RB sluices, spillway, Canal system and bund rising started simultaneously. The project was started in 2018 with the total estimated cost of Rs.165.9 million and revised to 235 million in year 2021. The total expenditure is Rs.134.636 million at the end of 2021 and this is planning to complete within year 2022.

Figure 5-48: Anicut construction

Figure 5-49: Spill way construction

Figure 5-50: Tank Bund construction

Figure 5-51: Construction of LB Sluice

f. Wilakandiya Reservoir Project

Wilakandiya is an abandoned tank in the Ebbehera Village in Mahiyangana Divisional Secretary's Division in Badulla District. This tank has been constructed across Nelliattakandiya Kandura which is a small tributary of Mahaweli River. The people of the area earn their living by rain fed shifted Chena Cultivation. This project is planned restore the wilakandiya tank and construct canal system to provide irrigation facilities to 250 acres of existing lands and benefit to the 250 farmer families. The capacity of the tank is 1.06 MCM and total estimated cost of the project is Rs. 298 million. The project was started in 2021 and total expenditure up to the end of 2021 was Rs. 232.912 million. The balance work of construction of the canal system needs to be completed within year 2022.

Figure 5-52: Construction of main canal

Figure 5-53: Construction of access road

g. Augmentation of Mahagalgamuwa Tank

It was proposed to construct anicut in Siyabalangamu oya and divert water along the 15km feeder canal to Mahagalgamuwa tank to ensure the irrigation facility of 400 acres under existing Mahagalgamuwa tank, 800 acres of existing and 200 acres of new land under neighboring Palukadawala scheme in both Yala and Maha season. This project was stared in 2014 with the total estimated cost of Rs.500 million and total expenditure up to the end of the year was Rs. 361.539 million. Part of the canal structures and earth and hard rock excavation along some sections of the feeder canal are remaining to complete.

Figure 5-54: Canal at 13+500

Figure 5-55: Over crossing at 13+050

Figure 5-56: Rock Blasting work along Feeder Canal

h. Potable Water Supply Project for Jaffna Peninsula

It was proposed to improve Vadamarachchi and Upparu lagoons to store water during rainy season to provide potable drinking water for the 600,000 people in the Jaffna peninsula. The total estimated cost of the project was Rs.2,000.0 million and the project period was 6 years starting from 2020. This project was abandoned due to problems of finding required quantities of construction materials and informed to the secretory to the ministry to close the project.

i. Barrack Plane Lake Development Project

The Barrack plane lake is situated in Nuwaraweliya and built in the year 1885. The inflow to the reservoir is from lover's leap water fall and outflow is to existing Bomura Ella reservoir. The irrigable area under this tank is 250 acres and under Bomura Ella is 2005 acres. The existing capacity of the lake is 68 ac-ft. Removal and eradicating invasive aquatic plant "Alligator" from the tank bed and the close vicinity, removal of silt from the tank bed, clearing and desilting of supply canal, construction of new silt trap, ring bund to avoid discharging wastewater to the tank, outlet structure and drainage inlets, minor repairs to the bund and Introducing soil conservation practices to the area around the tank are proposed for the rehabilitation programme.

The capacity will be increased up to the 101 acft after rehabilitation. The total estimated cost of the project is Rs. 230 million and planned to complete within 2 years.

Figure 5-57: Growth of Invasive Plant

Figure 5-58: Debris collected along supply canal

Figure 5-59: Removing Invasive plant and silt inside tank bed and supply canal

j. Irrigation Development Plan for Peripheral area of settlers in Pelawatta Sugar Plantation area

Palwatta sugar factory is produced the 10% of the sugar requirement of the country. Sugar cane is cultivated in the 2019 ha of land belong to the palawatta sugar plantation and 3803 ha of land in settlers area. The total number of families settled in the area is 1500. The factory is not running at its full capacity due to insufficient sugar cane supply which is caused by the water shortage. Therefor the proposal was submitted to the cabinet to increase water storage capacity within the system.

- Improvements of 9 tanks inside the plantation area.
- Construction of 3 new canals
- Improvements to 4 tanks in settlers' area.
- Construction of rainwater collecting pond
- Construction of tube wells.

The harvest of the sugar cane will increase from 45 MT/ha to 65 MT/ha and the cropping intensity of the paddy cultivated area will be 2 after implementation of this project. The total estimated cost of the project is Rs 143.5 million and need to be completed within 2 years.

The allocated amount for year 2021 was Rs 58.0 million. The rehabilitation of Thummulla tank, Mankada wewa and Meepale wewa in palawatta sugar cane complex were started in 2021 and cumulative physical progress at the end of 2021 was 31%.

Figure 5-60: Construction of Mankada wewa

Figure 5-61: Thunmulla Tank Improvement

5.2.5 Staff Position

Table 5-51: Staff position of C & D branch

Designation	Approved Cadre	Present Cadre	Deficit/ Excess
Additional Director of Irrigation	1	1	
Director of Irrigation (MC & RD)	2	2	
Chief Engineer	2	2	
Irrigation Engineer	4	2	2
Earth Resource Engineer	2	2	
Drawing Office Assistant	1	1	
Chief Management Assistant	1	1	
Development Officer	4	1	3
Draughtsman	4	2	2
Management Assistant	10	5	5
Office Assistant	6	4	2

6 System Management Sub Department

System Management Sub Department is responsible for the management of department assets, Irrigation assets, water management and irrigation agriculture. There are 6 branches coming under this sub department and they are Water Management Branch, Irrigation and Productivity Enhancement Branch, Assets Management Branch, Dam Safety Branch, Land and Legal Branch and Research Support & Process improvement Branch.

6.1 Water Management Branch

6.1.1 Objectives

- Facilitate efficient, effective and sustainable management of the irrigation systems with the participation of users in order to maximize productivity in terms of one unit of water and one unit of land.
- Facilitate Maximum utilization of resources available in order to increase the farmer income.

6.1.2 Functions

- Coordination with water stake holders to manage seasonal water in the reservoirs.
- System Water Management
- Awareness of on farm Water Management.
- Awareness of watershed management and management of quality of watershed.
- Rehabilitation and up-grading systems for better Water Management.
- Formulating proposals to mitigate adverse effect of climate variations.
- Monitoring and upgrading the measurement network within the scheme.
- Carrying out water management studies and awareness to the field staff.

6.1.3 Performance

a. Water Management

The climate experienced in Sri Lanka can be characterized into 4 climatic seasons as follows.
Table 6-1: Seasonal Rainfall variation

Season	Duration	Percentage of rainfall receiving
First Inter Monsoon (FIM)	From March to April	14%
South West Monsoon (SWM)	From May to September	30%
Second Inter Monsoon (SIM)	From October to November	30%
North East Monsoon (NEM)	From December to February	26%

These rainfall seasons do not bring homogeneous rainfall regimes over the whole island and it is the main cause to exhibit such a high agro-ecological diversity of the country despite of its relatively small aerial extent. Rainfall during SWM is mostly over the South – Western parts of the island. At the beginning it occurs in the South – Western low country. As winds strengthen, it spreads gradually to the interior, with considerable heavy rain in the hill country from June to August. During the NEM,

the eastern half of the island receives from 200mm to over 1200mm of rain. Out of these four rainfall seasons, two consecutive rainy seasons make up the major growing seasons of Sri Lanka, namely Yala and Maha seasons.

Maha season is the major growing season and cultivate most of the land in all over the country. It begins with the arrival of SIM rain in mid-September to October and continues up to late January or February with the NEM rain. Yala season mainly depends on FIM and SWM rain with the remaining water in the reservoirs. Therefor it is considered as minor cultivation season of the dry zone.

The following graph shows the variation of water availability (as a percentage to the total storage of major and medium reservoirs belongs to the Irrigation Department) over the year.

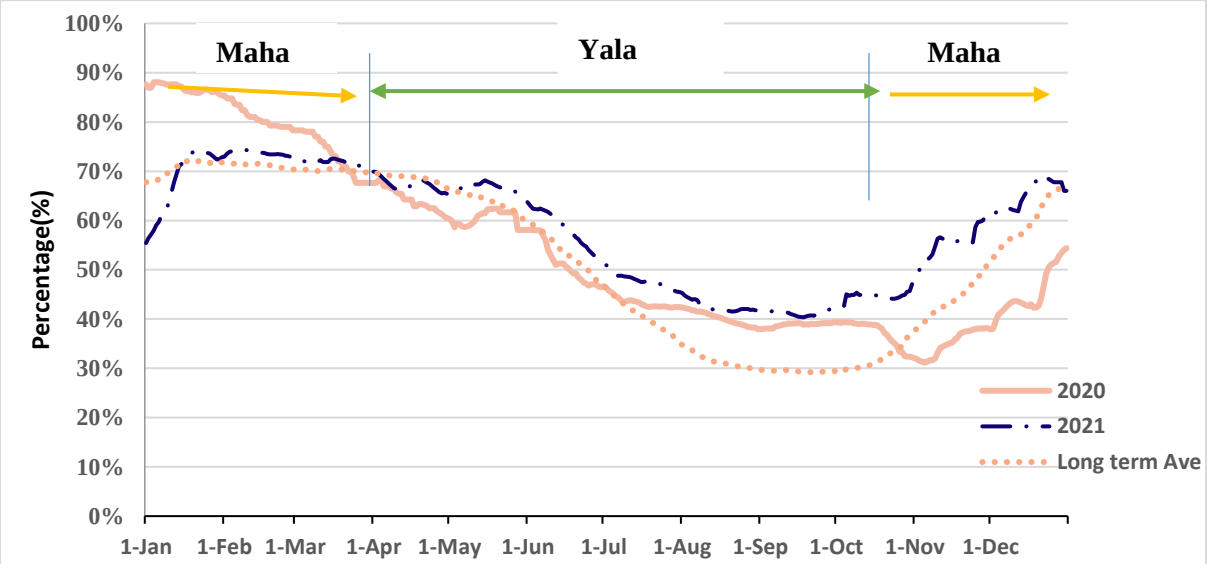


Figure 6-1: Percentage of water availability in 2020, 2021 and long-term average

The Maha season was planned based on the available water in each reservoir. The percentage of water availability of the reservoirs was 38% at the beginning of October 2020. There was less amount of rainfall received up to the end of November. The amount was reached up to the 74 % of the total storage at the end of January 2021 due to a significant amount of rainfall received during the North-East monsoon with the effect of several depressions.

The available percentage of water in the major reservoirs was around 70% at the beginning of April 2021 and it was almost equal to the long-term average of the reservoirs. Further, storage was slightly decreased up to 64% at the beginning of June. But considerable rainfall received all over the island due to the effect of Southwest Monsoon during the month of May in 2021. The effective storage of reservoirs was 45% at the end of yala season. The following table shows the water availability in the reservoirs over the time.

Table 6-2: Water availability in Major reservoirs

No	Reservoir	District	Storage (MCM)				
			2021.01.01	2021.04.01	2021.08.01	2021.10.01	2021.12.31
1	Ambalan Oya	Ampara	21.60	32.39	23.49	23.28	20.97
2	Ekgal Oya	Ampara	10.95	18.23	11.26	7.84	12.45
3	Namal Oya	Ampara	24.04	41.80	22.28	20.78	27.53
4	Pallan Oya	Ampara	43.74	56.69	39.30	36.59	58.47
5	Pannalgama	Ampara	12.94	20.13	12.03	11.26	19.11
6	Rambakan Oya	Ampara	29.39	53.09	37.21	36.19	51.22
7	Rottikulama	Ampara	4.43	6.29	1.91	1.26	5.69
8	Senanayaka Sam	Ampara	318.56	506.71	282.71	235.10	364.00
9	Kalugaloya	Ampara	9.74	9.87	4.84	5.55	8.67
10	Huruluwewa	Anuradapura	31.95	51.78	22.81	17.60	35.43
11	Mahakandarawa	Anuradapura	19.00	34.54	14.19	11.84	44.10
12	Mahawilachchiya	Anuradapura	31.22	37.21	29.88	24.87	40.21
13	Manankattiya	Anuradapura	4.49	4.78	2.38	1.96	3.53
14	Nachchaduwa	Anuradapura	42.23	47.70	28.06	24.76	53.31
15	Nuwara Wewa	Anuradapura	19.53	37.62	22.61	18.61	42.46
16	Padaviya	Anuradapura	90.29	89.39	33.15	28.99	102.07
17	Rajangana	Anuradapura	93.95	89.30	95.36	86.55	92.07
18	Wahalkada	Anuradapura	21.01	30.84	17.05	17.59	34.92
19	Yan Oya	Anuradapura	160.96	168.34	109.34	107.60	161.80
20	Ambewela	Badulla	2.42	2.42	2.41	2.42	2.39
21	Dambarawa	Badulla	10.55	15.92	5.40	7.77	12.70
22	Kande Ela	Badulla	2.17	1.60	1.51	1.15	1.54
23	Mapakada	Badulla	7.57	7.89	7.91	6.95	7.93
24	Nagadeepa	Badulla	12.50	19.98	7.15	2.57	11.14
25	Sorabora	Badulla	16.64	20.72	11.61	10.33	19.86
26	Morana	Badulla	15.91	13.54	15.85	14.43	16.22
27	Navakiri	Batticaloa	46.95	61.53	20.19	20.63	47.30
28	Rugam	Batticaloa	22.94	22.25	13.89	12.04	15.21
29	Unnichchai	Batticaloa	45.74	63.07	22.59	21.81	49.20
30	Vakaneri	Batticaloa	16.65	12.06	16.43	15.19	13.56
31	Badagiriya	Hambantota	3.33	2.84	2.90	1.17	10.07
32	Kekiriobada	Hambantota	2.25	2.38	0.97	0.99	2.52
33	Lunugamwehera	Hambantota	60.01	63.68	57.25	30.93	118.43
34	Mau Ara	Hambantota	23.02	18.82	23.51	14.52	39.93
35	Muruthawela	Hambantota	25.89	27.14	32.90	28.67	29.50
36	Ridiyagama	Hambantota	31.08	32.09	30.34	28.71	28.71
37	Tissawewa	Hambantota	4.43	2.87	3.16	2.50	1.94
38	Weheragala	Hambantota	25.43	24.22	48.30	40.62	64.98

No	Reservoir	District	Storage (MCM)				
			2021.01.01	2021.04.01	2021.08.01	2021.10.01	2021.12.31
39	Weerawila	Hambantota	12.24	13.57	8.88	13.57	13.14
40	Yodawewa	Hambantota	4.93	8.26	2.53	2.84	8.26
41	Ellewela	Matara	1.05	1.04	0.99	0.88	1.05
42	Kekanadura	Matara	1.70	1.67	2.18	2.37	2.73
43	Dewahuwa	Mathale	13.57	11.82	7.80	5.60	11.45
44	Nalanda	Mathale	15.72	13.86	15.76	14.38	15.84
45	Wemedilla	Mathale	5.74	4.57	5.09	5.68	5.67
46	Ambakolawewa	Kurunegala	6.93	4.78	5.00	2.13	6.98
47	Attaragalla	Kurunegala	4.48	2.44	2.84	1.49	3.30
48	Batalagoda	Kurunegala	6.04	5.78	4.82	6.36	5.71
49	Deduru Oya	Kurunegala	75.04	63.34	57.54	68.27	63.90
50	Hakwatunawa	Kurunegala	14.70	10.79	13.69	13.05	21.61
51	Kimbulwanaoya	Kurunegala	8.10	6.11	7.52	7.90	8.17
52	Mediyawa	Kurunegala	2.98	2.14	2.27	1.71	2.91
53	Magalla	Kurunegala	9.28	8.87	7.33	4.31	6.40
54	Jayawewa	Kurunegala	6.93	8.15	7.99	6.89	8.84
55	Usgala Siyabalan	Kurunegala	19.31	25.00	19.46	17.11	26.31
56	Ethimale	Monaragala	2.98	4.58	4.00	4.29	6.70
57	Handapanagala	Monaragala	6.32	9.00	14.08	10.27	16.21
58	Muthukandiya	Monaragala	12.58	18.56	13.70	13.70	24.54
59	Giritale	Polonnaruwa	21.01	25.45	19.07	21.24	19.67
60	Kaudulla	Polonnaruwa	83.31	127.54	75.00	80.61	86.13
61	Minneriya	Polonnaruwa	94.48	135.68	86.84	95.11	111.70
62	Parakrama Samudraya	Polonnaruwa	137.47	140.93	99.30	109.29	126.56
63	Inginimitiya	Puttalama	44.09	51.78	55.51	42.49	60.75
64	Tabbowa	Puttalama	17.94	16.03	16.75	16.03	16.39
65	Kantale	Trincomalee	78.79	129.05	64.69	101.97	103.91
66	Mahadivul Wewa	Trincomalee	22.54	19.49	6.49	8.63	20.87
67	Mora Wewa	Trincomalee	25.90	37.41	9.94	9.74	20.48
68	Vendrasan	Trincomalee	10.90	18.64	12.63	15.13	11.94
69	Wan Ela	Trincomalee	2.88	2.26	2.76	2.53	2.17
70	Pavatkulam	Vavuniya	16.34	20.87	6.27	3.83	30.22
71	Akathimuruppu	Mannar	5.88	2.59	2.05	1.23	8.09
72	Giants Tank	Mannar	37.25	13.14	26.40	15.97	33.18
73	Viyathikulam	Mannar	1.57	1.60	0.73	0.25	1.48

b. Cultivation performance

The total command area under major, medium, anicut and drainage schemes under Irrigation Department is 756,000 acres. The cultivation was done for intermediate season in 2021 other than formal Maha and Yala seasons.

The following two charts show the extent of cultivation based on crop type and the district for the Yala season 2021.

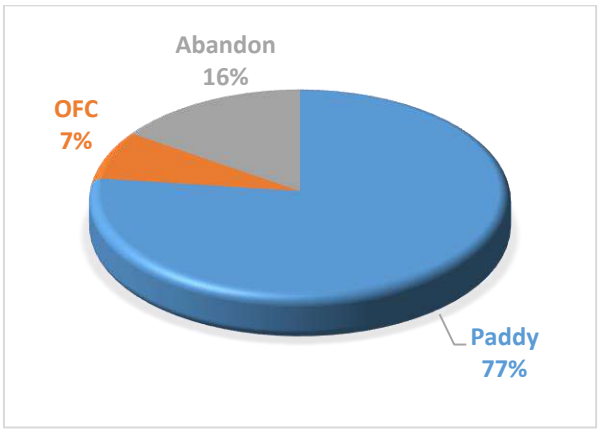


Figure 6-2: Cultivated extent in Yala 2021

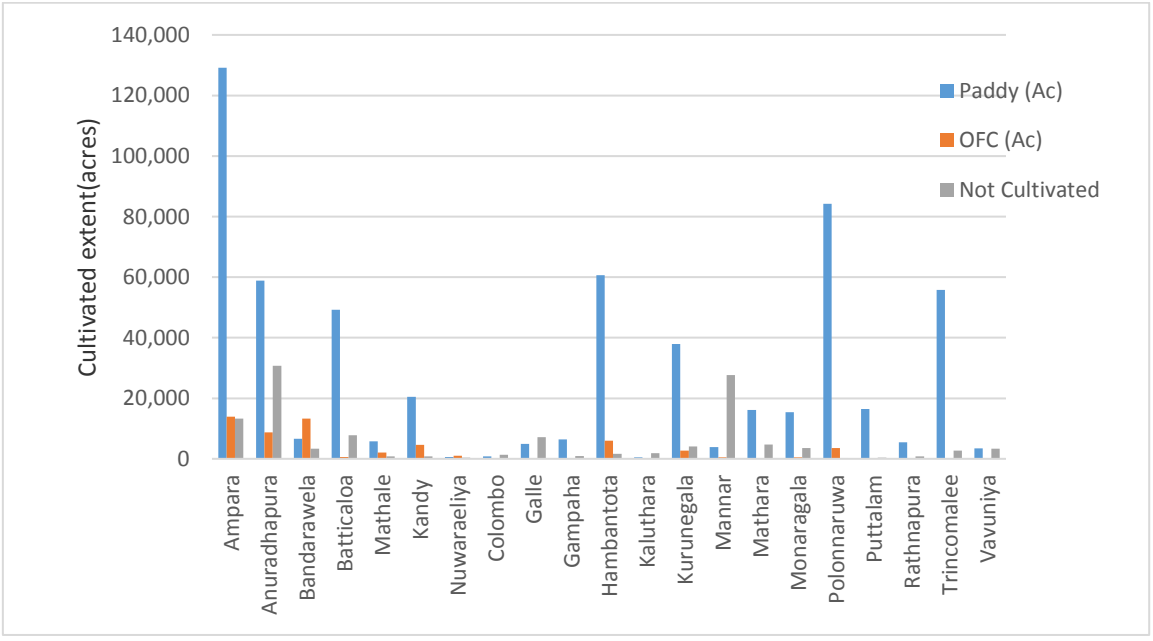


Figure 6-3: Cultivation extent cultivated during Yala 2021 in District

The following two charts show the extent of cultivation based on crop type and the district for the Maha season 2020/21.

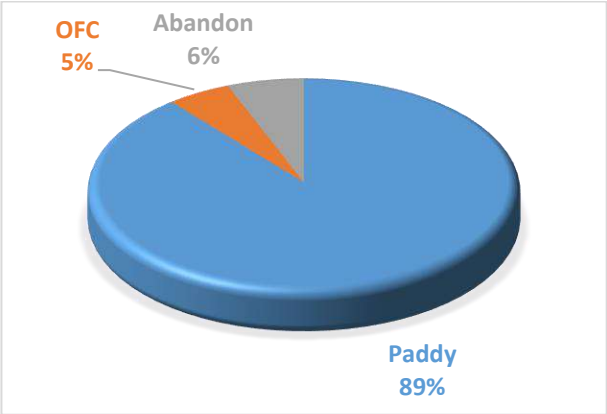


Figure 6-4: Cultivated extent in Maha 2020/21

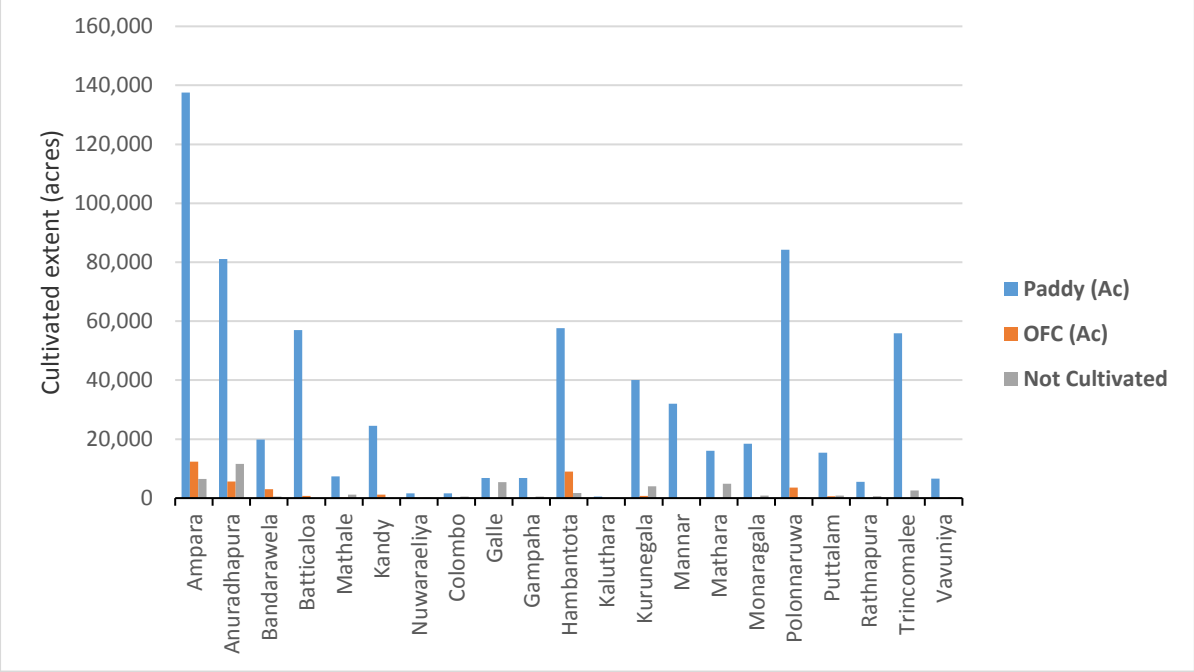


Figure 6-5: Cultivation extent cultivated during Maha 2020/21

The third season was planned to start as an intermediate season in selected areas using the remaining water of the reservoirs after the end of the Yala season. There were about 72,800 acres of lands cultivated and it is about 10% of the total command area. The cultivation was carried out from mid-August to the end of October and selected crops were such as Green Gram, Maize, Cowpea, Ground nut, vegetables, black gram Kurakkan, Finger Millet and Soya beans.

In addition to that, over 150 acres of paddy (2-month variety) were cultivated as a pilot project in Rugam, Batticoloa Range after 40 years. It was succeeded with an average yield of 80 bushels per acres. There was Turmeric cultivation over 900 acres in the Ampara District also under this program.

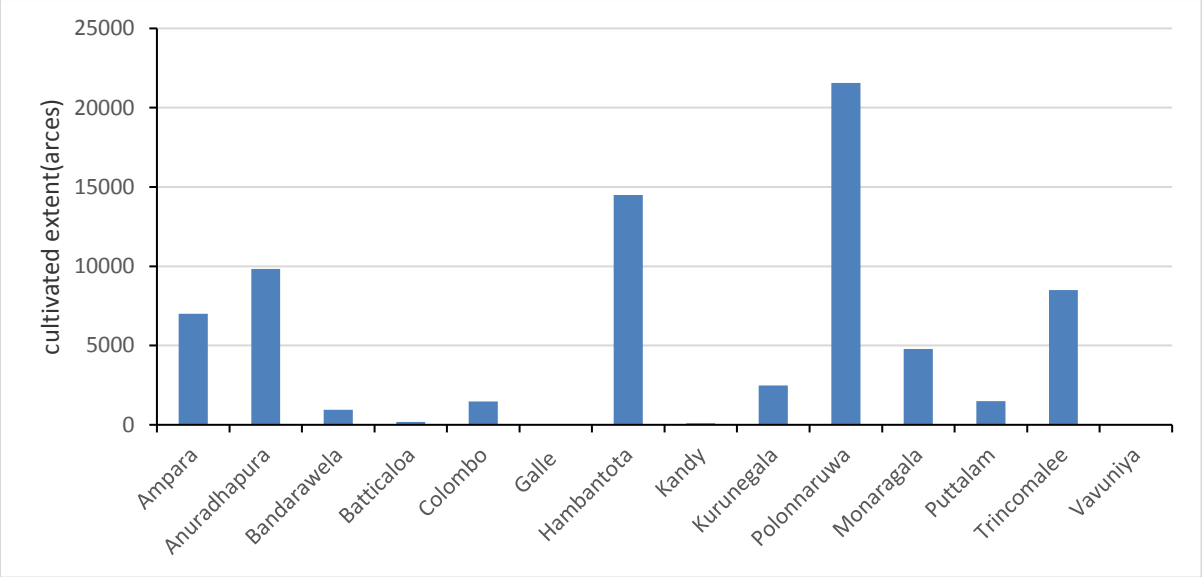


Figure 6-6: Cultivation extent cultivated during intermediate Season 2021

Figure 6-7: Intermediate season cultivated in Rugam

Figure 6-8: Turmeric cultivation at Ampara

The production of paddy from two seasons are as follows.

Table 6-3: Paddy Production

	2019/20 Maha Season	**2020 Yala Season**
Production of paddy (million Metric Tons)	1.65	1.35
Income (Billion Rupees)	83.00	67.50

c. Model Scheme

Managing water is becoming very important due to increasing demand from different uses such as drinking, hydropower, inland fisheries, wildlife, cultural activities, tourism etc. it required to ensure the food security of the nation while mitigating climate changes. One irrigation scheme is selected from each region and develops as a model scheme. The main purpose of this is to get the actual water used for the cultivation. The gauges were installed to measure inflow to the reservoir, irrigation issues in main canal and distributary canals and rainfall.

d. Celebration of World Water Day

Water is an important commodity and essential for all living being in the world. World Water Day highlights the current position and gradually raising challenges related to water around the world. World Water Day was celebrated on 22nd March 2021 at Auditorium, Irrigation Department, Colombo-07. The theme for 2021 was "Valuing Water". The limited participant was invited physically due to COVID 19 pandemic and Regional and Divisional officers were joined the function virtually. A documentary video was presented describing the irrigation and Water Resources Development in Sri Lanka. The keynote speech was delivered by Prof. Raj Kumar Somadewa. Other speeches were delivered by the invited speakers from the water related agencies like National Water Supply and Drainage Board, Mahaweli Authority of Sri Lanka, Water Resources Board, Department of Agrarian Development, and staff of Irrigation Department.

e. Data Collection for Water Management

Three social media groups were introduced to communicate with Regional and Divisional level offices to work under covid 19 pandemic situation. The Water Management related data (Reservoir and cultivation) and special notices were sheared through in these groups.

All the collected data (water levels, storages, spilling data, rule curve, etc...) of 73 major reservoirs had been collected from region and divisions on daily basis and uploaded after verifying to the Irrigation Department web site daily for public usage with the help of ICT branch.

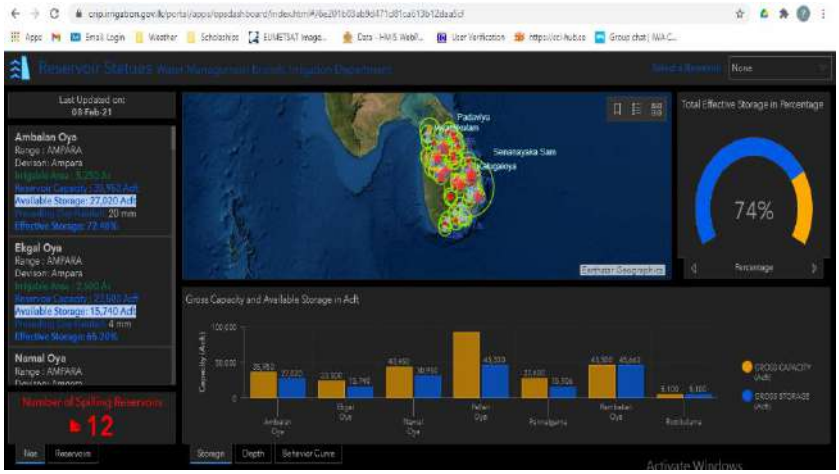


Figure 6-9: Daily reservoir data in ID web site

f. Approval for Drinking water extraction

Drinking water is the most important thing for living being on the earth. An approval has been granted for drinking water extraction from 64 numbers of locations by the irrigation Department to the National Water Supply and Drainage Board during 2021. These water supply projects will be implemented in future and the locations are from reservoirs, rivers, streams, and irrigation canals. Alternative locations were also proposed for some of the locations due to practical difficulties.

National Water Supply and Drainage Board was allocated total amount of 4.131 billion rupees under the programme "Water for All" for the rehabilitation of Irrigation head works and improve canal systems in the schemes connected with the drinking water extraction projects to improve the productivity of water.

In addition to that, the following allocations were requested for the projects indicated as below,

1) Gawarammana Bogahakumbura WSS (Ambewela Reservoir) – Rs. 300 million
2) Hambegamuwa WSP (Kandiyapita Tank) – Rs. 356 million
3) Echchilampattu WSP (Mavilaru Anicut) -Rs.200 million.

Table 6-4: Details of water abstraction from NWSDB-2021

Region	Name of the Project	Water Source	Extraction (m3/d)	Present condition of the Extraction	Approval given on
Ampara	Madulla WSP	Senanayake Samudraya	102,000	Conditional Approval given	2-Feb-21
	Pathiyathalawa WSS	Rambaken Oya	6 MCM/yr	Conditional Approval given	23-Jun-21
Anuradhapura	Thambuththegama WSP & Eppawala, Rajanganaya, Nochchiyagama, & Giribawa Intergrated WSP	Rajanganaya	43,000	MOU signed	Dec-21
	Anuradhapura North Water Supply Project - Phase I	Mahakanadarawa	6,700	Conditional Approval given	6-May-21
Badulla	Drinking water supply from Morana	Morana	5,000	Primary Approval given	7-Apr-21
	Thaldena Meegahakiula WSS	Badulu Oya @Thaldena new weir	4,400	Primary Approval given	22-Dec-21
	Gawarammana BogahakumburaWSS	Ambewela	13,200	Conditional Approval given	20-Dec-21
	Welimada WSS Stage II	Uma Oya	7,500	Primary Approval given	20-Dec-21
	Kandekatiya WSS	Badulu Oya	5,500	Primary Approval given	21-Dec-21
Batticaloa	Batticaloa North WSP	Kaddumurivu	10 MCM/Year	Conditional Approval given	28-Apr-21
	Batticaloa South WSP	Navakiri Aru	10 MCM/Year	Conditional Approval given	28-Apr-21
Colombo	Kiriella WSP	Kalu Ganga @ Kurugammodara	3,300	Primary Approval given	16-Mar-21
	Kuruvita WSP	Kuru Ganga Puwakwatta	11,000	Primary Approval given	16-Mar-21
	Integration of Kegalle WSS - Urgent improvement of existing WSS	Ma oya @ Hiriwadunna	12,000	Primary Approval given	23-Jun-21
	Upgrading existing treatment capacity in Moranthota WTP	Gurugoda Oya @ Halmassa	20,000	Primary Approval given	23-Jun-21
	Upgrading existing treatment capacity in Mawanella WTP	Ma oya @ Kappagoda	20,000	Primary Approval given	23-Jun-21
	Upgrading existing treatment capacity in Dehiowita WTP	Ma oya	3,500	Primary Approval given	23-Jun-21
	Upgrading existing treatment capacity in Warakapola WTP	Kuda Oya	4,500	Primary Approval given	23-Jun-21
	Integrated Kegalle WSP (Long Term Proposal)	Kelani	20,000	Primary Approval given	23-Jun-21
	Dehiowita WSP	Seethawaka	20,000	Primary Approval given	23-Jun-21
	Rambukkana WSP	Ma oya	20,000	Primary Approval given	23-Jun-21
	Greater Ratnapura WSP - Stage II	Kalu Ganga @ Rathnapura	19,800	Primary Approval given	16-Mar-21
	Yatiyantota WSS	Wee Oya @ Horandara	2,500	Primary Approval given	23-Jun-21
	Kethhena improvement & expansion WSP	Kalu ganga @ Kethhena	55,000	Primary Approval given	6-May-21

Region	Name of the Project	Water Source	Extraction (m3/d)	Present condition of the Extraction	Approval given on
Colombo	Pelmadulla WSP	Kirindi Ella @ Kuttapitiya	5,500	Primary Approval given	16-Mar-21
	Augmentation of Balangoda old WTP	Walawe Ganga @ Weliharanawa	7,700	Primary Approval given	23-Jun-21
	Doloswala, Nivitigala Karavita integrated WSP	Hangamuwa river @ Doloswala	5,500	Primary Approval given	16-Mar-21
	Kalawana WSP	Koswatta Ganga @ Koswatta	5,500	Primary Approval given	23-Jun-21
	Opanayake WSP	Way Ganga @ Dandeniya	5,500	Primary Approval given	16-Mar-21
	Divulapitiya WSP	Ma oya @ Kotadeniyawa	22,000	Primary Approval given	23-Jun-21
	Augmentation of Gampaha WSS	Attanagalu oya	6,300	Conditional Approval given	30-Apr-21
	Augmentation of Yakkala WSS	Attanagalu oya	5,250	Primary Approval given	30-Apr-21
	Augmentation of Kirindiwela & Ranpokunagama WSS	Kelani	11,100	Primary Approval given	25-Jan-21
	Augmentation of Veyangoda WSS	Attanagalu oya	5,250	Primary Approval given	30-Apr-21
	Augmentation of Nittambuwa (Western Park) WSS	Attanagalu oya	5,250	Primary Approval given	30-Apr-21
	Kirindiwela WSP	Kelani Ganga @ Pugoda	33,000	Primary Approval given	23-Jun-21
	WS to Walallawita Divisional Secretariat Division	Uthumgama Ellakanda Dola	10,000	Primary Approval given	26-Jun-21
	WS to Walallawita Divisional Secretariat Division	Kaludiya Dola	3,000	Primary Approval given	26-Jun-21
	WS to Walallawita Divisional Secretariat Division	Maguru Ganga	7,500	Primary Approval given	26-Jun-21
	Kolonna WSS	Eraporuwa river @ Kolonna	3,000	Primary Approval given	10-Jun-21
Galle	Hakmana WSP & Deyyandara-Mulatiyana WSP (Urgent Demand)	Kirama ara @ Rasnagoda	7,500	Primary Approval given	5-Jul-21
Hambantota	Upgrading of existing Barawakumbuka(Ruhunudivisarana) community based water supply scheme.	Walawe Ganga @ Liyangasthota	6,600	Conditional Approval given	6-Apr-21
	Ruhunupura Water Supply Project - Stage II	Ridiyagama	35,000	Conditional Approval given	6-Apr-21
	Augmentation of existing Wakamulla Water Supply Scheme	Uruboku Oya @ Wakamulla	6,600	Primary Approval given	14-Sep-21
	Weeraketiya WSP	Udikiriwila	16,500	Primary Approval given	14-Sep-21
Monaragala	Hambegamuwa WSP	Kandiyapita	3,850	Conditional Approval given	22-Dec-21
Puttlam	Puttalam WSP - Stage 11	Kala oya @ Eluwankulama	13,000	Conditional Approval given	15-Feb-21
Trincomalee	Morawewa, Gomarankadawala, Padavisiripura & Kuchchavili WSP	Bellikada	9 MCM/year	Primary Approval given	6-May-21

g. Operation and Maintenance works

There were 7 numbers of votes under the Water Management branch. The total amount of 51.57 million rupees of allocation were received from the departmental block Vote for the Year 2021.
The allocation under the votes Additions & Improvements to Existing Irrigation works for Improvements to Water management, Protection of upper catchment and watershed management and Calibration & Water management studies were used for necessary works for 7 number of selected model Schemes.

Table 6-5: Details of expenditure under block votes

No.	Item Description	Allocation Rs. Mn	Expenditure Rs. Mn	Liabilities Rs. Mn	%
1	Operation and of Maintenance Lift and micro Irrigation works. 282-2-2-0-2001-11-3	4.868	4.829	0.035	99
2	Remedial measures to safeguard crops during emergency situations. 282-2-2-0-2001-11-13	4.100	4.074	0.000	99
3	Protection of upper catchment and watershed management 282-2-2-0-2001-11-14	1.031	0.743	0.287	100
4	Improvements, Operation and Maintenance of existing Model Farms. 282-2-2-0-2001-11-20	4.500	4.491	0.000	100
5	Activities related to Water Day 282-02-2-0-2503-11-6	2.660	2.632	0.000	100
6	Calibration and Water Management Studies 282-02-2-0-2507-11-2-7	4.412	4.131	0.208	98
7	Additions & Improvements to Existing Irrigation works for Improvements to water management 282-2-2-1-2001-11-4	30.000	26.798	2.656	98

Figure 6-10: Plant Nursary at Padaviya, Anuradhapura

Figure 6-11: Fixing turnout gates, Kimbulwanaoya, Kurunagala

Figure 6-12: Fixing gauges & calibrate at Pavatkulam,Vavuniya

h. Model Farm

New model farm was established in Mahagalwewa and the maintenance of Nachchaduwa, Murukkan and Rajanganaya were carried out under the allocation given to this. The income of the farms obtained from selling fruits and vegetables is credited to the Government revenue.

Figure 6-13: Model farm Mahagalwewa,Hambantota

Figure 6-14: Model farm at Murunkan

6.1.4 Staff Position

Table 6-6: Staff Position of water management branch

Designation	Approved Carder	Present carder	Deficit
Director of Irrigation	1	1	-
Chief Engineer	1	1	-
Irrigation Engineer	3	2	1
Engineering Assistant	1	1	-
Draftsman	2	1	1
Development Officer	3	1	2
Management Service Officer	2	1	1
Labour 25/2014 - (Department Clerk & KKS)		4	-
Multipurpose Development Assistant (MDA)	-	1	1
Trainees	-	2	3

6.2 Irrigation & Productivity Enhancement Branch

6.2.1 Objective

To establish an integrated management system to increase socio-economic standard of farming community through participatory management approach by optimum use of one unit of water and one unit of land in irrigated agriculture.

6.2.2 Functions

- Establishment of Integrated Management System in Irrigated agriculture using participatory management concepts WAPHAULA PROGRAM.
- To Increase cropping Intensity by crop diversification in major/ medium schemes.
- Direction and training of project management staff and farmers in participatory management.
- Monitoring PMC in all Waphaula schemes and preparation of guideline for PMC activities and Appointing Project Managers for Irrigation system.
- To develop inter-relation between officers and farmers with other lines agencies in Irrigated agriculture.
- Financial management and progress monitoring of funds allocated to Irrigation and productivity enhancement subject.
- Direction and co-ordination of unit office management.
- Management of Invasive Aliens Species (IAS) in Irrigation Schemes.

6.2.3 Performance

a. Establishment & Improvement of Unit Offices

Establishment of Unit Offices in Irrigation Schemes level was started in 2013 and achieved good progress at presently. An allocation of Rs.50 Mn. were released for all the Ranges for the Establishment of Unit Offices.

Table 6-7: allocation distribution among the unit office for improvement and new construction

Region	Unit office	Amount Rs. Mn
Ampara	Panama	8.000
Anuradhapura	Kallanchiya, Horowpathana, Ellepothana, Manankattiya, Nachchaduwa, Medawachchiya	4.454
Batticaloa	Thumpankeny	2.600
Badulla	Sorabora	2.000
Colombo	Boralesgamuwa, Muruthawela, Katupathoya, Kalthota, Wellewa	6.263
Galle	Halpathota, Magallagoda, Haliela, Kepu Ela	6.007
Hambantota	Lunugamvehera RB and Walawa RB	4.000
Kandy	Paragahaharawa, Hettipola, Kegalla,Ma Ela	1.453
Kurunegala	redi bendi Ella	1.400
Manner	Maruthamadu, Viyadikulam,Murunkan	4.190
Monaragala	Hambegamuwa,Katharagama,Muthukandiya, Buththala, Kumbukkana	2.000
Polonnaruwa	Deyabeduma	2.000
Puttalam	Sengaloya	1.000
Trincomalee	Molopathana, Yan oya, Morawewa(D6&D7)	4.450

Figure 6-15: Opening Ceremony of Thumpankerny Unit Office in Rugam Division

Figure 6-16: Panama Unit Office in Pothuwil Division

b. Development of farmer organizations and improvement of farm productivity and profitability

The following activities were carried out by the Divisional Irrigation Engineer's Offices.

Figure 6-17: Deduru Oya Kanna meeting

Figure 6-18: Usgala Siyabangamuwa Kanna Meeting

Figure 6-19: Thaldena Kanna Meeting

Figure 6-20: Mathotilla Kanna Meeting

c. Organic fertilizer production program

Following are the organic fertilizer production contributed to the organic farming program carried out all over the country.

Table 6-8: Organic fertilizer production

No.	Region	Organic Fertilizer production (MT)
1	Ampara	101.0
2	Anuradhapura	26.0
3	Badulla	1.5
4	Batticaloa	18.0
5	Colombo	10.5
6	Galle	43.0
7	Hambantota	36.0
8	Kandy	17.0
9	Kurunegala	19.0
10	Monaragala	189.0
11	Manner	5.0
12	Polonnaruwa	43.0
13	Puttalam	9.0
14	Trincomalee	32.0
Total		**144.0**

Figure 6-21: Ambalangoda Division

Figure 6-22: Hambanthota Division

Figure 6-23: Kanthale Division

Figure 6-24: Murunkan Division

Figure 6-25: Nawakiri Division

Figure 6-26: Nikaweratiya Division

Special pilot project was carried out in DI office polonnaruwa to produce 30 metric tons of organic fertilizer. following are the poduction carried out under region.

Table 6-9: Organic fertilizer production carried out in DI office Polonnaruwa

Division	Scheme	Production (MT)
Polonnaruwa	Boowewa	6
Minneriya	Erige oya	15
Kaudulla	Bebiya wewa	8
Ellahera	Heerati oya	5
	Atharagallewa	7
	Neehinna	5
Total		**46**

6.3 Assets Management Branch

6.3.1 Objectives

Assets Management Branch is the largest branch under System Management Sub Department and handled Rs. 5210 million of annual allocation in 2021. The main role of the branch is managing all the assets of the department except machineries and vehicles.

There are 389 number of well operated schemes including 243 tanks, 113 anicuts and 8 lift irrigation schemes to supply water for the cultivations. The maintenance of all above schemes is very much important to ensure the long lasting and avoid damages causing disaster while delivering the intended water issues are the main objectives of the branch.

6.3.2 Functions

- Monitoring of all the Irrigation schemes belongs to the Irrigation Department
- Financial allocations and other relevant works in connection with the operation and maintenance work.
- Maintenance of buildings, lands, Irrigation structures and other immovable assets in all the schemes.
- Improvement and upgrade the department assets.
- Maintaining and upgrading the database relevant to Irrigation schemes, Buildings
- Taking action for the complaints made by public relevant to Operation and Maintenance and other related matters.

6.3.3 Performance

Following projects have been implemented through the Assets Management Branch.

a. Rehabilitation of Feeder Tanks under Giant's Tank in Mannar

This project was formulated to increase the acreage cultivated under feeder tanks in Giants tank irrigation scheme by increasing surface water storage and minimizing losses in conveyance systems by improving essential infrastructure to increase land and water productivity. And also to stop encroachments in the reservation and tank bed area by restoring the tank back to its initial water storage capacity. About 4870 families in Mannar District have benefited by this project.

The estimated cost of this project was Rs. 300 million and the total allocation for this project in 2021 is Rs. 150 million. The project duration is 3 years (2019-2021). The selected irrigation feeder tanks and other infrastructure facilities have rehabilitated to accomplish the main objective.

Figure 6-27: Rehabilitation of Sundikuli Feeder Tank

Figure 6-28: Rehabilitation of Kannaputhukulam Tank

b. Polonnaruwa District Irrigation Development Project (PDIDP)

This project was planned to minimize the water scarcity in Polonnaruwa district during "Yala" season and upgrading the efficiency of water supply. It is also expecting to minimize the damages to paddy areas due to flood in Polonnaruwa district during "North East Monsoon". About 35,978 families in Polonnaruwa District are benefited by this project.

The total estimated cost of the project is Rs. 7000 million and duration is 7 years (2017-2024). The allocation for 2021 is Rs. 200 million.

Figure 6-29: D1 North Canal Lining in PSS

Figure 6-30: Construction of 3 bay regulators across the Woulbokkuwa drainage canal in Kaudulla

c. "Wari Saubhagya" National Program for Rehabilitation of Rural Tanks and Anicuts

This project is basically implementing to strengthen of the rural lives and local agriculture in Sri Lanka by enhancing the irrigable area through rehabilitation of tanks enhancing their capacities. About 250000 families in all districts are benefited by this project.

The total estimated cost of the project is Rs. 5141 million and project duration is 2 years (2021-2022). The allocation for 2021 is Rs. 2286.9 million.

Figure 6-31: Construction of Canal in Pathegama Tank

Figure 6-32: Bund Improvement in Uguressawewa, Kurunegala

6.3.4 Performances Done under Block Votes

a. Work Carried out Under Rehabilitation and Improvements of Buildings

Figure 6-33: Improvements to IDB 03 Quarters, Nikaweratiya Division

b. Work Carried out Under Improvements to Department Roads

Figure 6-34: Improvements to Agriculture Road karadiyanaru kolani in Unnichchai scheme

Figure 6-35: Gravelling to Maraikavoor tank bund from 0+300 to 0+600 in Akathimurippu scheme

c. Work Carried out Under Flood Damages and Repairs

Figure 6-36: Reconstruction of off-take in Ottayanmadu bund in Sengappadai LB unit

Figure 6-37: Construction of emergency spill at Kompansaithan feeder tank in irattaikulam main canal in Giants Tank scheme

d. Construction of Staff Grade Quarters at Jawatta

The senior staff officers in the Irrigation Department are suffering without having sufficient lodging facilities in Colombo. The construction of 16 Nos. of quarters at Jawatta road was commenced in 2017 to address this problem. There are 04 Nos. of quarters have already completed and occupied.

The total allocation for the year 2021 under this vote is Rs. 30.19 million.

Figure 6-38: Jawatta Quarters - Under Construction of Second Floor

e. Balance work of construction of quarters in Kurunegala DI office


Figure 6-39: New Quarters at DI Premises, Kurunegala

f. Work Carried out Under Essential Rehabilitation of Major Medium Schemes

Figure 6-40: Reconstruction of drainage outlet cum bridge at stn.13+942 in RB main channel in Unnichchai scheme

Figure 6-41: Widening of Neluoya feeder canal- Stage II in Morawewa scheme

Figure 6-42: Improvements to Viyadikulam tank bund from 2+360 to 2+510 of Viyadikulam scheme

6.3.5 Regional wise Allocation Distribution and Expenditure

An allocation of Rs. 5210 million under 34 votes have been distributed among all Regions during year 2021. The regional wise allocation distribution and expenditure are as given table.

Table 6-10: Annual Allocation Released under the votes handle by DI (AM)

Region	Allocation	Expenditure	Physical
	Rs. '000	Rs. '000	Progress %
Ampara	385,948.34	356,266.41	100
Anuradhapura	553,052.37	439,501.37	100
Badulla	162,281.21	156,656.44	100
Batticaloa	448,578.94	390,848.47	100
Colombo	228,263.75	213,201.57	100
Galle	140,856.97	121,061.85	100
Hambantota	399,128.30	328,493.66	100
Kandy	339,560.38	292,762.50	100
Kurunegala	430,721.41	346,314.74	100
Monaragala	311,601.09	278,218.26	100
Mannar	441,415.63	399,368.89	100
Polonnaruwa	407,230.12	338,025.78	100
Puttalam	242,447.95	205,048.37	100
Trincomalee	596,559.15	547,178.04	100
Mullativu	9,000.00	9,000.00	100
Killinochchi	5,500.00	4,519.06	100
Jaffna	36,261.65	4,711.06	100
ITI	1,250.00	1,249.53	100
Head Office	70,376.75	13,416.15	93*
Total	**5,210,034.00**	**4,445,842.15**	**100**

*This is due to delay in supply of office equipment by the suppliers.

6.3.6 Staff Position

Table 6-11: Staff position of the branch

No	Designation	Required Cadre	Present Cadre	Deficit/Excess
1	Director of Irrigation	01	01	-
2.	Chief Engineer	01	01	-
3.	Irrigation Engineer	03	03	-
4.	Earth Resources Engineer	01	01	-
5.	Engineering Assistant	01	00	01
6.	Draughtsman	01	01	-
7.	Development Officer	02	02	-
8.	Management Service Officer	07	02	05
9.	KKS	02	02	-
10	Labourer (25/2014)	00	02	-
11	Computer Operator	02	02	-
	Total	**21**	**17**	**06**

6.4 Dam Safety Branch

6.4.1 Objectives

Guidance of the field level officers to ensure each dam is operated and maintained in a safe manner and to minimize the risk associated with dam failure.

6.4.2 Functions

- Ensuring safety of dams by monitoring, evaluation and feedback of periodical inspection of dams and coordination for the readiness to North East Monsoon
- Issuing guidelines to streamline dam safety practices
- Compilation of technical data and historical events of dams
- Developing and updating of standing orders
- Conducting dam safety awareness program to refresh the knowledge of the technical staff and to share the experience
- Coordination with specialized division, outside service organizations and professional bodies to carry out inspections, investigations and implementation of remedial measures
- Monitoring the annual work program under the vote of Improvements to Head Works for Additional Safety and Electrical & Electromechanical Installation
- Coordination with Project Management Unit of Integrated Watershed and Water Resources Management Project (IWWRMP) for improvements of head works and canal systems maintain by Irrigation Department and special study on Senanayaka Samudraya headworks in Ampara
- Maintain the Secretariat of Sri Lanka National Committee on Large Dams of International Commission on Large Dams.

6.4.3 Performance

a. Monitoring of Safety of the Head Works

The regular inspection of head works helps to identify any deficiencies at an early stage. It will focus on proper operation and maintenance to identify any possible emergency situation at early stage. Hence, corrective actions can be taken before the safety of the dam is jeopardized. Although this vital responsibility of Irrigation Department as a dam owner is stipulated in circulars the practices and responses in conducting regular inspections need to be improved further.

Dam Safety branch updated and issued the circulars on Safety of head works conducting regular inspections. Accordingly, Dam Safety branch monitor the progress of conducting quarterly inspections on major dams in each Region and check the Quarterly Inspection Report (QIR) as stipulated in the circular in order to streamline the practices. Accordingly, numbers of major dams in each Region which require preparing the Quarterly Inspection Reports (QIR) are as follows.

Table 6-12: Number of Major Dams

Range	Ampara	Anuradhapura	Badulla	Batticaloa	Galle	Hambanthota	Kandy	Kurunegala	Monaragala	Polonnaruwa	Puttalam	Mannar	Trincomalee	Total
No of major dams	9	13	9	7	4	9	5	11	3	4	3	5	4	86

Inspection of dam at different time period allows examining the dam under different reservoir loading conditions with different vegetation cover. Similarly, it facilitates to identify the changes in headworks at similar reservoir loading condition in different time periods. Accordingly, Dam safety branch has identified the importance of coordination and convincing the field staff on carrying out regular inspections, scheduled at different time periods as per the ID circular 4/2013.

Following table shows the progress of Quarterly Inspection Report received in year 2021

Table 6-13: Monitoring Quarterly Inspections for Major Dams

Range	**No of major dams**	**No of Quarterly Inspections Reports received**			
		1st Quarter	**2nd Quarter**	**3rd Quarter**	**4th Quarter**
Ampara	9	2	4	7	4
Anuradhapura	13	8	7	9	9
Badulla	9	6	6	9	6
Batticaloa	7	6	6	-	-
Galle	4	-	-	-	-
Hambanthota	9	2	-	-	-
Kandy	5	5	4	4	1
Kurunegala	11	5	7	3	2
Monaragala	3	2	-	-	-
Polonnaruwa	4	1	1	1	1
Puttalam	3	1	1	-	-
Mannar	5	4	1	3	4
Trincomalee	4	2	2	2	2
Total	**86**	**44**	**39**	**38**	**29**

b. Field Inspection

Field Inspection on following places was carried out by the staff of Dam Safety branch with the staff of other relevant specialized branches under the guidance of ADGI(SM) and ADGI (IP&D). Accordingly, instructions were given for proper operation and maintenance. Recommendations were given for emergency actions and long-term solutions where there were issues in headworks. Following field inspections were carried out in the year 2021.

- Parakrama Samudraya Spillway in Polonnaruwa Region
- Higura Ara Tank in Colombo Region
- Morana Reservoir in Badulla Region
- Uyanwatta tank in Colombo Region
- Debarawewa Lunugamwehera and Yoda Wewa Reservoirs in Hambantota Region
- Maradanmaduwa, Dekathipothana and Mahamankadawala tanks in Anuradhapura Region
- Tissa wewa and Lunugamwehera in Hambantota Region
- Kande Ela and Ambewela reservoirs in Badulla Region
- Mavadiodai Anicut in Batticaloa Region
- Bandaraulpotha Tank in Anuradhapura Region

Further, before giving the approval for recreational areas proposed by Urban Development Authority at head works of reservoirs were checked and given the recommendations.
The aim of this work was not to disturb the safety of the head works. Accordingly, following reservoirs areas were inspected.

- Proposed Jogging track of Ampara tank in Ampara Region
- Proposed development of Boralesgamuwa Reservoir in Colombo Region
- Proposed jogging track of Parakrama Samudraya in Polonnaruwa Region

Figure 6-43: Slip section of Bandaraulpotha Tank Bund in Padaviya Division on 20.12.2021

Figure 6-44: Upstream bund erosion in Debarawewa Tank Bund in Tissamaharama Division on 27.07.2021

6.4.4 Regional wise Allocation Distribution and Expenditure

There are two votes under the Dam safety branch.

1. The amount of Rs. 39.366 million for 31 nos. of works were distributed under the vote of Improvements to Head Works of Tanks for Additional Safety for year 2021. The work mainly consisted of improvements of bund, rehabilitation of anicut gates and repairs to spills and sluice towers.
2. Annual allocation under the Electrical and Electromechanical Installation vote was Rs.7.634 million and 08 items were selected for implementation.

The summary and distribution of annual allocation and expenditure at the end of year 2021 are given in Table below

Table 6-14: The summary and distribution of annual allocation and expenditure for year 2021

Region	Improvements to Head Works of Tanks for Additional Safety		Electrical and Electromechanical Installation	
	Allocation Rs. '000	Expenditure Rs. '000	Allocation Rs. '000	Expenditure Rs. '000
Ampara	534,840.00	530,020.00		
Anuradhapura	5,500,000.00	5,490,852.66		
Badulla	1,440,191.16	1,426,000.00	625,975.00	625,975.00
Batticaloa	3,953,950.79	3,953,950.79		
Galle	1,119,618.54	1,119,618.54		
Hambantota	4,820,000.00	4,819,719.66	903,848.00	902,949.00
Kurunegala	5,929,656.50	5,914,135.26	800,000.00	800,000.00
Polonnaruwa	6,300,000.00	6,299,082.66		
Puttalam	5,717,495.01	5,717,495.01		
Trincomalee	4,050,000.00	4,045,119.11	3,424,600.00	3,420,579.64
Mannar			1,879,825.00	1,839,096.30
Total	**39,365,752.00**	**39,315,993.69**	**3,305,800.00**	**3,265,071.30**

6.4.5 Staff position

Table 6-15: Staff Position in Dam Safety branch

No	Designation	Approved cadre	Present Cadre	Deficit / Excess
1	Chief Engineer	1	1	-
2	Irrigation Engineer	4	1	2
3	Earth Resources Engineer	-	1	
4	Engineering Assistant	2	1	1
5	Draughtsman	1	1	-
6	Management Service Officer	2	1	1
7	Labourer	-	1	-
8	Office Assistant	1	-	1
	Total	11	7	5

6.4.6 Specific Works under Dam Safety Branch

a. World Bank Funded Integrated Watershed & Water Resources Management Project (IWWRMP)

The main objective of the IWWRMP is to restore priority Watersheds, enhance functionality of Water Resources Infrastructure, and strengthen institutional capacity of Water resources Management. IWWRMP consists with 04 components. The total allocation for Irrigation Department is US$ Mn 16.18 under 2nd component of the project. The estimates, Social Screening Reports, Environmental Screening Reports and Bidding documents were prepared to show the readiness of the project. Accordingly, 14 nos of items for head works and 07 nos of canal systems were planned under Irrigation Department.

The loan agreement for IWWRM project was signed between World Bank and Government of Sri Lanka on 22nd April 2021 and became effective since 13th May 2021. Then Technical working Group (TWG) appointed by Project Management Unit (PMU) visited 18 nos of sites and given the comments to improve the estimate. Accordingly, 12 nos of estimates were revised by accommodating the comments of TWG. Then the position of the following works as follows.

Table 6-16: Position of works under IWWRMP

No	Division	Description	Allocation (Rs. Mn)	TEC (Rs. Mn)	Present Progress
1	Ampara	Improvements to Senanayaka Samudraya Reservoir.	300.00	605.30	Bid documents are under TEC evaluation process
2	Anuradhapura	Rehabilitation of Mahalindawewa Tank	60.10	54.63	Contract was signed
3	Mapakada	Rehabilitation of Nagadeepa tank bund	129.13	-	Checking the estimate at HO
4		Improvement to Arawatta tank bund Nagadeepa scheme	30.11	41.20	Contract agreement was awarded
5	Dambulla	Improvements to Dewahuwa Scheme	103.16	102.02	Estimates was revised after the TEC comments
6	Matale	Improvements to Haththota Anicut Scheme, 1st section	106.88	60.76	Contract was awarded.
7		Improvements to Haththota Anicut Scheme, 2nd section		56.07	Contract was awarded.
8	Hiriyala	Improvements to Bathalagoda Anicut & Inlet CHL road	70.70	73.18	Contract was awarded
9		Improvements to Bathalagoda main bund road	21.74	33.96	Contract was awarded
10		Rehabilitation of D1, D2, D4 canals	46.22	57.26	DPC recommended for retendering
11		Rehabilitation of D5, D7, D7 RB canals	36.58	41.21	DPC recommended for retendering

No	Division	Description	Allocation (Rs Mn)	TEC (Rs Mn)	Present Progress
12	Hiriyala	Improvements to Bathalagoda Anicut (Mechanical works)	19.67	18.51	TEC recommended for re-estimate
13	Vavuniya	Improvements to Muhathankulam Scheme	112.00	-	Estimates checking at HO
14		Improvements to Pavatkulam tank head works	155.70	-	Preparation of estimate at DIE's office
15	Silawathura	Improvements to Akathimurippu Tank	216.46	-	Estimates checking at HO
16		Improvements to RB Viyadikulam Scheme	120.41	-	Preparation of estimate

In addition to that TOR to hire an individual consultant to prepare a TOR for the safety analysis of Seananayaka Samudraya head works in Ampara Region was prepared.

b. Sri Lanka National Committee on Large Dams (SLNCOLD) of International Commission on Large Dams

The secretariat of SLNCOLD is hosted by Irrigation Department from 1958. Financial provision has been made by the government in the recurrent vote of annual budget of Irrigation Department for the subscription payments for ICOLD. Membership of SLNCOLD is comprised with professionals in ID, MASL, CEB, NWS & DB, Universities and freelance dam consultants. There are 5 Organizations having cooperate membership in SLNCOLD. The executive council is comprised with the members above organizations while Director General of Irrigation holds the president post.

Asia Pacific Group conference was attended via online Due to the Covid 19 pandemic situation.

6.5 Land and Legal Branch

6.5.1 Objectives

- Legal matters related to lands
  - Investigating the unauthorized activities of tanks, canals and irrigation structures operated and maintained by the Irrigation Department
  - Dealing with the cases assigned by the Irrigation Department as a party due to certain activities taking place in the society.

- Acquisition of lands
  Carrying out necessary activities for the process of acquisition of private and government owned lands required for various projects and other purposes implemented by the Irrigation Department.

- Activities related to irrigation reserve lands
  Recommending or not to transfer the irrigated lands belonging to the Irrigation Department to other parties and obtaining assignments to the lands used by the Department and requests made by various parties regarding lands within the scope of the Irrigation Department related to major rivers and canals in Sri Lanka. Prepare relevant articles to inquire into the facts and inform the relevant parties and institutions.

6.5.2 Functions

- Carrying out relevant legal matters under the Irrigation Ordinance
- Acting under the State Land Acquisition Act
- Contact the Attorney General's Department and act on the relevant legal advice
- According to the Land Acquisition Act, this process is carried out in collaboration with the Regional Offices of the Irrigation Department with the intervention of the relevant Divisional Secretariats and the Ministry of Lands.
- Relevant letters prepared by the Head Office on the recommendation of the Zonal Directors of Irrigation regarding the requests and complaints of lands and other parties belonging to the Irrigation Department are prepared and the relevant institutions and persons are made aware.

6.5.3 Performance

a. The Action taken by the Director General of Irrigation against the encroachments on lands belongs to the Irrigation Department under the Recovery of possession Act.

Table 6-17: Actions taken against the encroachments on lands belongs to Irrigation Department

Range	No. of Quit notice submitted by the D.G.I.	No. of cases field	No. of submitted to confirm ownership of the land	No. of people who have voluntarily Quit
Colombo	06	-	-	09
Kurunegala	11	10	01	-
Galle	01	01	-	-

b. Respondent by various persons or organizations against lawsuits filed by the Irrigation Department against unauthorized occupants or unauthorized occupation of lands used and operated by the department and against the activities of an irrigation system or structure or other concurrent event the details of the cases filed are as follows.

Table 6-18: Details of the cases filed

Range	Department as Respondent	Department as Petitioner
Anuradhapura	01	-
Colombo	14	-
Galle	01	-
Kandy	06	-
Polonnaruwa	02	-

c. The land acquired by the Irrigation Department for activities other than land acquisition for major projects carried out by the Irrigation Department and the land acquisitions currently underway and the commencement of land acquisitions in the year 2021.

Table 6-19: Land acquisition during 2021

SI. No.	Range	Acquisition currently in effect	Acquisition of lands started in 2022
1	Badulla	04	01
2	Colombo	01	-
3	Galle	06	01
4	Hambantota	03	01
5	Kandy	02	-
6	Kurunegala	03	-
7	Monaragala	03	-
8	Puttalam	01	-
9	Head Office	-	01

6.5.4 Staff Position

Table 6-20: Staff position of the branch

No	Designation	Approved Cadre	Present Cadre	Deficit
01.	Chief Engineer	1	1	0
02.	Legal Officer	1	0	0
03.	Engineering Assistant	2	1	1
04.	Development Officer	3	3	0
05	Management Services Officer	2	1	1
06.	KKS(Labour)	1	1	0

6.6 Research Support & Process Improvement Branch

6.6.1 Objectives

The Research Support and Process Improvement (RS & PI) Branch was established in 2012 as a special unit under the restructuring of the Department. The main objective of establishing this entity is to provide continued support for improving processes associated with performing the functions of the Department through a research-oriented approach. In addition, the branch offers support and guidance for enthusiastic officers to conduct research studies in engineering, science, administration, social science, accountancy and other particular fields related to the improvement of processes in the Department and address present issues in the irrigation sector in general. The unit functions under a director with the supervision of the Additional Director General of Irrigation (System Management).

6.6.2 Functions

- Identification of process improvement needs and research needs of the Department.
- Providing necessary support and guidance to Department officers to conduct research.
- Coordination with universities and other research organizations on research opportunities.
- Carry out research and studies in collaboration with universities, other research organizations, institutes and other relevant agencies when required.
- Identify critical areas of performance lags, propose strategies for process improvement, and assist in implementing them in the Department.
- Dissemination of knowledge related to process improvement in the field of irrigation and water resources.

6.6.3 Performance

Performance of the branch and achievements during the year 2021 is given below.

a. Model study on determination of PKW configurations to improve hydraulic performance of spillways in medium tanks

Effects of climate change include increased occurrence of high-intensity rainfalls and prolonged dry spells. Therefore, improving the safety of existing reservoirs while enhancing storage capacities have become vital. Piano key weir has been identified as one of the technological interventions that can handle exceptional floods of reservoirs while improving dam safety. Following the concept, a Type A PKW was implemented at Giritale reservoir in 2013, followed by three more Type D PKWs in Rambawa, Kumbichchun Kulama and Yudaganawa tanks. However, there are several medium tanks under the purview of the Department where the need for increasing spillway capacities has been identified. Therefore, a study was carried out to identify suitable PKW configurations for spillways of different heights and discharge capacities. A Type A PKW with a height of 3.5 m was designed. The experimental setup was established at the Hydraulics Research Laboratory.

Figure 6-45: Experimental set up in 12.5 m long glass flume at Hydraulics Research Labortory

Figure 6-46: Flow over the PKW scale model of 1:20

The staff of Hydraulics Research Laboratory carried out the model fabrication and experimental setup with the guidance of IE, Research Support and Process Improvement Branch in consultation with former Director Eng. H M Jayatillake, who introduced this spillway technology to Sri Lanka. The involvement of a staff member from Kothalawala Defense University in the study facilitated the dissemination of PKW technology among academia.

The initial results of the PKW with a breadth of 5 m and an inlet height of 2 m indicate that the spillway discharge capacity can be increased by around three times compared to a conventional spillway. Apart from the identification of optimum PKW configurations for 3 m – 4 m high spillways, repairing and making the Glass flume at the Hydraulics Research Laboratory re-functioning was an achievement. The technical and financial assistance for the study was provided by the Research Support and Process Improvement Branch. The study will be continued in 2022 to determine PKW configurations to improve the hydraulics performance of spillways in medium tanks with different dam heights.

b. Study on evolution of ancient technologies related to irrigation structures and adoption of them in the current context

Revealing the development principles of ancient irrigation systems and technologies adopted are vital for effective restoration and rehabilitation in the present-day context. Therefore, the study was carried out on the ancient technologies adopted in developing village tanks in cascades, taking into account the issues involved under the effects of climate change. Based on results revealed from the studies on identifying hydrological principle behind the development of series of bunds in ancient tank cascades in small catchments and the ability to modernize the spillways for improving robustness of village tank cascades for floods, the study was extended to developing a framework for sustainable development of village tanks in cascades as an adaptation to climate change. The study focused on the bund series layout, effects of landscape transformations, the safety of the systems following the hydrological principle behind the development of village tank cascades, incorporation of new technologies and interventions to improve the water security provided by these systems. The study on the development of village tank cascades was successfully completed by identifying a framework that could be adopted when developing village tank cascades. The findings have been published in an indexed journal contributing to the present knowledgebase on the subject.

c. Publications

Framework for the sustainable development of village tanks in cascades as an adaptation to climate change and for improved water security, Sri Lanka. *Journal of Water Policy*, IWA Publishing, United Kingdom. *doi: 10.2166/wp.2021.262*

This study was a continuation of the research study carried out with support from the National Research Council, Sri Lanka, and in collaboration with the University of Moratuwa and the University of Ruhuna.

d. Process Improvement Activities: Staff Database and Progress Tracking Database of Pension Preparation

The staff and pension databases established in 2019 were maintained for the third year with necessary additions requested by parties who use them. The databases were updated regularly based on the responses received from the officers handling the personal files in the administrative units of the headquarters and the 14 regions. In addition, it was shared with accounts sections of the regions to integrate payroll data with the staff database, making it easy for easy reconciliation of staff numbers. Integration of payroll data was completed by accountants of seven regions in the year 2021. Around 5,400 staff data and 1000 archived employee data were maintained in this database for the year 2021. The updated staff database facilitates the retrieval of the required information on staff regularly.

The pension database facilitates avoiding delays in the Department's pension preparation process by tracking the progress. Around 150 staff members retired in 2021, out of which preparation of pensions of 91 retirees is in progress. In addition, pensions of 210 officers who retired before 2021is also in progress. The databases provide staff management information to relevant parties as and when required. The Branch maintained these databases as decision support tools for effective communication of personnel management information. Updating and providing required information to relevant parties to be continued in 2022.

e. Pilot Initiative of Registering Engineering Technicians in Public Sector

Following the request by the Chairman, Engineering Council of Sri Lanka, registering engineering professionals working in the Department in line with ECSL Circular No. 1/2021 was started as a pilot program for the registration of Engineering Technicians in the Public Sector. Approval of Secretary to the Ministry of Irrigation for implementing this process was granted by his letter No. MOI / AD / 09 / ECSL-ENG REG.

The registration process aimed to motivate the staff to develop their skills, receive formal recognition for their competencies, and improve the quality of the technical work they performed. After conducting a study on the current categories of service in the Department and their recruitment procedures, it was decided to direct ten candidates of the Department as the first batch for the interview held on 2021-12-17. The evaluation committee comprised the Director of the Tertiary and Vocational Education Commission, a Council member of ECSL and a mechanical/ electrical engineer as a subject matter specialist. Out of nine candidates who appeared for the interview, eight qualified for registration under ECSL as the first batch of Engineering Technicians from the public sector.

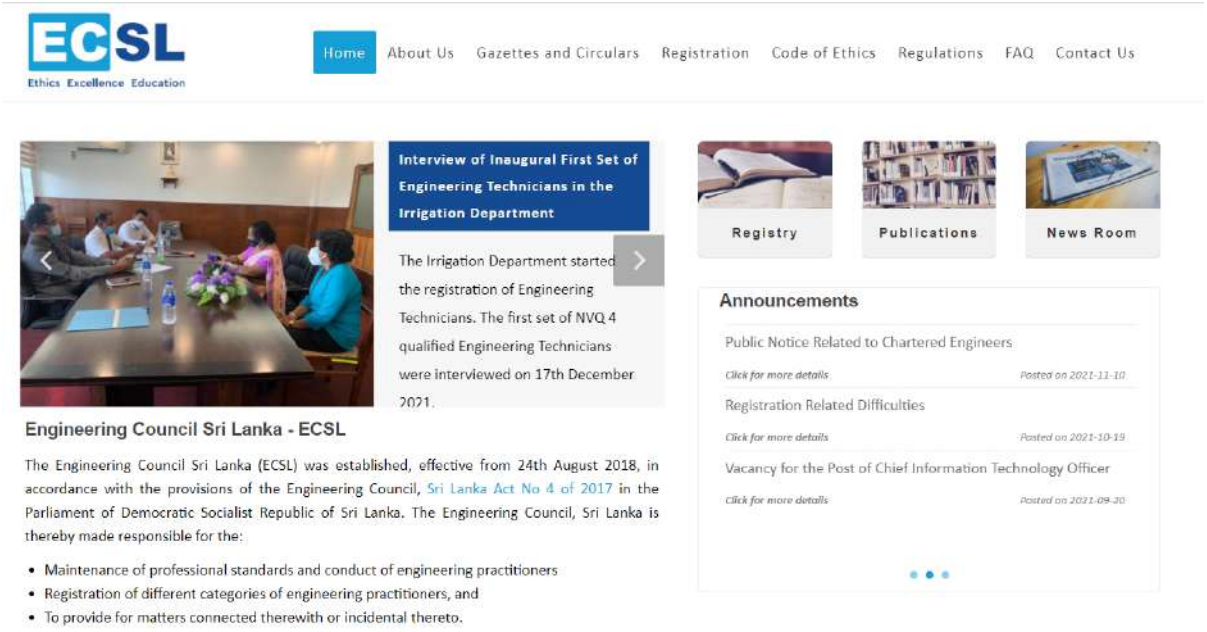


Figure 6-47: The announcement of the event on the official website of the Engineering Council

The registration process will continue, focusing on developing criteria and procedures for registering Engineering Technicians who are already employed in the public sector.

6.6.4 Staff Position

Table 6-21: Staff position of the branch

Designation	Approved Cadre	Present Cadre	Deficit
Director of Irrigation	1	1	0
Chief Engineer	1	1 (Till June 2021)	1
Irrigation Engineer	1	1	0
Earth Resources Engineer	1	0	1
Development Officer	1	0	1
Management Services Officer	1	0	1
KKS	1	0	1

7 Riverine Management Sub Department

Riverine Management Sub Department was established in January 2018 as stipulated under cabinet memorandum dated 2017-09-19 submitted by the Ministry of Irrigation and Water Resources Management. The objectives of establishing the Riverine Management Sub Department is to formulate new strategic approach associated with the water resources of Sri Lanka in development, management and conservation activities of river basins with proper co-ordination and participation of all parties including government institutions and other stake holders in order to maintain physical and ecological balance and the conservation of river basins.
Drainage and flood systems and Riverine management are the two branches under The Riverine Management Sub Department.

7.1 Riverine Management Branch

7.1.1 Functions

- Formulating natural river profiles.
- Identifying erosion and deposition reaches and existing level of erosions in rivers.
- Studying of flood behavior of main river basins.
- Analyzing flood storage capacities along the river and mapping.
- Studying energy management of the river basins.
- Identifying level of water pollution in rivers and implementing programs to prevent pollution.
- Sediment transport studies in identified rivers.
- Implementation of riverbank conservation works.
- Formulating land use policy on river reservations.
- Identifying public recreation opportunities in riverine environment.
- Conducting programs for public awareness on conservation of river basins.

7.1.2 Performance

Allocation is distributed under 9 votes for all 14 regions for carryout the works related to Riverine management.

a. Sediment transport studies and data collection

A three days (12 hours in total) training program ‘Introduction to Measurements and modeling of River Morphology’ was conducted in collaborating with Lanka Hydraulics Institute Ltd. The main objective of training is to trained staff to carry out the tasks related to Riverine management branch.
The programme included

- Theories of hydrodynamics and morphodynamics
- Aspects of river modeling
- Process of riverbank erosion and prevention mechanisms,
- Physical modeling, application, and interpretation of results,
- Basics of modeling software and Modeling of river sections, hand in experience
- Sediment sampling, classification, interpretation and demonstrations

b. Establishing river profile in major rivers

The main objective of this programme is to maintain a proper data base including morphological characteristics of the rivers. This helps to identify the damages caused to river profiles and to collect data for model studies of rivers.

The other objectives are to establish river longitudinal sections along the river, identify excess sand deposits along the river and the riverbank erosions, form appropriate restoration proposals, control inappropriate formations and control illegal river sand mining.

The surveys for river profiles were done for Ma oya, Navakiri, Mubakkumadu Aru, Moongil aru, Silikkodi River, Mahilawadduwan river, Mahilawadduwan branch river, Muthankumaraveli River etc. The obstacles for the flow of water, improvements and restorations required were identified during the survey.

Figure 7-1: Surveying of River profile of Ma-Oya

Removing silt deposit and obstacles of the water path in the locations such as Thel Hindunu tenna to Hingurugamauwa-Kuda Oya, near Hambewela Bridge in Badulla, upstream of Yan oya, Kaddi Aru, Nelu oya etc., Clearing locations such as Natural River path D/S from 0+480 to 0+990 at Ginthota Bridge, along the Bambarawanadola & LB canal Mattaka anicut in Mattaka, Clearing bottle necks at waterway Boo Oya and Ullukulam, in Kattaparichchan Aru, Darawala oya etc. were done under this vote.

Figure 7-2: Before and after clearing the neck of the waterway Darawala Oya in Nuwara Eliya Division


Figure 7-3: Improvements to spill tail canal from 15+550 to 16+000 in Kantale division


Figure 7-4: Removing obstacles of the waterway of Kaddai Aru From 0+000 to 1+650 in Muthur division

Improvements to Kaudulla spill tail canal, Correct the water path of Ginganga river at river mouth Gintota, Sand bagging in Uruboku Oya at Katuwana Town area were also done under this vote.




Figure 7-5: Sand bagging in Uruboku Oya at Katuwana Town

Figure 7-6: Correct the water path of Gin ganga River at River mouth Ginthota

c. Establishment of new Hydrological Gauging stations in Major Rivers

Two new hydrological gauging stations were established at Thalagahagoda along Nilwala river in Mathara Division and Murunkan – Silawathurai road along Malwathu Oya. Two new field units at existing gauging stations of Manampitiya and Ellagawa were constructed. Facility improvements to gauging stations such as constructing access to gauge post, fences to gauging stations, repairs to some gauging stations were carried out. Renovation of hydrological server rooms were also done.

d. Community Awareness

Short documentary films were prepared by all the ranges for the rivers using drone cameras. These films included the present situation of the rivers, highlighting the issues, proposed improvements, ongoing works carried out by the ranges as solutions for the identified issues. The main objective of this is to share the issues in rivers within a short period of time and convince the matters to the decision makers, relevant political parties and the public to overcome the issues.

e. Embankment Protection

The allocation mainly utilized to protect the riverbanks by constructing retaining walls and protecting lands in either side of the rivers from submergence during flood by constructing flood bunds. The priority was given to the places which create risk to the existing infrastructure such as main roads, bridges, railways, culverts etc. when protecting embankment.

Figure 7-7: Construction of timber pile in RB Embankment of Gal oya River near sugar factory

Figure 7-8: Improvements to Booela in Hiriyala division

Figure 7-9: Improvements to Pondukalchenai causeway downstream in Vahanery scheme in Rugam Division Batticaloa

Figure 7-10: Improvements to Naathanodai Flood Protection bund from 0+270 to 0+360 in Muthur Division

f. Water Quality Monitoring

The main objective of this is to measure the quality of water to check whether it is appropriate for domestic use for people such as washing, bathing etc. This will also help to find out the reasons for pollution such as adding industrial waste, sewerage pumps, urban impurities, etc. and aware the responsible authorities to take necessary actions. The parameters measured under this included pH, color, turbidity, hardness, Electrical conductivity, Total Alkalinity, Chlorides, Nitrate, Nitrite, Dissolved solids, calcium, Sulphate, Fluoride, Nitrite, Total coliform, COD, BOD etc. It was planned to check the water samples from selected locations from all the rivers and reservoirs.

g. Clean river program

The work carried out under this is to minimizing solid waste dumping in riverine environment including all riverbanks, flood bunds, reservations and maintain corridors along both riverbanks to maintain better river water quality and pleasant riverine environment. A trap was introduced as a pilot project to remove floating solid waste of Manik ganga at Katharagama to minimize solid waste floating to the sea.

Figure 7-11: Establishment of 100m long floating trash trap strainer at Menik Ganga river 1st Bridge Katharagama

Figure 7-12: Removing invasive plants & obstacles of drainage stream at Hettirippuwa 800-1900m in Makandura

Figure 7-13: Removing plants & obstacles in Samadara ela drainage canal 3rd section in Makandura scheme

h. River Basin Management

Mainly improving recreation facilities around rivers and anicuts were carried out under this programme. Some of the works carried out are landscaping works, construction of car parks, children parks, jogging tracks and bathing places etc. to improve the quality of life of the people around the area. In addition, Steps were constructed to improve access to reach the rivers.

Name boards were fixed along major rivers in locations near Aththanagalu Oya and road crossing in Nachchaduwa. Boundary stones were established along the reservation of Menik Ganga side in Wellawaya under this vote.

Constructing 54 m Gabion box wall at the RB side in U/S of the Kumbukkana anicut of Kumbukkana scheme Moneragala Division and forming bunds and remove existing formed bends along Hettipola Oya in stage iii in Minipe Division are some other works completed under this vote.

Figure 7-14: Landscaping around Ridi bendi ella anicut (Bathing steps)


Figure 7-15: Landscaping works Magalla in Nikaweratiya division


Figure 7-16: Establishment of boundary stones along the reservation of Menik Ganga either side in Wellawaya and in both ways of Rideebendhi ela feeder canal bund

Figure 7-17: Before and after forming bund and removing formed bends along Hettipola oya


Figure 7-18: Construction of steps to access the river and bathing place from Girigoris Bridge to Yanoya Bridge in Huruluwewa scheme


Figure 7-19: Improved location at Heenganga

i. Celebration of World River Day

United Nations launched the World Rivers Day in year 2005 and since then it is being celebrated by the people all around the world in the fourth Sunday of the month of September. Therefore,26th of September was announced as the World Rivers Day. The Irrigation Department declared the theme of the World Rivers Day as "Rights of a river".

The Riverine Management Branch arranged workshop via zoom platform due to COVID_19 with all the range offices of ID on 4th October 2021. Prof. Jayantha Obeysekera was invited as the guest lecturer to deliver lecture on 'River Morphology and River restoration'.

An allocation of Rs. 400 Mn under 9 votes has been distributed among 14 ranges during 2021. The vote wise allocation and expenditure are given in the table below.

Table 7-1: Vote wise allocation distribution and expenditure

No	Vote	Allocation (Rs.)	Expenditure (Rs.)
1	Sediment Transport Studies and Data collection 282-2-2-5-2105-(11)-1	308,000.00	308,000.00
2	Establishing River Profile in Major Rivers 282-2-2-5-2105-(11)-2	100,009,688.06	85,324,465,71
3	Establishment of new Hydrological Gauging stations in Major Rivers 282-2-2-5-2105-(11)-3	17,423,055.00	10,357,000.00
4	Community Awareness 282-2-2-5-2105-(11)-5	3,689,250.00	2,494,230.00
5	Embankment Protection 282-2-2-5-2105-(11)-6	186,231,569.00	168,348,596.64
6	Water Quality Monitoring 282-2-2-5-2105-(11)-7	1,400,000.00	1,265,173.50
7	Clean River Program 282-2-2-5-2105-(11)-8	17,575,273.73	17,097,563.24
8	River Basin Management 282-2-2-5-2105-(11)-9	73,177,195.32	61,298,756.68
9	Activities Related to River Day 282-2-2-5-2503-(11)-8	25,000.00	4,710.72
Total		**399,839,031.11**	**346,493,785.77**

The amount of Rs.53,345,245.34 was remained as liability at the end of year 2021 due to shortage of imprest and planned to settle within 2022.

7.1.3 Staff position

Table 7-2: Staff position of the branch

No.	Designation	Approved Cadre	Present Cadre	Deficit
1	Director of Irrigation	1	1	-
2	Chief Engineer	1	0	1
3	Irrigation / Earth Resource Engineer	1	1	-
4	Engineering assistant	1	1	-
5	Draftsman	1	0	1
6	Management Service Officer	2	2	-
7	Labour / KKS	1	1	-

7.2 Drainage and Flood Systems Branch

7.2.1 Objectives

- Facilitating the paddy cultivation in drainage, flood systems and saltwater extrusion schemes in low line area by maintaining proper drainage, by protecting them from floods or by protecting such areas from saltwater intrusion.
- Providing structural flood countermeasures for the areas prone to floods for protecting human lives, public and private properties and the environment from flood disasters.

7.2.2 Functions

- Operation and Maintenance of drainage and flood systems in the country.
- Rehabilitation of drainage and flood systems.
- Operation and Maintenance of and salt water extrusion schemes of the country.
- Planning new drainage and salt water extrusion schemes identifying the requirement.
- Submission of project proposals for new drainage, salt water extrusion and flood systems.
- Implementation of major and medium projects comes under drainage, salt water and flood protection scopes.
- Representing national level technical committees for technical advice and recommendations for national projects, with respect to drainage and flood issues.
- Issuing recommendations for public and private development activities which are having issues on flood and drainage.

7.2.3 Performance

a. Rehabilitation of Gin River Flood Regulation Project

Gin River Regulation Project situated in middle and lower reaches of Gin River in Galle district is a major flood control project in the country which facilitates safe paddy cultivation nearly in 5000 hectares and mitigate floods in middle and lower reaches of the Gin River basin saving people, public and private properties. Most components of the project (especially mechanical installations in 10 Pump Houses of the scheme) have been deteriorated due to completion of project life period. In 2020, all pumps (37 pumps) installation and testing works were competed. Rs. 100Mn has been allocated for this year and the expenditure at the end of year is Rs. 89.187Mn. Total estimated cost of the project is Rs.700 Mn and the cumulative expenditure of the project at the end of 2021 is 687.517 Mn.

Figure 7-20: Akuretiya Pump House

Figure 7-21: Fixing panel boards

Figure 7-22: Divithura Pump House

Figure 7-23: Hammaliya Pump House

b. Kelani North Bund Rehabilitation Project

Kelani North Bund Rehabilitation was proposed by drainage & flood systems branch in order to rehabilitate existing North bund including minor flood protection structures as it was identified during the flood- 2016 that the bunds and the minor flood structures are not in safe conditions. These structures have been built by Irrigation Department a long time ago. The project is commenced in year 2018. Annual allocation for the project is in year 2021 was Rs.170 Mn and the expenditure at the end of year is Rs.136.837 Mn and cumulative expenditure of the project at the end of 2021 is 334.744 Mn. Rehabilitation of most critical locations of the bund including riverbank protection to protect the bund was continued in the year. In addition, some minor flood protection structures were rehabilitated.

Figure 7-24: Kelani North Bund Rehabilitation

Figure 7-25: Riverbank Protection (sheet pilling work)

Figure 7-26: Improvements to Kelani North bund from 2+540 to 2+915

c. Flood Mitigation Gin, Niwala, Kelani, Kalu Basins Project

Flood mitigation in Mundeni Aru, Gin, Nilwala, Kelani and Kalu basins project was commenced in this year 2018. The objective of this project is to take urgent actions required for flood mitigations in the basin until the basin investment plan will be implemented. As the Mundeni Aru basin flood mitigation project is already commenced, more concentration was given for the Nilwala, Gin and Kalu river basins flood mitigation works. Total estimated cost of the project was revised to Rs. 2100 million considering the new projects comments in the basins. Annual allocation of the project for the year is Rs.100 Mn. and the expenditure at the end of year is Rs. 84.488 Mn. The cumulative expenditure of the project is 310.106 Mn.


Figure 7-27: Thudawa Gravity Outlet Repair (Sand blasting & painting of Gates (06 Nos)


Figure 7-28: Modification of Compress Air System

Figure 7-29: Cable Replacement of Magallagoda Radial Gate

Figure 7-30: Silencer replacement Thudawa pump house

d. Bentara Ganga Right Bank Drainage and Salt Water Extrusion Project

Bentara Ganga RB scheme is a drainage and saltwater extrusion scheme and it has about 2550 acres which has almost no productivity. Objective of this project is to increase the land productivity of the scheme. Estimated cost of the project is Rs. 298 million and major component of the project is rehabilitation of canal system, Salt Water Extrusion bunds and structures. In year 2021, Rs.100 Mn was provided for the project. The expenditure during the year is Rs. 69.95 Mn. The cumulative expenditure of the project at the end of year 2021 is 165.144 Mn.

Figure 7-31: Laddauwa Warapitiya Bund construction - Bentara

Figure 7-32: Improvements to Gammana bund at 3000 m Bentara Ganga Scheme

Figure 7-33: Improvements to Lewwanduwa Maha Amuna SWE structure in Bentara Ganga Scheme

e. Pethiyagoda Pump House

Construction of Pethiyagoda pump house was proposed in the year 2014. But due to land acquisition problem, it was a long delay to implement. Therefore, it was decided to re-design the pump house with minimum land acquisition requirements. So, a new design and estimate was prepared and procurement work was completed and waiting for cabinet approval. The estimated cost of the project is Rs.755 Mn.

f. Coordination and monitoring of operation and maintenance of Drainage & Flood Protection Systems in Sri Lanka

The Summary of the financial progress of the operation and maintenance of the Drainage and Flood Protection vote is as follows.

Table 7-3: Summary of Financial Progress -2021

Range	Allocation (Rs. Mn)	Expenditure (Rs. Mn)
Ampara	2.721	2.721
Batticaloa	4.000	3.989
Colombo	24.793	23.997
Galle	37.488	35.165
Hambantota	0.500	0.500
Puttalam	0.200	0.136
Anuradhapura	0.296	0.296
Total	**70.000**	**66.806**

7.2.4 Staff Position

Table 7-4: Staff Position of the branch

Designation	Required	Available
Director of Irrigation	1	1
Chief Engineer	1	1
Irrigation Engineer	2	0
Engineering Assistant	1	1
Draughtsman	2	1
Development Officers	1	0
Management Assistant	2	0
KKS	1	1
Labour (Acting as clerk)	0	2

8 Branches Functioning under DGI

8.1 Programme Management Branch

8.1.1 Objective

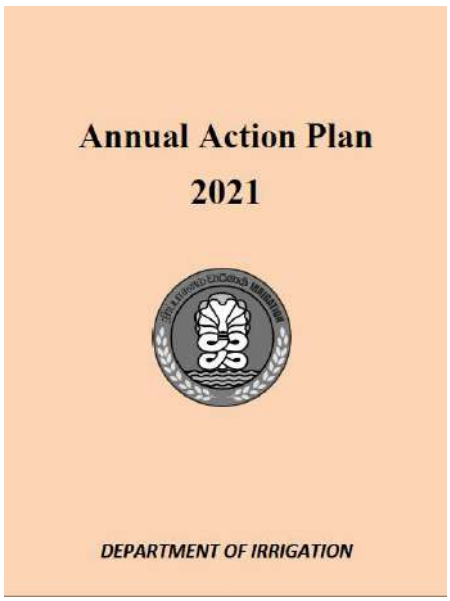
Process of capital budget planning for sustainable development and assist to ensure the implementation of the programmes and projects according to the annual action plans of the department.

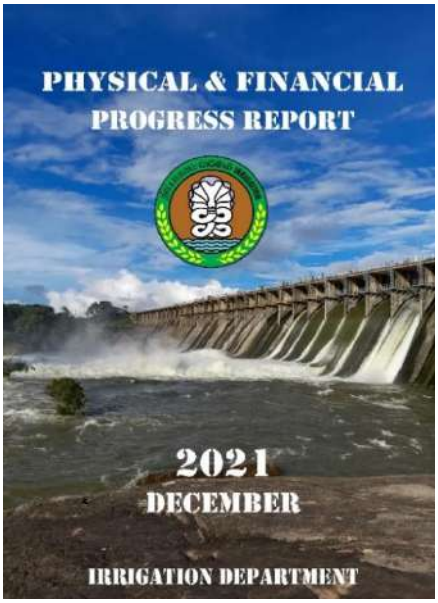
8.1.2 Functions

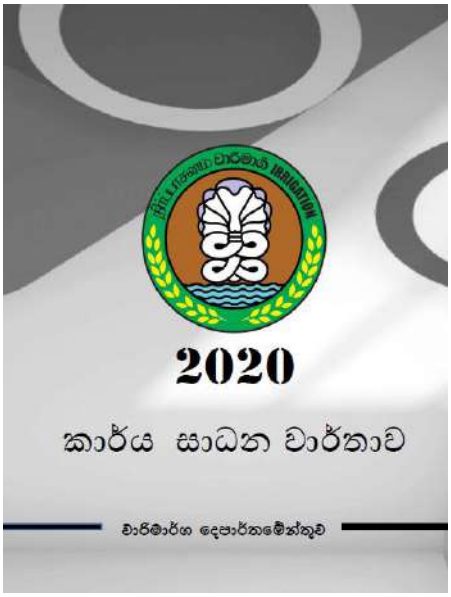
- Preparation of the Capital Budget and the long- term financial and physical programs of the Department for successive years according to the guidelines given by the Department of National Budget.
- Preparation of Implementation Programme (Action Plan) during the year according to the guidelines given by the Department of Project Management and Monitoring at the beginning of each financial year.
- Monitoring of monthly implementation Programme during the year according to the master programme prepared at the beginning of the year.
- Submission of progress report in the required format to the Ministry of Irrigation and Department of Project Management and Monitoring.
- Preparation of Administration reports, Performance reports, and Annual plans.
- Obtaining approvals for new project proposals from National Planning Department.
- Preparation of Cabinet Memorandums to get approval for new projects when required.
- Preparation and submission of information to "Committee on Public Accounts" in the Parliament.
- Submission of Performance data of the Irrigation Department to other organizations (Central Bank, Department of Census and Statistics, etc)
- Coordinate with finance branch regarding capital budget.

8.1.3 Performance

- Preparation of Monthly Financial and Physical Progress reports for 2021 (12 reports).
- Preparation of draft Capital Budget for the year 2022.
- Preparation of Annual Performance Report for the year 2020 according to the format given by the Department of Public Finance and submitted to the Ministry of Irrigation.
- Preparation of Action Plan 2021.
- Preparation of Administration Report for 2020 and printing.
- Preparation and submission of report for "Committee on Public Accounts" in Sri Lanka Parliament for the year 2020.
- Preparation of progress and investment report to the parliament-2020-2021
- Allocation transfers as requirements.
- Other related works assigned by the Director General of Irrigation.
- Organizing monthly progress review meetings







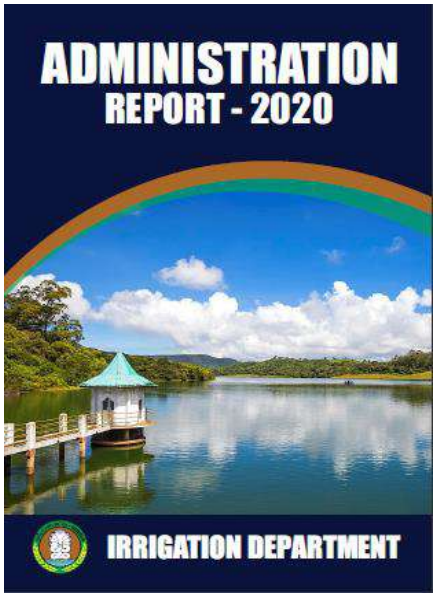


Figure 8-1: Works done by the Programme Management Branch

8.1.4 Staff Position

Table 8-1: Staff position of the branch

Designation	Required cadre	Available cadre	Excess/ deficit
Director of Irrigation	1	1	0
Chief Engineer	1	0	1
Irrigation Engineer	1	1	0
Engineering Assistant	1	1	0
Draughtsman	2	2	0
Development Officer	1	0	1
Management Service Officer	2	2	0
KKS	2	1	1

8.2 Contract Branch & Procurement Branch

8.2.1 Objectives

- Procuring Works, Goods / Services and Consultancy Services by maximizing economy, timelines and quality in procurement resulting in least cost together with high quality.
- Adhering to prescribed standards, specifications, rules, regulations and good governance.
- Providing fair, equal and maximum opportunity for eligible interested parties to participate in procurement.
- Retaining confidentiality of information provided by bidders.

8.2.2 Functions

- Preparation of Procurement Plan for procurement of Goods & Services for Irrigation Department.
- Registration of Goods & Service Providers at the beginning of every year including calling applications for registration.
- Inviting application for Registration of Contractors (Range wise) at the end of every year.
- Preparation of Bidding Document / Request for proposals under ICB / NCB / NS or any other government approved methods.
- Activities related to appointment of TEC, publication of Procurement Notices, Issuing of Bidding Documents, arranging Pre-bid Meeting, Site Visits, Bid Openings, Awarding Contracts following the approvals of DPC / MPC, preparation of Contract Agreements.
- Opening of Letter of Credits and handling with procuring of Goods.
- Preparation of vouchers for payment to suppliers.
- Organizing Department Procurement committee meetings (DPC), preparation of DPC Meeting Minutes and carrying out DPC decisions.
- Facilitating to obtain DGI's approval for Divisional and Regional Procurement Committee decisions.
- Appointing Divisional and Regional Procurement Committees under the approval of DGI / Secretary, Ministry of Irrigation.
- Issuing Contract Circulars whenever necessary.
- Assisting Head Office, Branches, Regional DII and DIEE for their procurement activities.

8.2.3 Performance of Contract Branch

a. Signed Agreements

- Procurement of providing of security service to Irrigation Department Head office premises (Contract No: ID/HO/CT/Security/NCB/2021/11)
- Providing of Janitorial Service to Irrigation Head Quarters & other buildings (Contract No: ID/HO/CT/Jan.Ser/NCB/2021/01)
- Procurement of Topographic Survey for Design works of Kumbukkan Oya Reservoir Project (ID/HO/CT/Topo.surveys/DA/2021/12)
- Geo technical Investigations for Dam site – Kumbukkan Oya Reservoir Project (ID/HO/CT/Geo.Inves./KORP/2021/13)
- Rehabilitation of tank bund (1.5km) including Rip Rap and sluice of Mahalindawewa Tank (Contract No: LK-MOMDE-124412-CW-RFB)

b. Contract Awarded

- Insurance Coverage for department vehicles 2021 (ID/HO/VEH.INS/NS/2020/05)
- Improvements to Batalagoda Anicut &Anicut CHL road from CH 0 TO 3+775 (Contract No: LK-MOMDE-123572-CW-RFB)
- Improvements to Batalagoda main bund road from CH TO 1+525 (Contract No: LK-MOMDE-123594-CW-RFB)
- Rehabilitation of Hattota Anicut Scheme (From0+000 to 5+000 of Main Canal) (Contract No: LK-MOMDE-123488-CW-RFB)
- Rehabilitation of Hattota Anicut Scheme (From 5+000 to10+175 of Main Canal) (Contract No: LK-MOMDE-234772-CW-RFB)
- Improvements to Arawatta Tank Bund in Nagageepa Scheme (Contract No: LK-MOMDE-125496-CW-RFB)

c. Procurement Notice Published

- Rehabilitation of D1,D2,D4 canals in Batalagoda Scheme (Contract No: LK-MOMDE-123600-CW-RFB)
- Rehabilitation of D5,D7,D7 RB canals in Batalagoda Scheme (Contract No: LK-MOMDE-123602-CW-RFB)
- Registration of Contractors-2022

d. Department Procurement Committee Meetings

22 Nos DPC meetings were conducted

8.2.4 Performance of Procurement Branch

a. Registration of Goods & Service Providers for Year 2022

No of Advertisements Published- 03
No of Applications Received - 305
No of Applications Registered - 287
No of Categories Registered - 82
No of Applications Rejected - 08
No of Applications Returned - 10

b. Items Procured

Table 8-2: Items procured

No	Item Description	Qty	Amount (Rs.)	Total Amount (Rs.)
1	**Computer & Computer Peripherals**			
1.1	i7 Notebook Computers - RO	02	315,374.34	2,906,729.54
1.2	i7 Notebook Computers	06	1,352,666.40	
1.3	i7 Notebook Computers - RO	02	450,888.80	
1.4	i7 Notebook Computers	03	787,800.00	
2	**Office equipment**			
2.1	A4 Scanners	06	210,000.00	979,230.00
2.2	A3 Colour Image Scanners	09	769,230.00	
3	**Geological equipment**			
3.1	Drilling Equipment	Lots	10,631,628.00	71,150,851.44
3.2	Diamond Bits & Drilling Equipment	Lots	19,501,884.00	
3.3	Diamond Core Bits and Drilling Accessories	Lot	33,055,020.00	
3.4	Spare Parts for Drilling Machines	Lots	7,962,319.44	
4	**Laboratory Equipment**			
4.1	Goods & Equipment for Uma Oya Development Project - Lot. 02, Lot. – 04	Lot	946,080.00	8,770,148.00
4.2	Goods & Equipment for Uma Oya Development Project - Lot. 05, Lot. – 06	Lot	2,372,004.00	
4.3	Goods & Equipment for Uma Oya Development Project - Lot. 08	Lot	2,451,600.00	
4.4	Goods & Equipment for EM Division - Lot. 06	Lot	695,744.00	
4.5	Goods & Equipment for EM Division - Lot. 04	02	183,600.00	
4.6	Goods & Equipment for EM Division - Lot. 02	01	966,600.00	
4.7	Goods & Equipment for EM Division - Lot. 03	01	1,154,520.00	

No	Item Description	Qty	Amount (Rs.)	Total Amount (Rs.)
5	**Machinery**			
5.1	Electrical Pumps for Halpathota (02) & Agaliya (02) Pump Houses	Local Component	2,436,750.00	24,940,693.00
		Foreign Component	7,089,172.00	
5.2	Electrical Pumps for Mahimulla (02) & Ganegama (02) Pump Houses	Local Component	2,500,875.00	
		Foreign Component	7,089,172.00	
5.3	Electrical Pumps for Kiribathawila (03), Akuratiya (02) & Hammaliya (02) Pump Houses	Local Component	2,116,800.00	
		Foreign Component	3,707,924.00	
5.4	Electrical Pumps for Indigasketiya (06) & Divithura (06) Pump Houses (3rd Part Payment)	Lot	3,031,560.00	269,064,309.50
5.5	Electrical Pumps for Hegoda (10) Pump House (3rd & 4th Part Payments)	Lot	9,266,400.00	
5.6	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 01	Lot	27,506,698.20	
5.7	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 02	Lot	8,870,472.00	
5.8	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 03	Lot	1,597,145.00	
5.9	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 04	Lot	1,041,900.00	
5.10	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 05	Lot	1,051,631.10	
5.11	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 06	Lot	3,949,560.00	
5.12	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 07	Lot	1,047,500.00	
5.13	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 08	Lot	2,263,488.00	
5.14	Steel Elements & Other Essentials for Radial Gates of Kuda Oya Reservoir - Lot. – 09	Lot	2,916,000.00	
5.15	Breaker Attachments for 20 Ton Excavators	02	5,076,000.00	
5.16	Breaker Attachments for 20 Ton Excavators – RO	01	2,538,000.00	

No	Item Description	Qty	Amount (Rs.)	Total Amount (Rs.)
5.17	Backhoe Loaders	04	62,400,000.00	
5.18	Operation & Maintenance Machinery & Field Equipment - Lot. – 01	116	4,640,371.20	
5.19	Operation & Maintenance Machinery & Field Equipment - Lot. – 03	06	296,784.00	
5.20	Operation & Maintenance Machinery & Field Equipment - Lot. – 05	04	820,800.00	
5.21	14 Ton Wheel Excavators	04	90,800,000.00	
5.22	Amphibious Excavators	01	39,950,000.00	
6	**Surveying & Leveling Instruments**			
6.1	Total Stations	02	2,850,000.00	15,362,100.00
6.2	Vis Spectrophotometer	01	1,212,100.00	
6.3	Automatic Levels	100	11,300,000.00	
7	**Hydrological Instruments**			
7.1	GPS Receivers	02	220,000.00	4,204,820.00
7.2	Universal Current Meter	01	3,116,320.00	
7.3	Smart Mobile Phones	45	868,500.00	
8	**Other**			
8.1	Network Switches - Lot. – 02	1	33,480.00	5,773,650.00
8.2	Network Switches - Lot. - 01, Lot. 03	Lot	163,620.00	
8.3	Upgrading of Existing ArcGIS Desktop Software and Get Back Maintenance	Lot	504,000.00	
8.4	Re-design of Irrigation Department Website	System	379,750.00	
8.5	Goods & Equipment for Media Unit - Lot – 03	2	1,442,800.00	
8.6	Procurement Notice	-	3,250,000.00	
Grand Total				**403,152,531.48**

8.2.5 Staff Position

Table 8-3: Staff position of the contract and procurement branch

No	Designation	Approved Cadre	Present Cadre
1	Director of Irrigation	1	1
2	Chief Engineer	1	0
3	Irrigation Engineer	2	0
4	Engineering Assistant	5	4
5	Management Service Officer	6	3
6	Office Assistant	3	1
7	Labour	-	1

8.3 Training Branch

8.3.1 Objectives

To increase the knowledge, enhance the skills and develop attitude of the employees for delivering a productive service through increasing awareness and providing motivation.

8.3.2 Functions

- Arrangement of training programs according to the recruitments all the service categories of the department.
- Coordination of all the foreign training programs (short term, refresher courses, postgraduate diplomas, Masters, and PhD degrees) with External Resources Department and providing necessary assistance to the selected candidates for participation of the programme.
- Conducting recruitment exams and efficiency bar exams according to the SOR of the departmental services.
- Conducting efficiency bar examinations of other service where necessary.
- Management of pre-service training programme.
- Management of in -service training programme.
- Coordination of all the local training programs with training institutes like Universities, SLIDA, SLF ect.. and providing necessary assistance for participation of the programme.
- Coordination of all the postgraduate diplomas and Masters degrees programmes with the universities and providing necessary assistance to the selected candidates for participation of the programme.
- Providing necessary arrangements for the training requirement of the candidates in other organizations such as Universities, Technical Collages, Government and private institutions.
- Coordinate with Irrigation Training Institute Galgamuwa when and where necessary.
- Arranging in-plant training for the university and technical College student.

8.3.3 Performance

a. Arrangement of Efficiency bar Examinations

Table 8-4: Examinations conducted during the year 2021

No	Name of the Examination	Dates Conducted	No. of participants
1	Senior Technical Examination (Practical)	2021.03.15 – 2021.03.19 2021.04.05 – 2021.04.09 2021.04.19 – 2021.04.23	96
2	First Efficiency Bar Examination for Engineering Assistants Grade III	2021.10.15	41
3	Second Efficiency Bar Examination for Engineering Assistants Grade II	2021.11.03	71
4	Third Efficiency Bar Examination for Engineering Assistants Grade I	2021.12.15	30
5	First Efficiency Bar Examination for Technical Aids Grade III	2021.11.29	53

No	Name of the Examination	Dates Conducted	No. of participants
6	First Efficiency Bar Examination for Storekeepers Grade III	2021.11.29	1
7	First Efficiency Bar Examination for Engineers in SLES Grade III	2021.08.17	19
8	Open Recruitment Examination for SLTS and Engineering Assistants Service to the Irrigation Department	2021.04.24, 2021.04.25	653

b. In plant training programme

It was arranged in plant training programme for 70 students from the university and technical College student

c. Details of Foreign Programmes

Table-8-5: Details of Foreign Programmes – 2021

No	Name	Designation	Course	Country	Duration	Starting Date	Funding Agency
1	Eng. T.Suganthalingam	IE – WM	Training on Sustainable Basin Management in a Context Changes	Thailand (Online)	21 D	1-Sep-21	Government of India
2	Eng. W.M.S.Priyankara	IE – PP & D	Practical Methodology for Flood Control Planning and River Basin Management in Asia Region	Japan (Online)	24 D	1-Feb-21	JICA
	Eng.S.Kisokanth	IE – PP & D					
3	Eng. S.Nerojan	CE(Act.) – C&D	Master's Degree in Flood Disaster Risk Reduction	Japan	01 Year	28-Sep-21	JICA
	Eng. P.M.A.U. Samarathunga	IE – Uva Zonal					
4	Eng. B.M.D.N. Abeyrathna	IE _ MC	The Project for Human Resource Development Scholarship by Japanese Grant Aid (JDS)	Japan	02 Years	1-Nov-21	JICA
	Eng. W.P.N.Weerasinghe	DIE - Bibile					
5	Eng. W.M.M.P.Kumara	DIE - Matara		Japan (Online)		17-May-21	JICA
6	Eng. S.Nerojan	CE – C & D	Seminar on Management of International Engineering Projects in Sri Lanka	China (Online)	10 D	11-Aug-21	Shanghai Business School
	Eng. M.D.T.W.Kumari	IE – C & D					
	Eng. D.D.T.Dassanayake	IE – C & D					
	Eng.M.A.M.Rikas	IE – C & D					
	Eng. L.S.Sooriyabandara	DI – Galle					
	Eng. S.T.Siriwardhana	IE – Hambanthota					
	Eng.S.Manivannan	IE – Mannar					
	Eng.D.M.M.P.Disanayake	DIE – WG& BS					
	Eng. K.Nithushan	IE – Badulla					

d. Details of Local Training Programmes

Table-8-6: Local Training Programmes in 2021

No	Name of the programme	Institute	Service Category	No. of participants	Programme duration	Cost per Head (Rs)	Total Cost (Rs)
1	Advance certificate course in public procurement & Asset Management	DLC	EAA	10	3 months	28,500.00	285,000.00
2	Training programme on Introduction to Graphic Application	Softwawe	All	25	1 day	2,200.00	55,000.00
3	CPD course (GIS)		IEE	1	2 weeks	10,000.00	10,000.00
4	Certificate course for EB	University of Sri Jayawardhanapura	Draughtsman	16	3 months	17,500.00	280,000.00
5	Training programme for primary level staff officers	Head Office	Primary Level Officers	75	2 days	1,200.00	90,000.00
6	STE refresher course for EAA	Head Office	EAA	100	6 days	300.00	30,000.00
7	International conference - Sri Lanka Geo technical society	Sri Lanka Geo technical society	IEE	4	1 day	4,000.00	16,000.00
8	Interviewing the Engineering technicians in Irrigation Department of ECSL for registration	Head Office	Engineering Technicians	10	1 day	1,150.00	11,500.00
9	workshop on " Technical Guideline for village tank desilting'	ITI	IEE	4	2 days	-	-
10	Seminar on Essential for effective Contract Administration, performance management and supervision in infrastructure projects	IIESL	DI, IE & EA	3	1 day	-	-

e. Details of Post Graduate Programs

Table 8-7: Post graduate programs in 2021

No	Name of the programme	Institute	Category	No. of participants	Duration	Amount (Rs)
1	Master's degree in Structural Engineering	University of Ruhuna	IEE	8	2 Years	2,592,000.00
2	Master of Business Management Degree	University of Ruhuna	Accountant	2	2 Years	278,000.00
3	M.Sc in Engineering Geology	University of Moratuwa	ERE	1	2 Years	352,000.00
4	M.Phil Degree Program in Nature Based Solutions for slope protection of riverbanks in Sri Lanka	University of Moratuwa	IEE	1	3 Years	303,000.00

8.3.4 Staff Position

Table -8-8: Staff Position of the branch

No	Position	Approved Cadre	Available Cadre
1	Director of Irrigation	1	1
2	Chief Engineer	1	1
3	Irrigation Engineer	1	1
4	Engineering Assistant	4	3
5	Management Service Officer	3	1
6	Development Officer	1	1
7	Office Assistant	1	1

8.4 Works General and Building Services Branch

8.4.1 Objective

- Facilitate for effective utilization of resources within head office premises.
- Assist DGI in parliamentary consultative meeting, public grievances on miscellaneous matters and matters discuss in all media.
- Facilitate for smooth functioning of all categories of services in regional office as well as head office.
- Facilitate for comfortable working environment for employees of ID.

8.4.2 Functions

- Reservation of accommodations in 42 number of field circuit bungalows all over the country.
- Upkeep and maintenance of PABX inter-communication services including departmental telephone directory.
- Provision of garage facilities for departmental vehicles attached to head office staff and private vehicles of head office staff.
- Provision of approval for social activities within the head office premises organized by the welfare society and for Auditorium facilities for different departmental activities.
- Management of office space by rearranging & allocating rooms for different branches in the department premises.
- Arranging holiday pay approval forms of all staff and field officers in the department for DGI's approval & for the secretary's approval.
- Coordinating leave approvals of regional directors by maintaining diary abstracts.
- Organizing quarterly forums of Directors conference including preparation meeting minutes.
- Miscellaneous matters which are not assigned under the functions of other branches such as Parliamentary consultancy committee matters, public petitions, the nomination of staff for different committees requested by other departments & organizations, etc.
- Construction, maintenance & improvement works in Irrigation Head office, Lot 34 premises and Quarters in Rathmalana.

8.4.3 Performance

a. Works General

- Organizing official functions such as ceremonies chaired by Hon. Minister and other meetings in year the 2021.
- Preparation of compressive answer with the coordination of relevant sub department/ RDI / Project for the questions arise from parliament and parliament consultative committee meetings and also response to the public petitions/complaints/appeal coming from various institutions on Irrigation related problems. All those matters attended during the year 2021 can be classified as follows.

Table 8-9: Progress of Preparation of comprehensive answers

Ministry/Department/Institution	Numbers received	Replied with solutions
Parliament Question	10	10
Ministerial Advisory Committee	30	30
Public petitions (Presidential office/ Prime Minister's office /Ministry of Irrigation)	1500	1400

- Repaired the PABX inter communication services and direct telephone lines at Irrigation Secretariat.
- 750 number of reservations among 42 Irrigation Department field inspection Bungalows.
- Providing facilities required for management of pandemic situation.

b. Building & Building Services

- Improvement and renovation of buildings to achieve the architectural view
- Construction of new building in lot 34.
- Re arranging floor area of the head office premises.
- Maintenance and improvements to the electrical system and providing energy saving electrical fittings
- Solid waste management of the ID Secretariat
- Maintenance and repairs of Drainage, Sewerage and Water Supply system of the building
- Maintenance of AC systems of the buildings
- Landscaping of the ID secretariat and Lot 34 area
- Maintenance of Department roads
- Monitoring the Janitorial and Security services
- Management of the Canteen services
- Providing necessary facilities to various functions of the Irrigation Department.

8.4.4 Expenditure

Table 8-10: Expenditure during the year 2021

Vote particulars	Allocation (Rs. Million)	Expenditure (Rs. Million)
Irrigation Secretariat 282-1-2001-11-1	20.0	20.0
Rehabilitation of Rathmalana Housing Scheme 282-1-2001-11-3	10.162	10.162
Purchase of Communication Equipment 282-2-2-2103-11-4	9.658	1.443
Management Supporting facilities for Human Resources Development 282-2-2503-11-2	0.8	0.8
Welfare facilities 282-2-2503-11-4	2.415	2.187

8.4.5 Staff position

a. Works General

Table 8-11: Staff cadre year 2021

No	Designation	Approved Cadre	Present Cadre	Deficit/Excess
01	Director of Irrigation	01	01	-
02	Chief Engineer	01	01	-
03	Irrigation Engineer	01	01	-
04	Engineering Assistant	01	01	-
05	Development Officer	01	00	Deficit
06	Management Assistant	03	03	-
07	KKS	03	03	-
Total		**11**	**10**	

b. Building & Building Services

Table 8-12: Staff cadre year 2021

No	Designation	Approved Cadre	Present Cadre	Deficit/Excess
01	Divisional Irrigation Engineer	01	01	
02	Divisional Assistant	01	00	
03	Engineering Assistant	06	04	Deficit
04	Technical Assistant	07	05	Deficit
05	Development Officer	02	00	Deficit
06	Management Assistant	05	02	Deficit
07	Draftsman	01	01	
08	Storekeeper	02	01	Deficit
09	Store helper	02	00	Deficit
10	KKS	03	02	Deficit
Total		**30**	**16**	

8.5 Machinery Branch

8.5.1 Objectives

Maintenance repair and up keeping all vehicles, machinery and hydro mechanical structures attached to Irrigation Department.

8.5.2 Functions

- Administration and coordination of all Mechanical Workshops of the Irrigation Department to obtain optimum quality on mechanical works.
- Maintenance and repair of all vehicles and machinery in the Irrigation Department.
- Design, fabrication, installation and necessary repairs of hydro mechanical structures.
- Allocation of machinery within Divisions to achieve optimum utilization and efficient use.
- Assisting DII (Region) in flood and disaster situation by providing mechanical staff and other support.
- Preparing specifications to Vehicles, Machinery and Equipment and attending to technical evaluations according to the procurement plan.
- Development of mechanical workshops with new technologies and improvements of buildings.
- Development of skills of mechanical staff by providing training opportunities.
- Introducing innovative mechanical solutions.
- Implementing Financial Regulations on accident and losses.
- Implementation of productivity programs within mechanical section.

8.5.3 Performance

List of repairs completed by the mechanical workshops under the mechanical vote particulars are given below. In addition to this list, there are other hundreds of vehicles and machinery repairs completed by mechanical workshops from other votes.

Table 8-13: Repairs completed by the mechanical workshop

Type of repair	No of repairs
Machinery & Equipment	173
Tractors	15
Lorry	18
Vehicle	204

Table 8-14: Some of the special works and repairs done by workshops

Item No	Special work & Description	Work Done by
1	Fabrication of steel ladder and roof for "Upasampadha Pinkama" at Kaduwela	Rathmalana Central Workshop
2	Fabrication and installation of Anicut Gates at Benthara	Rathmalana Central Workshop
3	Fabrication and Installation 5Nos of New gates at Bomiriya Annicut, Kaduwela	Ampara Regional Workshop
4	Fabrication 9Nos of New gates at Alayadiodei Annicut	Ampara Regional Workshop
5	Fabrication 6Nos of New gates at Sellawali Annicut	Ampara Regional Workshop
6	New painting facility declare open by DGI at Halpathota	Halpathota Regional workshop
7	Tinkering and Re-Painting of 32-0214 Jeep	Halpathota Regional workshop
8	Repairing and Painting of 31-8816 Jeep	Halpathota Regional workshop
9	Fabrication and Installation Lunumadawella Gates	Lunugamvehera Regional Workshop
10	Repairing and Installation of Kirama Oya Pansala Amuna Radial Gate	Lunugamvehera Regional Workshop
11	Repairing and Painting of Uma Oya Project Lorry	Lunugamvehera Regional Workshop
12	Fabrication and Installation of Muruthawela Tank Spill way Handrail	Lunugamvehera Regional Workshop
13	Fabrication and Installation of 40 Nos anicut gates and Hoisting mechanism in Batticloa Range	Rambewa Regional Workshop
14	Fabrication and Erection of Malwathu Oya Workshop Building	Rambewa Regional Workshop
15	Repair and Paint Mahindra Tractors	
16	Fabrication and Installation of anicut gates for Nihal Siriwardhana Anicut	Rambewa Regional Workshop
17	Repair of Inginimitiya RB sluice gate gear box	Puttalam Regional Workshop
18	Construction of Mechanical Workshop Yard at Puttalam	Puttalam Regional Workshop
19	Repair of 28-0378 Water Bowser	Puttalam Regional Workshop
20	Replacing of Radial gate cables in Inginimitiya	Puttalam Regional Workshop
21	Fabrication of Kumara Ella anicut gates in Bakamuna	Minneriya Regional Workshop
22	Fabrication of water tank tower at Minneriya	Minneriya Regional Workshop
23	Fabrication of Green House at Kaudulla DIE's office	Minneriya Regional Workshop

Figure 8-2: Fabrication of steel ladder and roof for “Upasampadha Pinkama” at Kaduwela

Figure 8-3: Fabrication and Installation 5Nos of new gates at Bomiriya Annicut, Kaduwela

Figure 8-4: Fabrication 9Nos of New gates at Alayadiodei Annicut

Figure 8-5: Fabrication 6Nos of New gates at Sellawali Annicut

Figure 8-6: New painting facility at Halpathota

Figure 8-7: Repairing and Installation of Kirama Oya Pansala Amuna Radial Gate

Figure 8-8: Tinkering and Painting of 32-0214 Jeep

Figure 8-9: Repairing and Painting of 31-8816 Jeep

Figure 8-10: Fabrication and Installation of OU2 and Lunumadawella Gates

Figure 8-11: Fabrication and Installation of Muruthawela Tank Spill way Handrail

Figure 8-12: Fabrication and Installation of 40 Nos anicut gates and Hoisting mechanism in Batticloa Range

Figure 8-13: Fabrication and Erection of Malwathu Oya Workshop Building

Figure 8-14: Repair and Paint Mahindra Tractors

Figure 8-15: Repair of Inginimitiya RB sluice gate gear box

Figure 8-16: Repair of 28-0378 Water Bowser

Figure 8-17: Replacing of Radial gate cables in Inginimitiya

Figure 8-18: Fabrication of Green House at Kaudulla DIE's office

8.5.4 Financial Progress

Table 8-15: Financial progress of year 2021

No	Vote	Description	Received Allocation (Rs.Mn)	Expenditure (Rs.Mn)
01	282-2-2-0-2001 (II) 17	Improvements to Mechanical Workshop	5.00	4.86
02	282-1-1-0-2002 (II)	Improvements to Plant Machinery & Equipment	5.00	4.99
03	282-1-1-0-2003 (II)	Improvements to Vehicles	20.00	18.895
04	282-2-2-0-2002 (II)1	Repairs to Plant, Machinery and Equipment	105.00	92.448
05	282-2-2-0-2003 (II)	Repairs to Vehicles	35.00	33.894
06	282-2-2-0-2103 (II) 1	Purchase of Machinery	166.00	162.306
07	282-2-2-0-2013 (II) 6	Purchase of Equipment for Mechanical Workshop	17.950	7.974

8.5.5 Write off of Accident files

Predominant progress was achieved in settlement and write off of accident files during year 2021.

No of accident files active as at 01.01.2021 - 62
New accident files opened within the year 2021 - 27
No of files write off within year 2021 - 25
Balance active accident files as at 31.12.2021 - 64

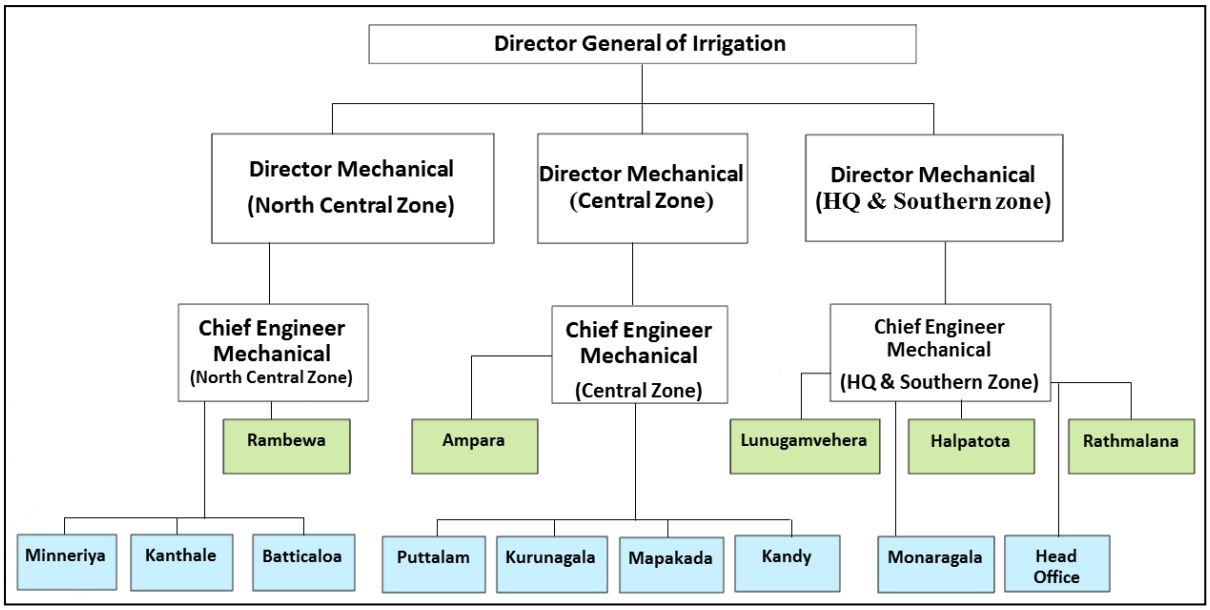
8.5.6 Purchase of machinery and equipment in 2021

During the year 2021 procurements were done and following machines were purchased for the revival of the Irrigation Department.

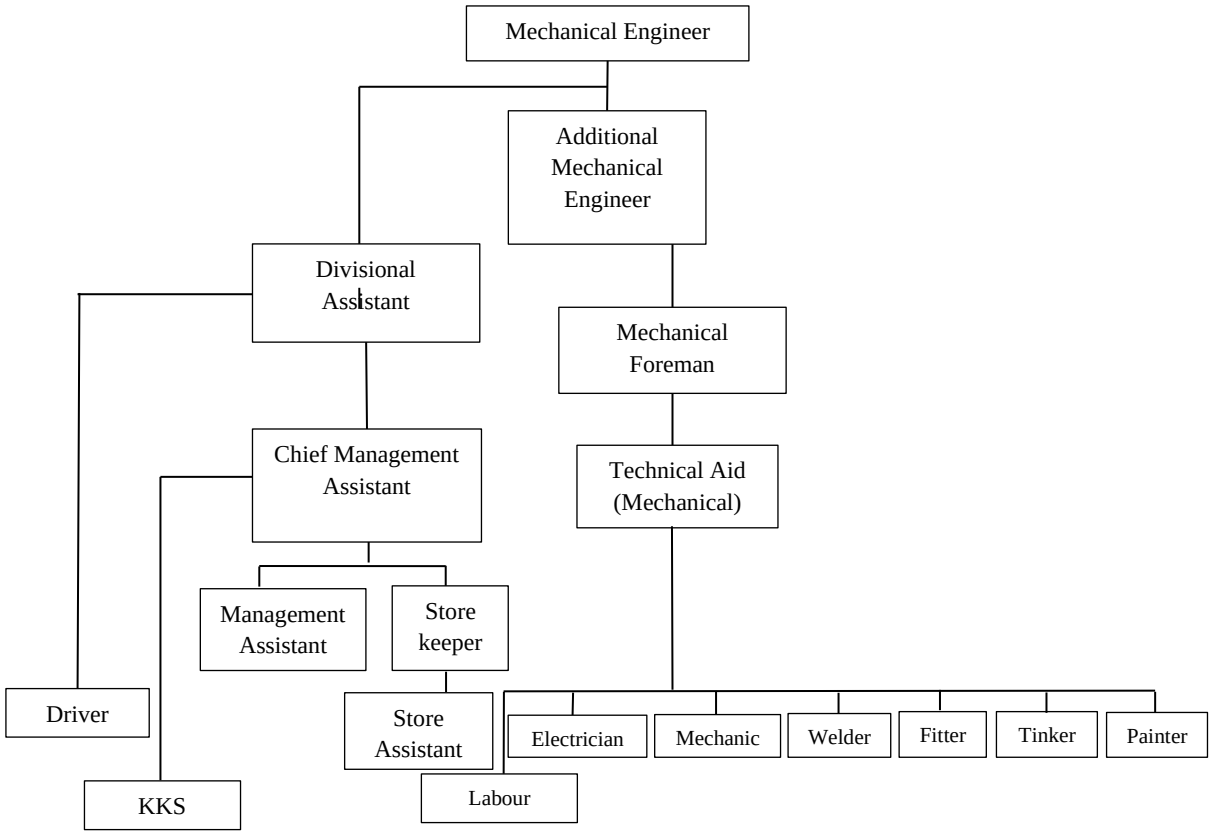
Table 8-16: Machines purchased for the revival of the Irrigation Department

Type		Number	Expenditure (Rs.Mn)
Machine	Wheel Excavators	04	90,800.00
	Backhoe Loaders	04	62,400.00
	Breaker Attachments	02	5,076.00
	Breaker Attachments	01	2,538.00
Equipment	Gap-Bed Lathe Machine	02	9,950.00
Total			170,764.00

8.5.7 Organization chart of Machinery Branch



8.5.8 Organization chart of a Mechanical Workshop



8.5.9 Staff Position

Table 8-17: Staff position of the branch

Item No.	Positions	Head Office	CEM_Southern	Rathmalana	Halpathota	Lunugamvehera	Monaragala	CEM_Central	Ampara	Mapakada	Kandy	Puttalam	Kurunagala	CEM_NC	Rambewa	Kanthale	Minneriya	Batticaloa	Total
1	Director Mechanical	2																	2
2	Chief Engineer (Mechanical)		1					1						1					3
3	Mechanical Engineer	3		3	2	1	1		2	1	1	1	1		3	1	1	1	22
4	Divisional Assistant																		0
5	Development Officer	2	1		3	1		1					1	1					10
6	Mechanical Forman	1		2	2	2							1		1				9
7	Management Assistant	3		5	5	2		1	4	1	1	1	2	1	4		1		31
8	Store Keeper			3		1	1		1	1			1		3	1	1	1	14
9	Technical Aide	1		3	2	1			2			1			1	1			12
10	Driver	39	1	2	5	5	3		4	2	1		2	1	4	1	1		71
11	Electrician	1		2					2				1		1			1	8
12	Mechanic	3		6	4	5	1		12	2	1	1	2		8	2	2	1	50
13	Welder			1	1	3	1		1	1		1	1		3	1			14
14	Tinker												1						1
15	Painter			2					1						1				4
16	Latheman				2	1				1									4
17	Fitter			1									1					1	3
18	Machinist				1				1										2
19	Blacksmith			1	1														2
20	Store Assistant	1		2			1			1			1	1	2	1	1		11
21	Operator				1				2	1									4
22	Tractor Operator	3		1			1	1	1	1							1		9
23	Water Pump Operator								1										1
24	Greaser								2	1									3
25	Lorry Helper			2		1	1		3	1					2				10
26	KKS	2	1	1	1	1		1	1	1	1	1			1	1			13
27	Field Watcher			4	1	3			2	2		1	2		3	1	2		21
28	Maintenance Labourer	2		3	2	1			3	2						1	1	1	16
39	Lobourer	9	1	2	9	4	3	1	20	5	4	6	4	1	11	2	1	1	84
Total		**72**	**5**	**46**	**42**	**32**	**13**	**6**	**65**	**24**	**9**	**13**	**21**	**6**	**48**	**13**	**12**	**7**	**434**

8.6 Internal Audit Branch

8.6.1 Objectives

The main objective is giving an independent certificate on practicing internal control systems and activities for good governance based on risk assessment.

- To participate in the system of internal control.
- To carry out inquiries and independent appraisal of controls and soundness and adequacy of internal checks adopted in the prevention and detection of errors and frauds.
- To assist the Accounting Officer in ascertaining progress on works and schemes.

8.6.2 Functions

- Ascertain systems of internal checks and controls in operation for prevention of errors and frauds.
- Ascertain reliability of accounting and other records, for preparation of correct financial statements.
- Ascertain the extent to which department's assets are safeguarded from losses of all kinds.
- Ascertain the compliance with Establishment Code, Financial Regulations, Department Circulars and others issued by relevant agencies.
- Ascertain effectiveness of system of internal controls adopted in preventing and detecting waste and idle capacity.
- Examine accounting procedures and its operations which have any financial implications and verifying the safety, economical and proper use of property and assets of the Department.
- Appraisal of progress of works, schemes projects and extent to which programs and schedules are on target.
- Carryout special investigations when necessary.
- Convene and coordinate the activities of Audit and Management Committee of the Department.

8.6.3 Performance

In relation to the financial year commencing from January 2021, the Internal Audit Branch has submitted eleven (11) field audit reports and twelve (12) voucher audit reports under the bad condition of Covid-19. All reports were presented to Director General of Irrigation for kind attention. Copies of all reports are sent to the Auditor General and Director General, Audit & Management Department.

Further, paid documents for the financial year 2021 of 83 paying units including offices of District Director of Irrigation, Divisional Irrigation Engineers and Projects under the Department were audited by the Internal Audit Branch. Arrangements were made to convene Three (03) Audit and Management Committees , one for each quarter under the Chairmanship of the Director General of Irrigation during the year. A member of the Department of Management Audit of the General Treasury represented this Committee in each quarter of the financial year together with the representative of the Auditor General as an Observer.

8.6.4 Staff Position

Table 8-18: Staff position of the branch

No	Designation	Approved Cadre	Present Cadre	Deficit/Excess
1	Chief Internal Auditor	1	1	-
2	Internal Auditor	1	1	-
3	Irrigation Engineer	1	-	1
4	Draughtsman	2	1	1
5	Engineer Assistant	2	1	1
6	Management Service office & Related Service	11	8	3
7	K.K.S	1	1	-
	Total	19	13	6

9 Finance Sub Department

The Director General of Irrigation is Functioning as the Accounting Officer of the Irrigation Department. He is responsible to the Parliament through the Chief Accounting Officer in respect of all finance activities of the Department. The Finance Sub Department is headed by Chief Financial Officer who is supported by twenty one (21) Accountants. Out of them, one (01) post in Head Office was covered under acting arrangements.

9.1.1 Functions

- Preparation of Annual Expenditure, Revenue and Advance Account Estimates
- Annual imprest control
    - Domestic Fund
- Effecting all payments under
    - Capital Expenditure
    - Recurrent Expenditure
- Release of allocations and maintaining control ledgers
- Submission of monthly Summary of Accounts
- Submission of claims to Reimburse funds from donor agencies
- Submission of monthly financial progress reports
- Attending to contract management activities
- Maintaining a close liaison with General Treasury, Finance Ministry, Line Ministries and other institution on finance matters.
- Submission of Annual Appropriation account, Public Officers Advance Account, Deposits Account to the Auditor General.
- Asset management, conduct of Annual Board of Surveys and dealing with Disposals, write off applications etc.
- Submission of replies to Audit Queries
- Submission of applications for Refund from Revenue etc.
- Representing the Audit and Management committees.
- All other accounting related activities.

9.1.2 Expenditure incurred under other Department Votes-2021

In addition to the Department budget, Payments made on behalf of other Ministries and departments amounting to Rs. 4,554.6 mn during the year.

9.1.3 Write offs during the year 2021

(A) Losses not written off are accumulated over the past years and actions were taken to expedite to write off the losses. Amounts written off during 2021 are as follows.

Table 9-1: Amounts written off during 2021

Department/Ministry	Allocation (Rs)	Total Expenditure (Rs)
Ministry of Water Supply **(166)**	303,167,325.63	18,031,721.01
Ministry of Irrigation **(198)**	3,772,862,344.50	2,554,576,141.58
State Ministry of Tanks, Reservoir & Irrigation Development Related to Rural Paddy Field **(429)**	1,708,787,509.00	1,651,913,783.63
State Ministry of Urban Development, Waste Disposal & Community Cleanliness. **(411)**	85,900,000.00	318,890.62
State Ministry of Canals and Common Infrastructure Development in Settlements in Mahaweli Zone. **(428**)	654,000,000.00	325,189,273.89
Department of Agriculture **(285)**	4,595,000.00	3,592,906.10
Total	**6,529,312,179.13**	**4,553,622,716.83**

(I) Losses of Stores

	No	Amount (Rs)
Losses below Rs. 25,000/-	02	23,330.75
Losses over Rs. 25,000/-	05	980,616.25
Total	07	**1,003,947.00**

(II) Damages vehicle Accidents recovered/written off

	No	Amount (Rs)
Losses below Rs. 25,000/-	05	94,285.00
Losses over Rs. 25,000/-	20	8,711,053.53
Total	**25**	**8,805,338.53**

9.1.4 Advance Account Activities

Total Amount of Loans Granted

Type of loan	No of Loans granted	Amount (Rs)
Distress Loan	882	130,500,718.22
Festival Advances	2544	25,440,000.00
Special Advances	359	1,436,000.00
Cycle Loans	1	6,000.00
Total	**3786**	**157,382,718.22**

Loans/Advances were paid within the Advance Account limit provided for the year 2021.

Table 9-2: Loans/Advances paid during 2021

Property Loans	No of Applications Received	No of Applications Submitted to the bank	Amount Recommended (Rs)
Applications on Property Loans Recommended during the year	31	31	78,666,920.00

9.1.5 Deposit Accounts Activities

Receipts & payments of pension gratuities of retired employees and collections and payments of refundable miscellaneous deposits are made through the deposit accounts and its financial position is as follows.

Table 9-3: Deposit account activities (Rs)

Description	Deposit A/C No					
	1/41	13/36	16/8	18/10	2/189	Total
Opening Balance	2,794,680,42	213,044,362.20	612,555,273.99	1,672,318.84	11,828,070.67	**841,894,706.12**
Receipts	1,177,456.32	417,303,367.46	314,596,780.42	1,636,950.53	11,820,564.50	**746,535,119.23**
Payments	2,500,503.70	416,974,003.00	623,391,073.06	1,433,204.76	7,367,427.92	**1,051,666,212.44**
Closing Balance	**1,471,633.04**	**213,373,726.66**	**303,760,981.35**	**1,876,064.61**	**16,281,207.25**	**536,763,612.91**

9.1.6 Imprest released During Year 2021

Table 9-4: Imprest released during year 2021 Rs. '000

Division	Capital	Recurrent	Total Released
Head office	1,912,679	579,851	2,492,530
Ampara	540,290	230,800	771,090
Anuradhapura	1,470,400	252,050	1,722,450
Bandarawela	234,600	168,300	402,900
Batticaloa	469,000	101,800	570,800
Colombo	546,761	168,700	715,461
Galle	373,750	244,270	618,020
Hambantota	437,620	205,800	643,420
Kandy	563,400	186,250	749,650
Kurunegala	670,500	186,300	856,800
Monaragala	579,800	126,700	706,500
Polonnaruwa	559,050	138,410	697,460
Puttalam	358,300	74,800	433,100
Trincomalee	691,300	102,700	794,000
Vavuniya	562,500	82,000	644,500
Morana Project	210,000	-	210,000
Kalugal Oya	44,500	-	44,500
Yan Oya	1,289,891	-	1,289,891
Uma Oya	1,634,000	-	1,634,000
Ellewewa	58,500	-	58,500
Himbiliyakada	155,900	-	155,900
Mundeniaru	107,200	-	107,200
Kudawilachchiya	42,000	-	42,000
LC Payments	18,000	-	18,000
Total	**13,529,941**	**2,848,731**	**16,378,672**

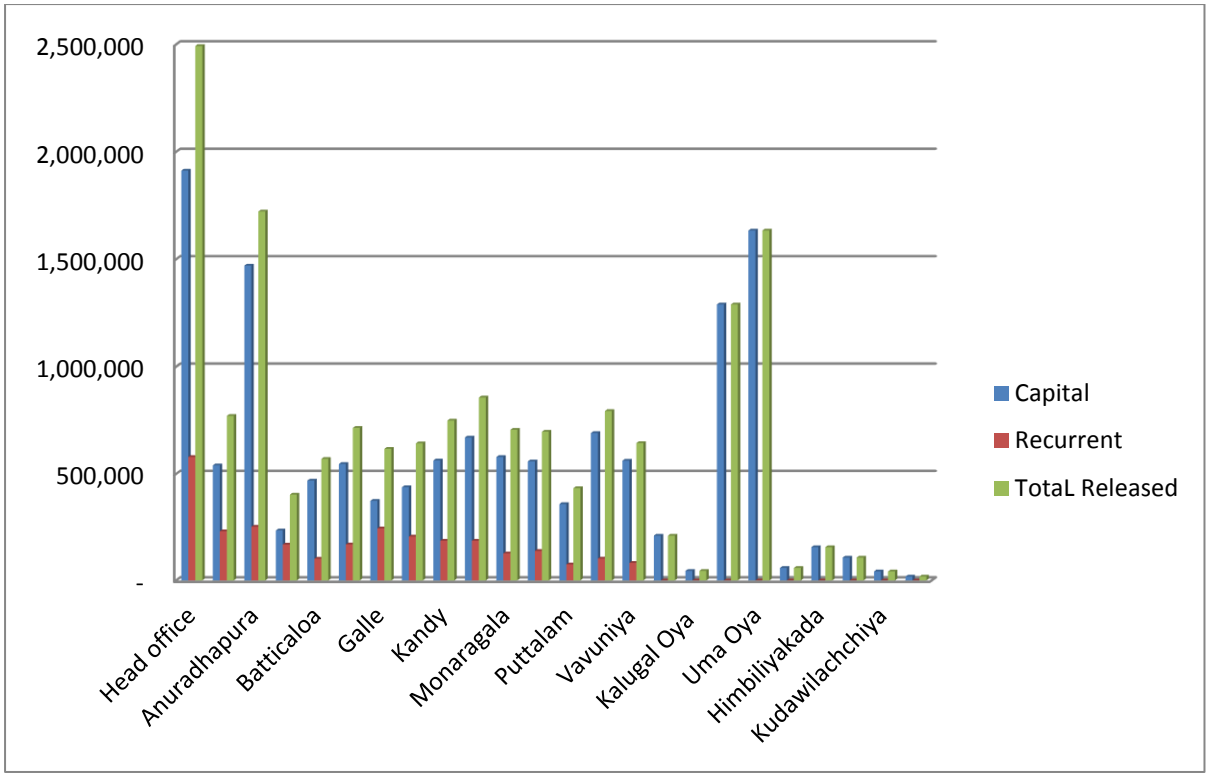


Figure 9-1: Imprest Released during the year 2021

9.1.7 Capital Expenditure – Project 2

Table 9-5: Capital Expenditure – Project 2

Projects	Expenditure – 2021 (Rs.'000)	%
2-2-0-2001	496,448	17.60
2-2-0-2002	97,186	3.45
2-2-0-2003	33,895	1.20
2-2-0-2102	1,738	0.06
2-2-0-2103	214,638	7.61
2-2-0-2104	63,303	2.24
2-2-0-2401	9,326	0.33
2-2-0-2503	6,721	0.24
2-2-0-2505	6,756	0.24
2-2-0-2507	95,513	3.39
2-2-1-2001	679,237	24.08
2-2-4-2001	760,700	26.97
2-2-5-2105	355,573	12.60
Total	**2,821,034**	**100.00**

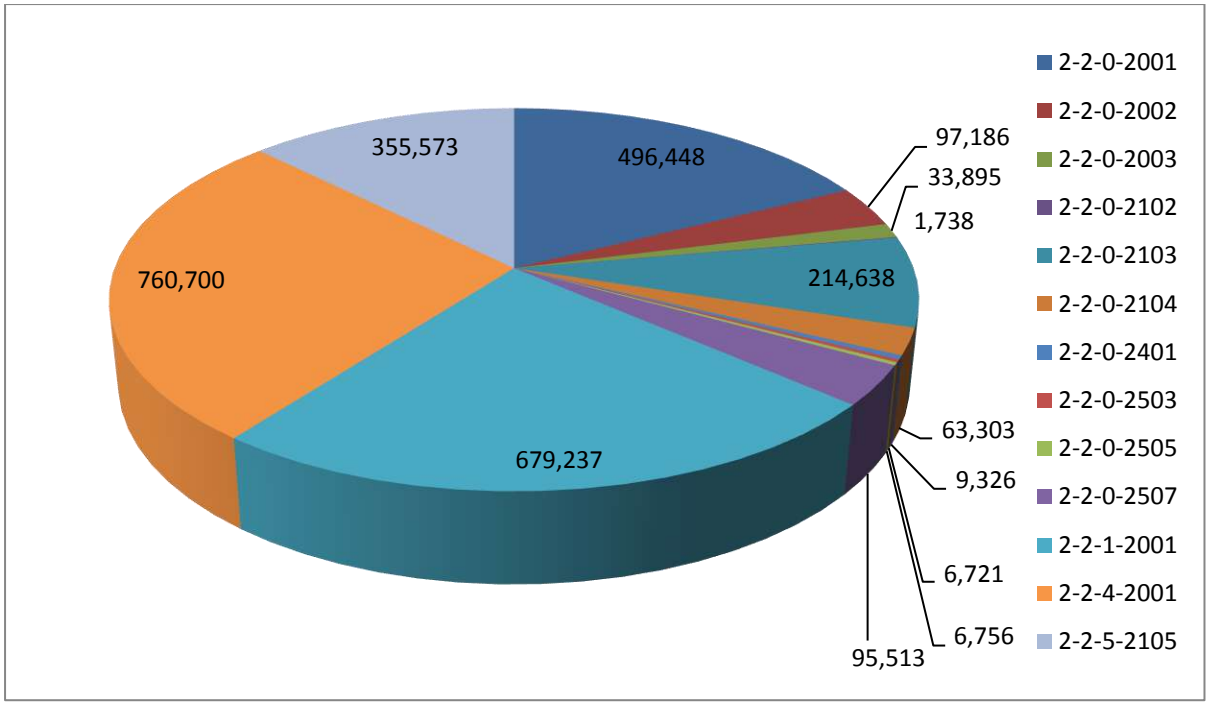


Figure 9-2: Capital Expenditure – Project 2 (2021)

9.1.8 Capital Expenditure – Project 3

Table 9-6: Capital Expenditure – Project 3

Projects	**Expenditure – 2021 (Rs.'000)**	**%**
Deduru Oya Reservoir	556,105	11.19
Menik Ganga Reservoir	45,243	0.91
Rambukkan Oya Reservoir	2,486	0.05
Yan Oya Project	2,689,405	54.10
Lower Uwa Project	44,853	0.90
Mahagona wewa Project	36,193	0.73
Morana Resevoir	209,618	4.22
Ellawewa Reservoir	168,652	3.39
Kalugal Oya reservoir	73,530	1.48
Kumbukkan Oya	95,379	1.92
Rugam - Kithul Reservoir	128,325	2.58
Polonnaruwa District Irrigation Development	168,403	3.39
Acelerated Irrigation Development Project in Monaragala District	195,382	3.93
Kelani River Bund Protection	36,837	2.75
Development & Improvements of Godigamuwa Tank in Matale District	87,985	1.77
Flood Mitigation project in kelaniganga Mundeniaru Basin, Kaluganga Basin	84,488	1.70

Projects	Expenditure – 2021 (Rs.'000)	%
Giant Tank in Mannar District	141,045	2.84
Supply Portable Water to the Population in the Jaffna Penisula	4,608	0.09
Rehabilitation of Kudawilachchiya Reservoir	102,647	2.06
Rehabilitataion of Dematagalla Tank	256	0.01
Total	**4,971,440**	**100.00**

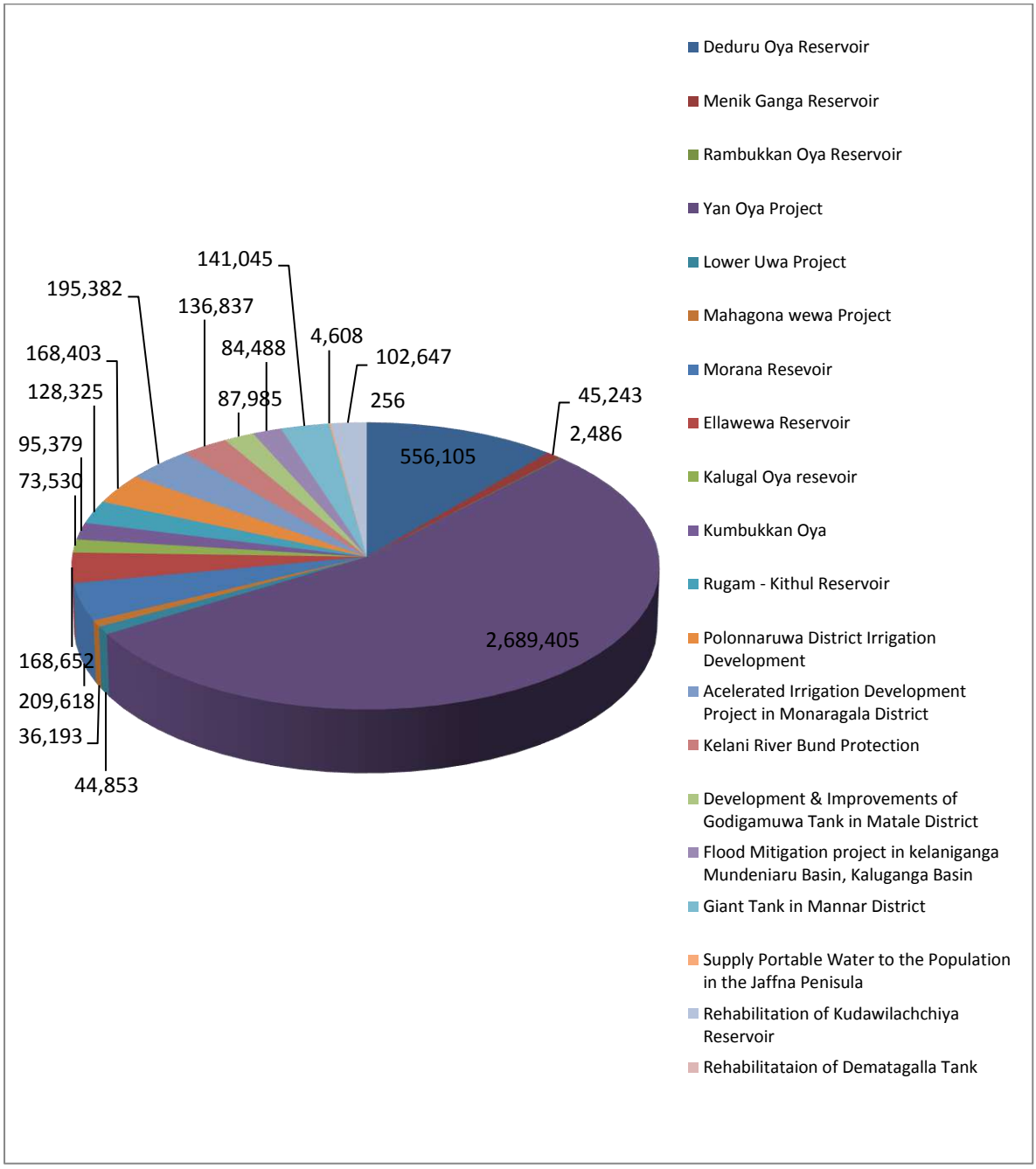


Figure 9-3: Capital Expenditure – Project 3 (2021)

9.1.9 Capital Expenditure – Project 4

Table 9-7: Capital expenditure – Project 4

Projects	**Expenditure – 2021 (Rs.'000)**	**%**
Wilakandiya Reservoir	32,007	4.91
Kaudulla Stage 11 - Extension to Damsopura area	56,000	8.60
Augmentation of Mahagalgamuwa Tank	13,674	2.10
Ginganga Flood Regulation Project	89,187	13.69
Benthara Ganga	69,950	10.74
Rural Tank Development project under wari saubhagya programme	390,580	59.96
Total	**651,398**	**100.00**

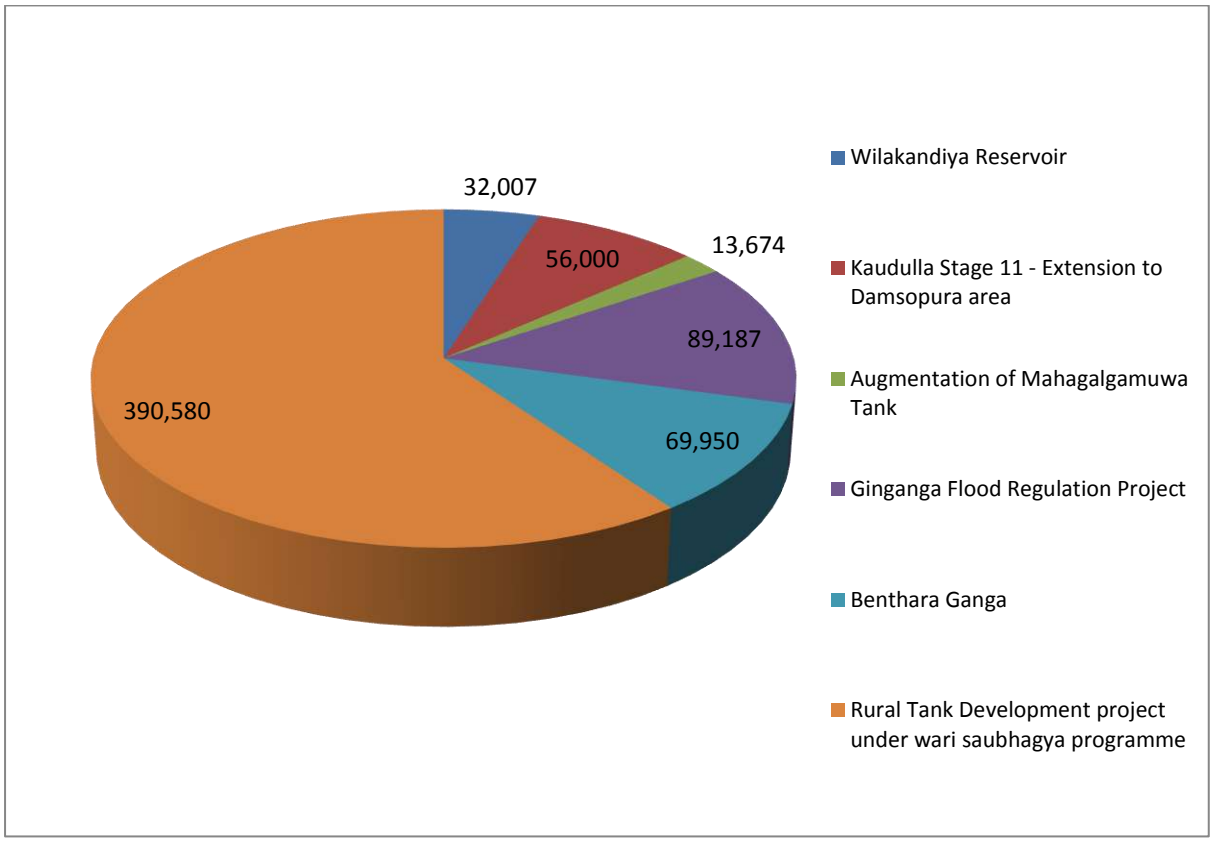


Figure 9-4: Capital Expenditure – Project 4 (2021)

10 Administration Sub Department

Administration sub department consists of 05 units headed by Additional Director General (Administration), who is supported by Director (Administration), Assistant Director (Administration) and 05 numbers of administrative officers.

Administrative works related to appointment, transfer, promotion and retirement of officers / workers comes under purview of unit 02, 03, 04, and 05.

10.1.1 Unit 02 Branch

Following officers' personnel files are updated and maintained in this branch.

- Officers of Sri Lanka Technical Service
- Information & Communication Technology Officers
- Information & Communication Technology Assistant
- Work Supervisors (Non SLTS)
- Technical Aide (Irrigation)
- Technical Aide (Mechanical)

10.1.2 Unit 03 Branch

Following officers' personnel files are updated and maintained in this branch.

- Management Service Officers (Supra Grade)
- Management Service Officers (Class –I, II, III)
- Development Officers
- Institutional Development Officers
- Budget Assistant
- Librarian
- Translator
- Assistant Librarian
- Store Keepers
- Typists and Clerks (Departmental)
- Trainee Graduates

10.1.3 Unit 04 Branch

Following officers' personnel files are updated and maintained in this branch.

- Laboratory Attendant
- Plan Printer/Helpers
- Greasers
- Cleaner/Helper
- Laboratory Labourers
- Field Watchers
- Labourers
- Field Attendant

10.1.4 Unit 05 Branch

- Drivers
- Operators
- Tractor Operators
- Electricians
- Mechanics
- Welders
- Tinkers
- Painters
- Latheman
- Machinists
- Blacksmiths
- Maintenance and Operating Labourers
- Pump Operators
- Mesons
- Carpenters
- Plumbers
- Instrument Artificer,
- Instrument Repairers
- Hydrological Survey Labourers
- Circuit Bungalow Keeper
- Store Aide
- Watch Repairer
- Fitters
- Office Employees
- Air Conditioner Repairer

Following officers' personnel files are updated and maintained in this branch.

10.1.5 Unit 06 Branch, Postal Division and Record Room

Postal division and Record room administrated under unit 06 and functions are given below.

- Preparation of Pension and Release of guaranteed money
- Managing Agrahara Insurance Scheme
- Issuing Railway Warrants
- Requesting Railway Season tickets
- Granting approval for Language Allowances
- Getting approval for Overtime and Holiday Pay
- Maintaining Departmental Circulars
- Coordinating Elections related activities