



National Water Supply & Drainage Board

2017 Annual Report



Ministry of City Planning & Water Supply

Mission

Serve the nation by providing sustainable water & sanitation solutions ensuring total user satisfaction

Vision

To be the most prestigious utility organization in Sri Lanka through technological and service excellence

Goals

- Increase the water supply and sanitation coverage
- Improve business efficiency
- Ensure greater accountability and transparency
- Facilitate safe drinking water supply and sanitation to rural and unserved communities

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His Excellency Maithripala Sirisena
The President of Democratic Socialist Republic of Sri Lanka



Rauff Hakeem
Hon. Minister of City Planning & Water Supply,



Sudarshini Fernandopulle
Hon. State Minister



► **Message from the Secretary, Ministry of City Planning & Water Supply**



The Ministry of City Planning and Water Supply (MCPWS) continued to work closely with the National Water Supply and Drainage Board (NWSDB) to serve the nation by providing safe drinking water and wastewater disposal facilities, during the year 2017. NWSDB has been able to provide 2,219,172 water supply connections covering 38.7% of total population of the country with pipe-borne water supply by NWSDB, as at end of 2017. This has also contributed to bring the total pipe-borne water supply coverage in the country to 49.2%. The MCPWS has supported NWSDB for implementing 17 number of ongoing large scale Foreign Funded Water Supply Projects during the year.

As a result of extending their effort to improve the piped sewer coverage of the country in addition to providing pipe borne water supply, NWSDB has provided over 2,500 new sewerage connections during the year while implementing 7 number of large scale Foreign Funded Sewerage Projects.

In addition, the Ministry continued to work together with NWSDB throughout the year, investing Rs. 1,134.76 million under the budget heads –Emerging Small Townships (Small & Medium) Water Supply Projects and Water Sector Community Facilitation including providing safe drinking water for the areas affected with Chronic Kidney Disease of Unknown Etiology (CKDu).

The Ministry is grateful to our many funding partners who supported us in 2017, the principal ones being the

Government of Sri Lanka, ADB, JICA, SIDA, UNICEF, World Bank and Governments of Australia, Austria, Belgium, China, France, Hungary, India, the Netherlands, South Korea, Spain and US Exim.

The Ministry will continue working together with NWSDB in the coming years to achieve the targets already set for making 60% of the population available with pipe borne water and 3.3% of the population available with piped sewerage by 2020.

I Would take this opportunity to thank Hon. Rauff Hakeem, Minister of City Planning and Water Supply for his leadership and guidance and Hon. Sudarshini Fernandopulle, State Minister of City Planning and Water Supply for co-operation extended to all of us to implement government policy with regard to City Planning and Water Supply.

I wish all success to the endeavors of the NWSDB to provide the public with high quality water supply and sewerage services and to implement the several development programmes that have been lined up for 2018 and beyond for achieving their water supply and sanitation targets.



D. G. M. V. Hapuarachchi

Secretary
Ministry of City Planning and Water Supply





National Water Supply & Drainage Board

The supply of potable water was originally the responsibility of the Public Works Department (PWD) which was subsequently transformed to the Department of Water Supply in 1965. Thereafter, the National Water Supply & Drainage Board was formed by Act of Parliament in 1975.

The National Water Supply & Drainage Board currently functions under the Ministry of City Planning & Water Supply which was established in 2015 to cover the subject area of water supply, sewerage and city planning separately.

Around 89.3 % of the population have access to the safe drinking water of which 49.2% is through piped water supply systems throughout the country.

Notice of the Report

Hon. Minister of City Planning & Water Supply,
Ministry of City Planning & Water Supply,
Lakdiya Medura,
No. 35, Sunil Mawatha,
Pelawatta,
Battaramulla.

Dear Sir,

Annual Report and Financial Statements - 2017
National Water Supply & Drainage Board

In terms of Section 14 (2) of the Finance Act No. 38 of 1971, the members of the Board have the honour to forward herewith the Annual Report and the Financial Statements of the National Water Supply & Drainage Board for the year ending 31st December 2017.

Yours faithfully,



Eng. K. A. Ansar
Chairman
National Water Supply & Drainage Board

Chairman's Statement



“The total drinking water production in 2017 has been increased by 5.7% compared to the year 2016 by producing 686 million cu.m. of drinking water through 343 water supply schemes in operation throughout the country”



National Water Supply and Drainage Board continued its invaluable service to the nation by providing safe drinking water and sewerage facilities to the public throughout the year 2017. Contributing to the endeavor to increase pipe borne water supply coverage in the country, four numbers of Large Scale Foreign Funded Water Supply Projects namely Monaragala – Buttala Intergrated W.S, Rehabilitations & Augmentation of Labugama Kalutuwawa, Eastern Province WSDP and Kilinochchi Rehabilitation WSP have been completed during the year. Accordingly, it was able to provide 126,701 new water connections during 2017, while improving the service level of some existing water supply coverage areas in different parts of the country.

The total drinking water production in 2017 has been increased by 5.7% compared to the year 2016 by producing 686 million cu.m. of drinking water through 343 water supply schemes in operation throughout the country. This safe drinking water was supplied to the consumers through 2,219,172 service connections. The population having piped drinking water supply has been brought to 49.2% by end of 2017. This continuous increase of pipe borne water supply coverage is going parallel with the target for reaching 60% pipe borne water coverage by the year 2020.

During the year 2017, over 2,500 new sewerage connections have been provided bringing the total number of sewerage connections maintained by NWSDB, to 21,719 which is an increase of 12% compared to the year 2016. The total piped sewer coverage of the country including the sewerage facilities maintained by CMC is 2.07% as at end of 2017.

This year is the 2nd year of implementing the Corporate Plan 2016-2020, and the staff of NWSDB continued working towards achievement of the goals and objectives set out by the this Corporate Plan.

For capital works, NWSDB was able to carry out Rs.30.18 billion worth investments during the year towards the goal on water supply and sanitation coverage. This investment was mainly on 17 large scale Foreign Funded Water Supply Projects and 7 large scale Foreign Funded Sewerage Projects of which the implementation was ongoing during the year. The NWSDB also continued to rehabilitate and improve existing water supply and sewerage schemes using Rs.945.74 million of its own finances in 2017. In addition, using Rs. 6,914 million borrowed from local banks, 15 Local Bank Funded Water Supply Projects were also implemented during 2017.

As of the previous years, the special effort on reducing Non-Revenue Water (NRW) was continued through short-term and long-term measures during the year 2017 in RSC level as well as large scale Foreign Funded Projects. As a result, 2.14% NRW reduction in Colombo City area and 1.64% reduction in RSC (WC) area has been achieved while 1.07% reduction has been recorded Islandwide.

The NWSDB has also implemented many activities to provide safe drinking water for people living in the areas affected with Chronic Kidney Disease of unknown etiology (CKDu), spending Rs. 386.2 million from capital budget allocated from the Ministry of CPWS for CKDu relief activities in 2017.

Special attention has been given during the year to assure the quality of water provided to the consumers. With the advocacy and implementation support from WHO, NWSDB continued to implement Water Safety Plans during 2017. As a result, by end of 2017, there were 116 Urban Water Safety Plans being implemented at various stages Island- wide by DGMs of RSCs with the assistances of WSP advisory unit established in Kandy. In addition, the central lab of NWSDB together with regional laboratories also worked to assure the quality of water provided. Source water quality of treatment plants of schemes Island wide, were tested twice a month while the treatment process water quality was analyzed weekly according to relevant standards thereby assuring the supply of safe drinking water.

In order to promote innovation which is crucial for growth and sustainability of the organization in a modern context, NWSDB continued its focus on Information Technology development throughout the year.

The energy management program of the NWSDB has achieved substantial progress with qualitative and quantitative upgrading of its systems. The M&E Services Division of NWSDB is fully equipped with energy measuring equipment to carry out all types of energy audits for energy management works.

The contribution of NWSDB staff in all categories for the successful operations and the development initiatives of the NWSDB were very significant. This includes, planning, designs, investigations, feasibility studies, construction, operation & maintenance, process control & optimization and energy conservation under careful considerations with a view to achieve economic operations meeting the global environmental obligations.

We are thankful for all the support given by the Hon. Minister of City Planning & Water Supply for the accomplishments of the functions of NWSDB during the year. His directions, guidance and support as the Minister in charge of Water and Sewerage facilities were invaluable for us. Our sincere thanks also goes to the Hon. State Minister of CPWS for her guidance and support cendered us throughout the year. We also take this opportunity to extend our thanks to the Secretary to the Ministry of City Planning & Water Supply and all the staff at the ministry for coordination,

support and assistance given whenever necessary.

We also take this opportunity to thank the Secretary to the Ministry of Finance and the Heads of Departments in the Treasury for the continuous support by them to achieve progress in all our activities.

We are grateful to multinational donors and bilateral financiers for giving us a hand for the developments we have brought up throughout the country in water supply and sanitation sector. We thank them for their interest to having participated with NWSDB on development work in the sector.

All the progress we have made through the year is a result of the dedications and efforts by the Members of the Board of Directors and the staff of the NWSDB. Without their dedications, hard work and sacrifices, our achievements would be impossible. We expect their endeavor through the years to come will upgrade the health, social and living standard of the people from all parts of the country by improving the service in water supply and sanitation facilities meeting the consumer satisfaction. Meanwhile, if there are any lapses on the part of the NWSDB, we request our customers to bear with us and inform us for further improvement.



Eng. K. A. Ansar

Chairman

National Water Supply & Drainage Board



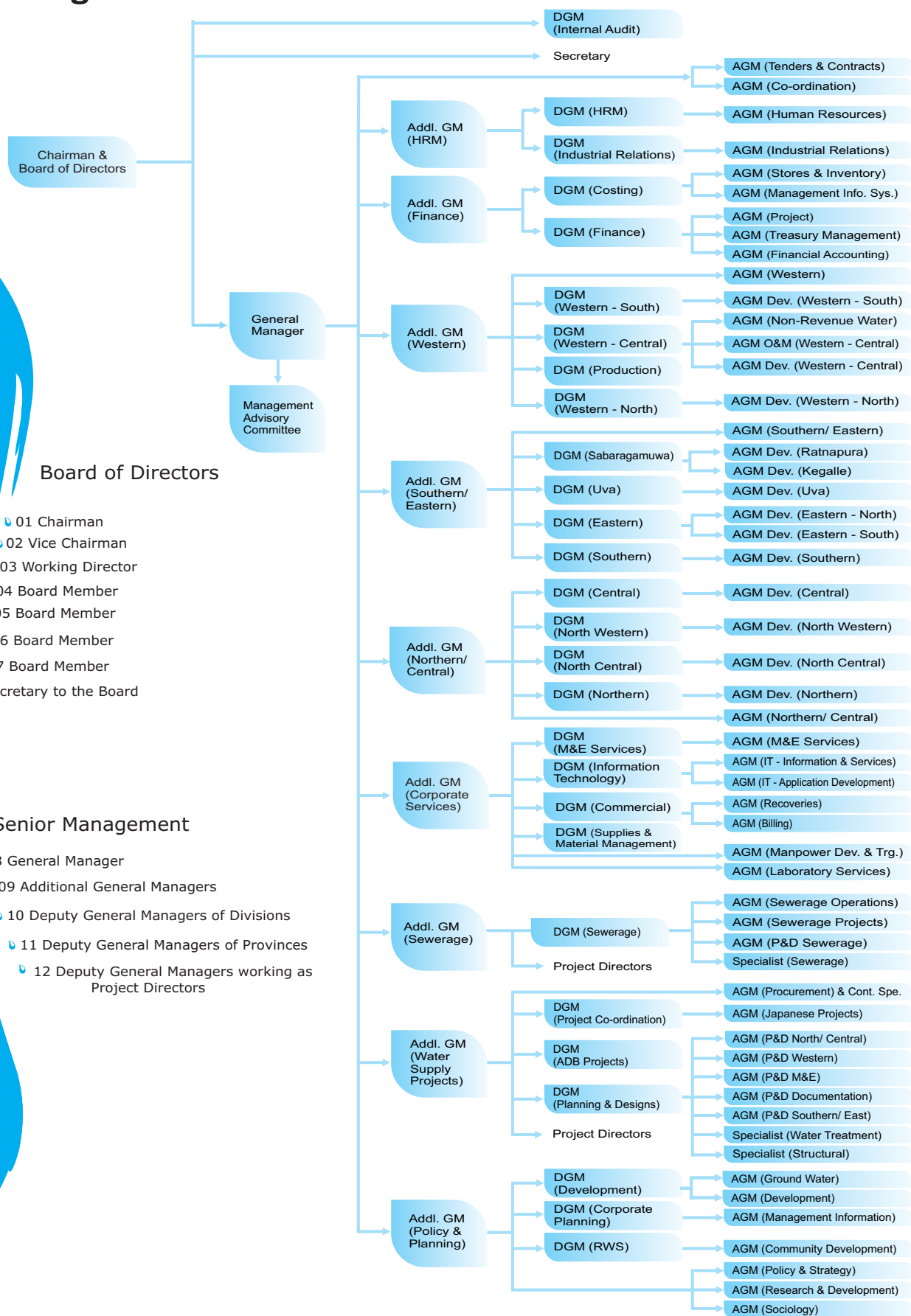


“By means of water, we give life to everything”

—Koran



Organizational Structure



Board of Directors

01 Eng. K. A. Ansar

Chartered Civil Engineer/ Lead Auditor (QMS)
M.Sc. (Delft), B.Sc. Eng. (Hons),
Dip. H.E. (Delft), C.Eng., MIE (SL)
Chairman, NWSDB (Since 05.02.2015)

02 Mr. M. Shafeek Rajabdeen

Vice Chairman, NWSDB (Since 10.03.2015)

03 Mr. P. I. T. Mahilal Silva

BA, MA, M.S.Sc
Working Director, NWSDB (Since 05.02.2015)

04 Dr. P. G. Maheepala

MBBS, M.Sc., MD, MBA, FCMA, DPM, DBS, DED, DMgt.
Director General of Health Services
Ministry of Health
Board Member, NWSDB (Up to 02.01.2017)

Dr. T. B. Ananda Jayalal

MBBS, Msc Medical Administration, MD Medical
Administration, PG Cert.in Paed. Nutrition
Director Youth, Elderly and Disabled Persons
Ministry of Health Nutrition & Indigenous Medicine
Board Member, NWSDB (Since 20.01.2017)

05 Mr. J. M. U. P. Jayamaha

DPFM, PGD(A&F), Fellow Member of APFASL
Additional Director General
Department of Public Enterprises
Board Member, NWSDB (Since 02.04.2015)

06 Mr. Shantha Rathnayake

Board Member, NWSDB (Since 12.02.2015)

07 Mrs. K. A. Subadra Walpola

MA
Senior Assistant Secretary
Ministry of Local Government & Provincial Councils
Board Member, NWSDB (Since 13.02.2015)

Secretary to the Board

Mrs. W. P. Sandamali De Silva

B.Sc. Special (Hons)
Master of Public Management, IMSL (Member)

13 Nos. of Board Meeting held during year 2017

Senior Management

08 General Manager

Eng. D. U. Sumanasekara

B.Sc. Eng., C.Eng. FIE (SL), M.Sc. (Struct. E.) UK
(From 22.04.2017)

Eng. G. A. Kumararathna

B.Sc. Eng. (Hons), M.Sc. (UK), C.Eng. FIE(SL),
MICE (Lond.), MIWEM (Lond.) P.G. Dip. in Industrial Eng.
(up to 21.04.2017)

09 Additional General Managers (Addl. GM)

Eng. W. B. G. Fernando (Corporate Services)

B.Sc. Eng (Hons), P.G. Dip. (EWREM), C.Eng. FIE (SL)

Eng. J. R. B. Nedurana (Sewerage)

B.Sc. Eng (Hons), P.G. Dip. in Environmental
Sciences & Technology (Delft.)
C.Eng.MIE(SL),

Eng. R. H. Ruvinis (Water Supply Projects)

B.Sc. Eng. (Hons) P.G.Dip. (App Hy)
MBA, C. Eng. FIE (SL), MIE (Aus). CP Eng.

Eng. S. G. J. Rajkumar(North Central)

C. Eng., FIE(SL), M.Sc. in Sanitary Engineering
M.Sc. In Environmental Engineering and Management

Eng. B. S. Wijemanna (Western)

B.Sc.Eng., M.Eng. Hydrology and Water Resource, IHE (Delft)
Dip. In Construction Management
C. Eng. MIE (SL)

Eng. N. H. R. Kulanatha(Southern Eastern)

B.Sc. Eng., C. Eng.MIE (SL)

Eng. Wijethunga (Policy & Planning)

B.Sc. Eng., C. Eng., FIE(SL), MBA, M.Sc. (Planning)
MA. (Financial Economics), MIM (SL), PG. Dip(Finance -
ICA(SL), Dip (Mgt.)-DK

Mr. D. Thotawatte (Finance)

B.Com (Sp.), ACA, MA (Fin. Econ)

Mr. G. K. Iddamalagoda

(Human Resource Management)

B.Sc. (B. Admin), Dip. in Per. Mgt.
MA (Mgt. & Admin) London

10. Deputy General Managers (DGM) of Divisions (as at 31st December 2017)

Mr. R. M. A. S. Weerasena (Internal Audit)

B.Com (Sp.), PGDBM (Col.), ACA

Mrs. A.P.S. De Silva (Costing)

FCA

Mrs. N. Y. S. Abeygunawardena

(Industrial Relations)

BA, P.G. Dip. in Management (PIM), Member (IMSL)

Mr. R. M. A. Bandara (Supplies)

B.Sc., (Business Administration - Spl.)
Dip. in Purchasing and Materials Mgt.

Mrs. M. M. S. Peiris (Finance)

B.Sc. (Accountancy & Finance Mgt.), ACA (SL)

Eng. K.P.R.S. Samarasinghe (Development)

M.Sc.(Water Supply Eng.) The Netherlands
M.Sc. (Env. Eng.), Moratuwa, MIESL, AM(OACETT) Canada

Eng. S. G. G. Rajkumar (Commercial)

B.Sc. Eng. (Hons), C.Eng., FIE(SL),
M.Sc.(Denmark), MBA (PIM-USJ), M.Eng (Moratuwa)

Eng. S. Sumanaweera (Production - Western)

B.Sc. Eng., M.Eng. (Env.) AIT, C.Eng., FIE (SL)

Eng. U. Ratnapala (Project Coordination)

B.Sc. Eng., C. Eng, FIE (SL), PG.Dip. in Hydraulics Eng. (Moratuwa),
P. G. Dip. in Business & Financial Admin (ICA)

Eng. K. W. Premasiri (Planning and Design)

B.Sc. Eng. M.Eng. (Hydraulics), M. Eng. (Structural Eng. Designs),
Int. PE.C.Eng., FIE (SL), M.S.S.E. (SL),

Eng. K. D. P. F. Siriwardana (Corporate Planning)

M.Sc. (Env.Eng.) Denmark, PG Dip (Const. Mgt) SL,
C.Eng., MIE (SL)

Eng. S.G. Jayawardena (Swerage)

B.Sc., PG.Dip.in Sanitary Eng.MIE(SL)

Eng. Duleep Goonawardene (RWS)

B.Sc.Eng., C.Eng., MIE(SL), M.Eng.(IHE- UNESCO)

Eng. Jaliya Lalith Seekkuge (ADB Projects)

B.Sc.Eng.,Hons, C.Eng., MIE(SL), MBA(PIM- SRJ)
PG Diploma (Const. Mgt),
PG Diploma in Drinking Water Mgt.(Germany)

Eng. B.L. Gunaratne (M&E)

B.Sc. Eng. PG.Dip.(Sani.Eng) - Norway

Eng. J.Chandradasa (Information Technology)

B.Sc. Eng., C.Eng. MIE(SL)

**II. Deputy General Managers of Provinces
(as at 31st December 2017)****Eng. C.C.H.S. Fernando (Western South)**

B.Sc. Eng., MPM, PG Dip. (OSLO University)
MIE (SL), C.Eng., MIM (SL), ,

Eng. R.A.B.S. Mendis (Western North)

B.Sc.(Eng.), C.Eng. MIE(SL), M.Sc. In Sanitary Eng.(Netherlands)

Eng. M.M. Uma Lebbe (North)

IESL, PG. Dip. (Str. Eng. Design)
PG. Dip. (Water & Waste Water Treatment)

Eng.T.W.S. Perera (Western Central)

B.Sc.Eng.,(Spl), C.Eng.Masters in Dev.
Science MIE (SL).

Eng.I.M.W.K. Illangasinghe (North Western)

B.Sc. (Eng.), M. Eng.(Japan) C.Eng. MIE(SL)

Eng. G.V. Wijerathne (North Central)

B.Sc.(Eng), M.Sc(WREM), C.Eng, MIESL

Eng. W.W. Liyanage (Sabaragamuwa)

M.Eng.(Structural Eng. & Design),
M.Sc. (Environmental Eng. & Mgt.), C.Eng. FIE(SL)

Eng. R.S. Liyanage (Uva)

B.Sc. Eng. C.Eng. FIC(SL), PGD (Management),MIM,
M.Sc. Eng.(Water & Environmental Resources Management), MBA,
M.Sc. (Water Resources Management, Holland)

Eng. J. K. S. Pathirana (Southern)

B.Sc. Eng. (Hons), C.Eng. MIE (SL) M.Sc. (Sanitary) Delft.

Eng. S.A. Rasheed(East)

M.Sc.(Sanitary Engineering), The Netherlands
PG.Dip.(Structural Engineering Design), Sri Lanka
B.Sc. Eng. Sri Lanka, C.Eng., MIE(SL)

Eng.M.K.D.J.H. Meegoda (Central)

B.Sc. Eng. M.Sc. (Water Management), MIE(SL), C.Eng.

12. Addl.GMS/DGMs working as Project Directors**Eng. R. Kulanatha (Wastewater disposal for****Rathmalana Moratuwa & Ja-Ela/ Ekala Area)**

B.Sc. Eng., C.Eng. MIE (SL),

Eng. B. S. Wijemanna**(Greater Colombo Rehabilitation Project)**

B.Sc. Eng., M.Eng. Hydrology and Water Resources, IHE (Delft),
Dip. in Construction Management, C.Eng. MIE (SL),

Eng. K. J. V. A. Perera**(Gampaha Attanagalla Water Supply Project)**

P. G. Dip. in Environmental Engineering and Management
B.Sc. Eng. FIE (SL), M.Eng. (Sanitary) IHE (Delft),

Eng. R. A. B. S. Mendis (ADB 5th Project)

B.Sc. Eng., C.Eng. MIE (SL),
M.Sc. in Sanitary Eng. (Netherlands)

**Eng. K.P.R.S. Samarasinghe (Labugama Kalatuwawa WSP and
Kolonna Balangoda WSP)**

M.Sc. (Water Supply Eng.) The Netherlands
M.Sc. (Env. Eng.) Moratuwa, MIESL, AM(OACETT) Canada

**Eng. S.A. Rasheed(Colombo Water Supply Service
Improvement Project)**

M.Sc.(Sanitary Engineering), The Netherlands
PG.Dip.(Structural Engineering Design), Sri Lanka
B.Sc.Eng. Sri Lanka, C.Eng., MIE(SL)

Eng. P.P.Kahaduwa (Ruhunupura WSP)

B.Sc.Eng., PG.Dip.(Water &Waste Water Treatment), PG. Dip. (B.A)
C.Eng., MIE(SL)

Eng. R.S. Liyanage**(Mahiyanganaya WSP and Badulla Haliela WSP)**

B.Sc. Eng. C.Eng., FIC(SL), PG.Dip. (Management),MIM,
M.Sc. Eng.(Water & Environmental Resources Management), MBA,
M.Sc. (Water Resources Management, Holland)

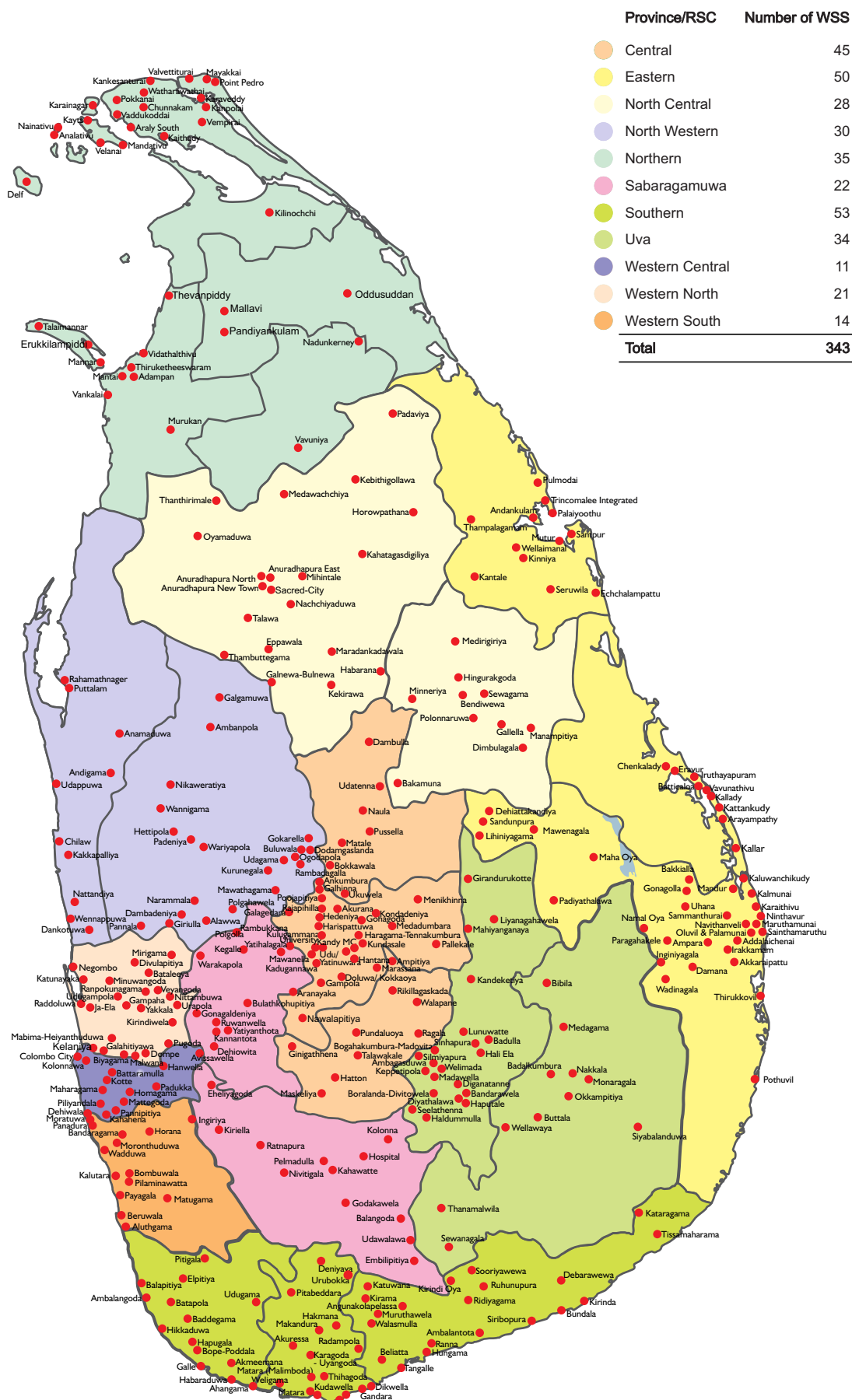
Eng. R.A.A. Ranawaka**(Shift Project)**

B.Sc.(Eng).Hons, PG Dip. (Env. Eng & Man), C.Eng., FIE (SL)

Eng. I.V.W. Ediriweera**(Ambatale/ Orugodawatta Pipe laying Project)**

B.Sc. Eng. M.Sc.(Water Resources Management),
M.Sc. (Development Studies), C.Eng., MIE(SL), FIE(SL), MIWA(UK)

Existing Water Supply Schemes



Corporate Planning

“NWSDB strive to make sure that all the water consumed by the community is safe.”

Implementation Status of the Corporate Plan 2016- 2020

The year under review was the second year of the Corporate Plan 2016-2020. This Corporate Plan was prepared by a special committee appointed by the General Manager, comprising of 14 senior managers of the NWSDB.

By incorporating key results areas in previous Corporate Plan (CP 2012-2016), the special committee decided to reduce the number of goals from 7 to 4 for the new Corporate Plan 2016-2020 for accelerated monitoring of the progress status of each and every activity of relevant Goals.

The NWSDB continued working towards the achievement of the goals and objectives set out by the Corporate Plan during the year. It was considered important to have timely reviews for the successful achievement of the goals, objectives and the targets set.

Quarterly progress on the Corporate Action Plans are presented to the Members of the Board by every manager responsible for a particular goal (there are four such goals, overseen by a designated accountable manager for every goal). Accordingly, 4th quarter of 2016, 1st, 2nd and 3rd quarters of 2017 progress reports on the Corporate Action Plans were presented to the Members of the Board at Board meetings held in 2017.

Activities towards the goal on water supply and sanitation coverage were being carried out throughout the country. Special efforts taken to reduce NRW and power cost during 2017 are noteworthy. However, customer service improvement was given as a priority.

Promoting Institutional Development is part of a Corporate Goal. Productivity improvement activity were implemented for improving the productivity in every section in the NWSDB head office, Telawala premises and Polwatte premises. Arrangements were made to select the section with the best implementation of 5S programme under “Identify Infrastructure Development Activities” in the NWSDB and the Commercial Division of the head office won the first place in this contest.

On achieving the Goal “Ensure greater accountability and transparency”, both the Internal Audit Division and the Government Audit Branch worked on the accountability and transparency issues.

The CKDu affected areas and the rural community without safe water supply facilities were given priority within the available resources.

Water Safety Plan (WSP) implementation in Sri Lanka continued in 2017 under the advocacy and implementation support from the WHO. NWSDB strive to make sure that all the water consumed by the community is safe. Under this context Water Safty Plans (WSPs) are being implemented. As at end 2017 there are 116 urban Water Safty Plans implemented in various stages Island - wide by the DGMs of RSCs with assistance of WSP advisory unit established in Kandy.



Commercial Division won the first place in the competition held in 2017

Progress Towards Stated Goals

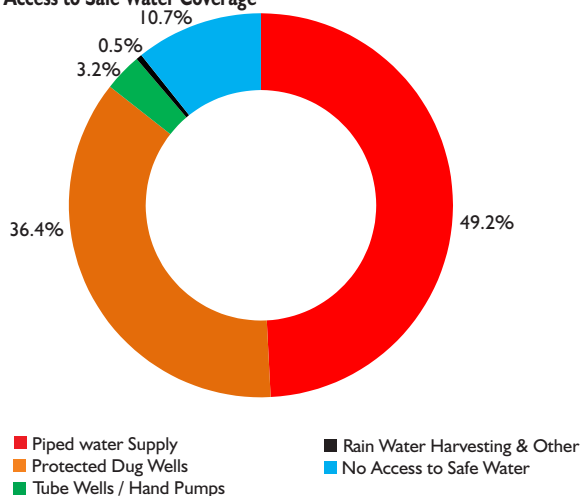
Goal	Key Objectives	Target end 2017	Achievement end 2017
1. Increase the water supply and sanitation coverage	1.1 Total Pipe-borne water supply coverage	52.3%	49.2%
	1.2 Piped sewerage coverage	2.4%	2.07%
	1.3 Access to safe drinking water supply coverage	89.3%	89.3%
2. Improve business efficiency	2.1 NRW (island-wide)	24.97%	25.98%
	2.2 Total staff for 1,000 connections	4.72%	4.66%
	2.3 Expenditure on power to total recurrent cost	20.38%	19.47% *
	2.4 Maintenance expenses to total recurrent cost	5.44%	6.16% *
	2.5 Establishment expenses to total recurrent cost	10.23%	10.83% *
	2.6 Estimated bills to total number of bills	1.0%	1.37%
	2.7 Collection efficiency	100%	103%
	2.8 Accounts receivable from -		
	(a) domestic and commercial institutions	30 days	45 days
	(b) Government institutions	40 days	10 days
	2.9 Promote Human Resource Development		
	(a) In-house training (no. of participants)	4600	9228
	(b) In-country external training (no. of persons)	250	182
	(c) Overseas training (no. of persons)	80	239
	2.10 Improve service to customers and promptly attend to public complains Public awareness programs to be carried out all island (school/other)	100 Nrs	152 Nrs
	2.11 Annual savings from energy efficient projects.	36.7 m	18.1 m
	2.12 Research and Development Division of the NWSDB is continuing systematic, investigative and experimental activities that are performed for the purpose of acquiring new knowledge to efficient business and O&M activities.		
	2.13 The NWSDB is ready to capitalize on improving the customer and corporate relationship, which will have a web-portal as a platform for improving its business to implement comprehensive ICT development activities.		
3. Ensure greater accountability and transparency	<p>Initiatives were taken to develop a whole range of management and business tools on human resource development, management information system and business plan.</p> <ul style="list-style-type: none"> • Delegation of financial authority • Training on budgetary control & financial regulations • Audits on commercial operations • Audits on stores and supplies • Audits on cash/ cheque payments • Audits on construction contracts • Valuation of assets • Improved Management Information and Coordination 		
4. Facilitate safe drinking water supply and sanitation to rural and underserved communities	4.1 RWS Schemes maintained by CBOs, LAs and others under the NWSDB backup support	10.6%	10.5%

* Figures are before Auditing

Key Performance in Water Supply

“The ratio of staff per thousand service connections was reduced to 4.66 in the year 2017 from 4.95 in 2016.”

Access to Safe Water Coverage



By providing 126,701 service connections during the year, the population that was covered with piped drinking water supplies by the NWSDB was brought to 38.7%.

New water supply connections were provided and service levels to existing consumers were improved by commissioning several major and minor water supply projects in different parts of the country during the year. There were 19 foreign funded water supply projects and 10 local bank funded water supply projects in progress in addition to the many small and medium water supply projects at completion stage to increase the pipe borne water supply coverage of the country.

The ratio of staff per thousand service connections was reduced to 4.66 in the year 2017 from 4.95 in 2016.

The tariff revision has not been in line with the increase in the operational expenses from the year 2012. Hence the Board has experienced difficulties in managing its cash flow during the last six years. Despite the policy decision taken in the year 2014 by the General Treasury to convert the total outstanding debt into equity to strengthen the Balance Sheet, it had not improved due to the debt commitment of the new loans.

The NWSDB has recorded Rs.1,030,044,119, Rs.2,926,304,392, Rs.1,816,772,395 after tax profit for the last consecutive three years since 2015.

The Central Lab of NWSDB together with the regional labs worked to assure the quality of drinking water provided by NWSDB. Out of 31,752 drinking water samples tested for Micro Biology during the year, only 0.75% of samples have shown unsatisfactory. Further, 29,838 samples were tested for physical and chemical parameters and 11.8% were found unsatisfactory based turbidity, colour or hardness. Source water (Raw Water) quality in 271 Water Treatment Plants of schemes island wide, were tested twice a month following SLS 722 Guide lines and treatment process water quality were analyzed weekly.

Central Laboratory was obtained Laboratory Accreditation (ISO 17025) for chemical testing. New complete Laboratory was developed with testing facility for physical, Chemical & Bacteriological parameters in Badulla (Demodara). In Bandarawella laboratory, the laboratory premises were renovated, expanded and Heavy Metal Testing facility was developed with High tech Instrument (ICP/OES) received from ADB 5th Funds. Testing capacity of Anuradhapura Laboratory was increased by 30%.

Several NRW reduction activities were conducted during the year. Within Colombo city, critical areas were selected and area inflow measurements were taken after establishment of closed boundaries. Night survey, culvert survey and house to house survey were carried out to identify visible leaks. The NRW reduced to considerable amount for those areas. Accordingly, the NRW of Western Province & Island wide were brought down up to 27.68 % and 25.98 % respectively.

General

There are 343 major, medium and small water supply schemes in operation under the NWSDB's purview. Out of these, 55 schemes cover major cities and 288 schemes cover townships and villages.

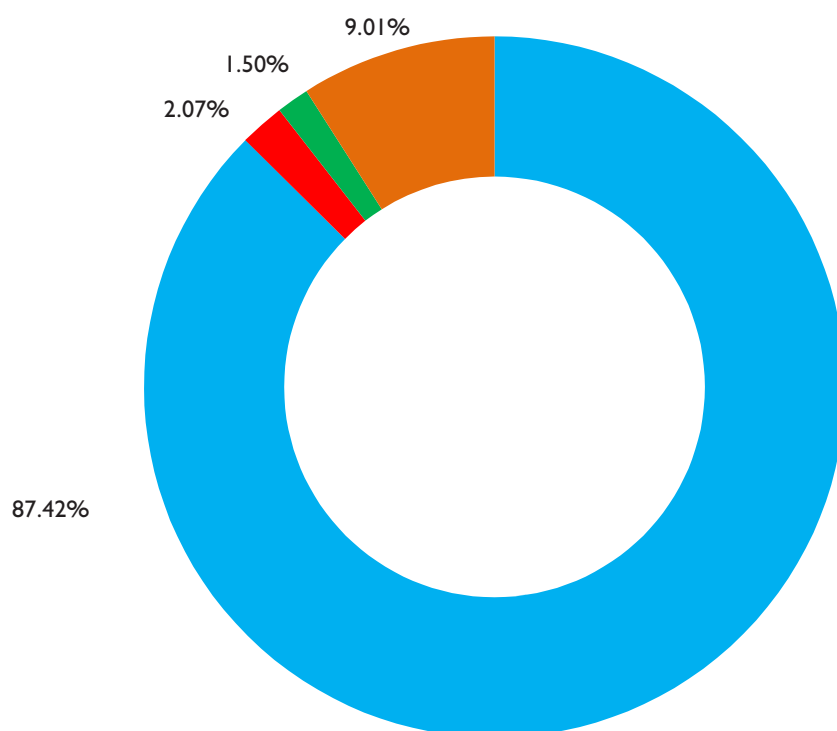
3.2 % of the population is covered with hand-pump tube wells. Community management is promoted with regard to rural water supply schemes through community-based organizations. Proper rain water harvesting was considered as an acceptable option for drinking water source.

	2016	2017	Variation (%)
KEY STATISTICS: WATER SUPPLY			
No. of Water Supply Systems	337	343	1.78
Piped Water Production (million cu.m.)	649	686	5.70
Piped Water Consumption (million cu.m.)	483	508	5.18
Domestic Connections (Nrs.)			
(a) Western Province	857,647	902,050	5.18
(b) Other Provinces	1,073,609	1,143,859	6.54
Total Domestic Connections	1,931,256	2,045,919	5.94
Public Stand Posts (Nrs.)			
(a) Western Province	470	489	4.04
(b) Other Provinces	1,159	1,127	(2.76)
Total Public Stand Posts	1,629	1,616	(0.80)
Non-Domestic Connections (Nrs.)			
(a) Western Province	79,599	84,878	6.63
(b) Other Provinces	81,616	88,375	8.28
Total Non-Domestic Connections	161,215	173,253	7.47
(Including total public stand posts)			
Total No. of Service Connections	2,092,471	2,219,172	6.06
Average Monthly Household Consumption			
(cu.m. per house connection)			
(a) Western Province	18.12	17.61	(2.81)**
(b) Other Provinces	13.62	13.31	(2.28)**
Average Household Bill Value per Month (Rs.)			
(a) Western Province	829.92	795.33	(4.17)**
(b) Other Provinces	474.76	464.92	(2.07)**
Total Revenue (Rs. million - with VAT)	23,975	24,846	3.63
Total Recurrent Expenditure (Rs. million)	20,917	* 24,358	16.45**
Non-Revenue Water (%)			
(a) Western Province	28.26	27.68	(2.05)
(b) Other Provinces	22.18	23.92	7.84**
(c) Island-wide	25.55	25.98	1.68
O&M Staff/ 1,000 Connections	4.14	3.88	(6.28)
Total Staff/ 1,000 Connections	4.95	4.66	(5.86)
Average Recurrent Cost of Water Production (Rs./ cu.m.)	32.23	31.63	(1.86)
Average Total Cost/ Unit Sold (Rs./ cu.m.)	47.19	47.37	0.38**
Average Unit Revenue (Billing/ Consumption) (Rs./ cu.m.)	49.62	48.95	(1.35)**
Collection Efficiency	1.00	1.03	3.00
Deep Wells (Nrs.)			
(a) Drilled	299	291	(2.68)
(b) Successful	265	245	(7.55)
Development Expenditure (Rs. million)	30,902.42	30,176.68	(2.35)**

* Figure is before auditing

**Variation of the key factor considered is unfavorable.

Key Performance in Sewerage



- Onsite sanitation
 ■ Pipe Sewerage
- Unknown sanitation (not using toilets)
 ■ Other sanitation types (shared/ common/ public toilets)

KEY STATISTICS: SEWERAGE

		2016	2017	Variation (%)
Domestic Connections	Western Province	13,757	15,500	11.25
	Other Provinces	886	886	0.00
Non-Domestic Connections	Western Province	1,332	1,480	10.00
	Other Provinces	185	187	1.07
Housing Scheme Connection(Bulk)	Western Province	2,907	3,666	20.70
	Other Provinces	-	-	-
Total Sewerage Connections	All Island	19,067	21,719	12.00
	Western Province	17,996	20,646	12.84
	Other Provinces	1,071	1,073	0.19

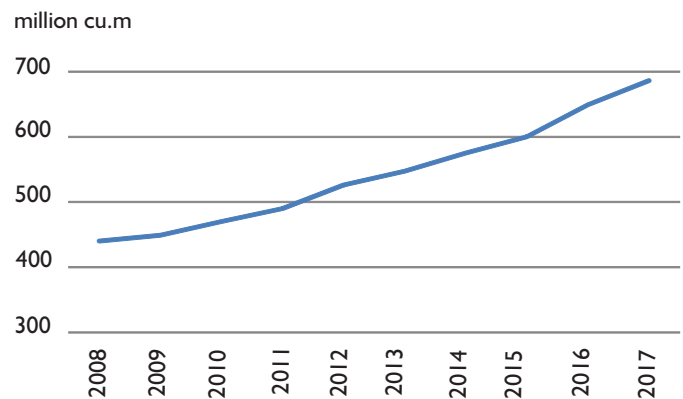
Summary of Operations

“The Western Province water supply system claims the major share of production mainly through the centers at Ambatale, Labugama, Kalatuwawa, Biyagama, Bambukuliya and Kandana & Kethhena in Kalutara amounting to 54.84 % of the total water produced by the NWSDB ”

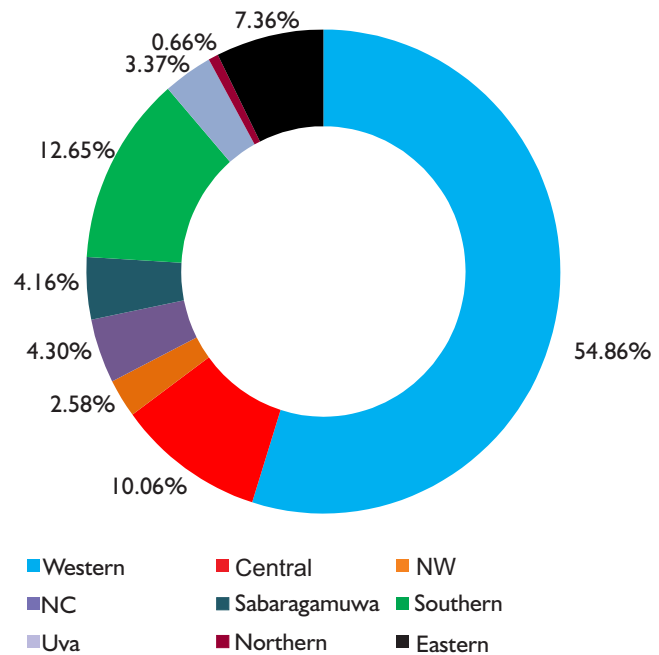
WATER SUPPLY

Drinking Water Production

The total quantity of drinking water produced in 2017 was 686 million cu.m. The trend in drinking water production during the last 10 years is given in the chart. The Western Province water supply system claims the major share of production mainly through the centers at Ambatale, Labugama, Kalatuwawa, Biyagama, Bambukuliya and Kandana & Kethhena in Kalutara amounting to 54.84% of the total water produced by the NWSDB.



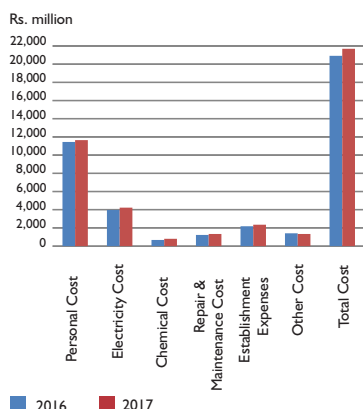
Water Production by Provinces



Cost of Production

Breakdown of the total production cost (Rs. million) in comparison with 2016 is shown below:

Cost of Production



Cost of Production Rs. /cu.m.

2016
47.19

2017
47.37

$$\begin{aligned} \text{Cost of Production} &= \text{Total Cost} / \text{Units Sold} \\ &= (\text{Total Recurrent Cost} \\ &\quad + \text{Interest on commissioned projects} + \text{Depreciation}) / \\ &\quad (\text{Quantity sold}) \end{aligned}$$

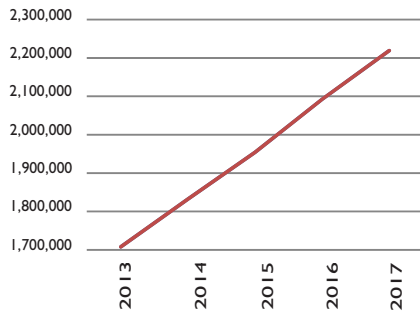
Comparison of Service Connections

Province/ RSC	No. of Connections Province/ RSC-wise			NWSDB Region	No. of Connections NWSDB Region-wise		
	As at end December 2016	As at end December 2017	Change %		As at end December 2016	As at end December 2017	Change %
Western - Central	443,998	462,290	4.12	Priority **	2,293	2,007	(12.47)
				Colombo City	140,841	142,883	1.45
				Kotte	160,781	166,770	3.72
				Maharagama	140,083	150,630	7.53
Western - North	256,513	271,735	5.93	Kelaniya	183,519	194,207	5.82
				Gampaha	72,994	77,528	6.21
Western - South	236,735	252,903	6.83	Dehiwala	105,136	107,363	2.12
				Kalutara	63,912	67,570	5.72
				Panadura	67,687	77,970	15.19
Central	248,735	261,356	5.07	Kandy North	93,804	99,303	5.86
				Kandy South	80,366	85,103	5.89
				Kandy East	74,565	76,950	3.20
North Western	73,782	78,036	5.77	Kurunegala	73,782	78,036	5.77
North Central	107,686	114,351	6.19	Anuradhapuraya	107,686	114,351	6.19
Sabaragamuwa	100,957	106,606	5.60	Ratnapura	47,489	51,219	7.85
				Kegalle	53,468	55,387	3.59
Southern	303,423	312,024	2.83	Hambantota	102,406	106,237	3.74
				Matara	94,646	97,267	2.77
				Galle	106,371	108,520	2.02
Uva	86,273	94,794	9.88	Bandarawela	48,706	53,409	9.66
				Monaragala	37,567	41,385	10.16
Northern	17,817	21,653	21.53	Jaffna			
				Mannar	17,817	21,653	21.53
				Vavunia			
Eastern	216,552	243,424	12.41	Ampara	50,967	58,005	13.81
				Trincomalee	55,902	63,866	14.25
				Akkaraipattu	68,935	74,605	8.23
				Batticaloa	40,748	46,948	15.22
Total	2,092,471	2,219,172	6.06	Total	2,092,471	2,219,172	6.06

** In year 2017, Priority connections include only Colombo City area.

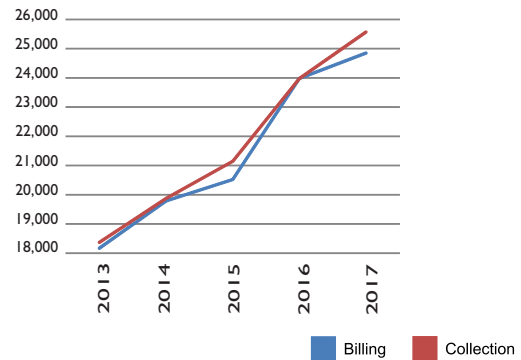
Growth of Connections

No. of connections

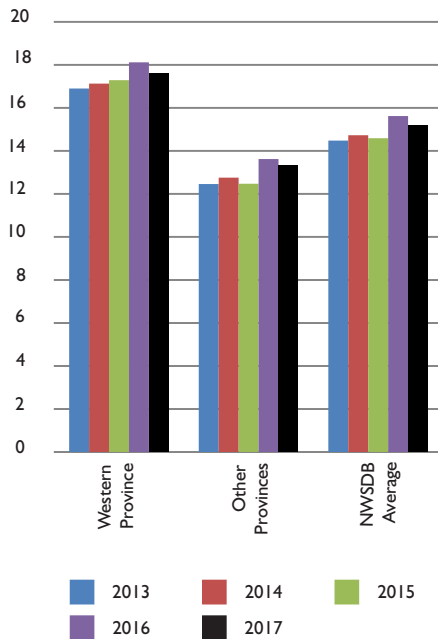


Comparison of Annual Billing and Collection

Rs. million

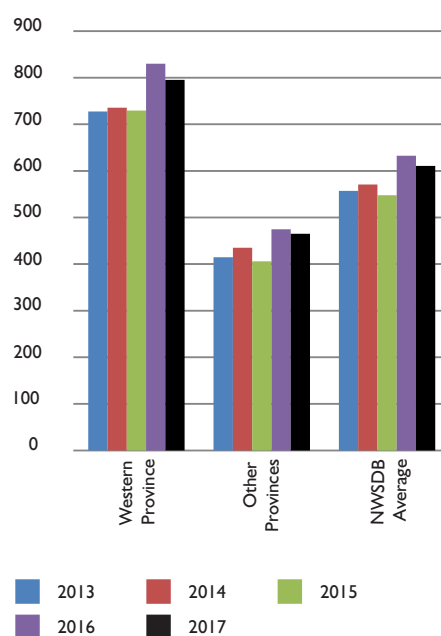


Average Household Monthly Consumption (cu.m per Connection)



Average Household Monthly Bill

Rs.



Billing Statistics

Description	2016 (Rs.million)	2017 (Rs.million)
Billing Target (with VAT)	22,380	26,346
Actual Billing (with VAT)	23,975	24,846
Collection Target (with VAT)	22,156	27,913
Actual Collection (with VAT)	23,971	25,567

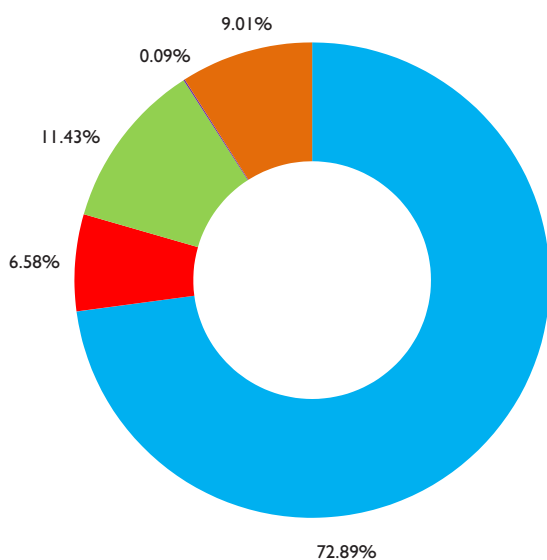
Quantity of Water Sold and Revenue by Consumer Categories (2017)

Consumer Category	Quantity sold		Revenue	
	cu.m '000s	%	Rs. million	%
Direct billing #	371,050	72.89	14,903	59.98
Schools	5,782	1.14	136	0.55
Tenement gardens	2,209	0.43	87	0.35
Public stand-post supply	480	0.09	8	0.03
Government institutions, NWSDb premises	33,474	6.58	2,406	9.68
Commercial and industrial	58,174	11.43	5,794	23.32
Tourist hotels	3,169	0.62	298	1.20
Shipping	124	0.02	69	0.28
Board of Investment	9,698	1.91	692	2.79
Religious premises	5,829	1.15	141	0.57
Subtotal	489,989	96.26	24,534	98.74
Bulk billing	15,901	3.12	303	1.22
Others*	3,150	0.62	9.0	0.04
Grand Total	509,040	100.00	24,846	100.00

Domestic, NWSDb Quarters, Government Quarters, Condominium, Domestic Non-Vat, Domestic Samurdi & Tenement Samurdi

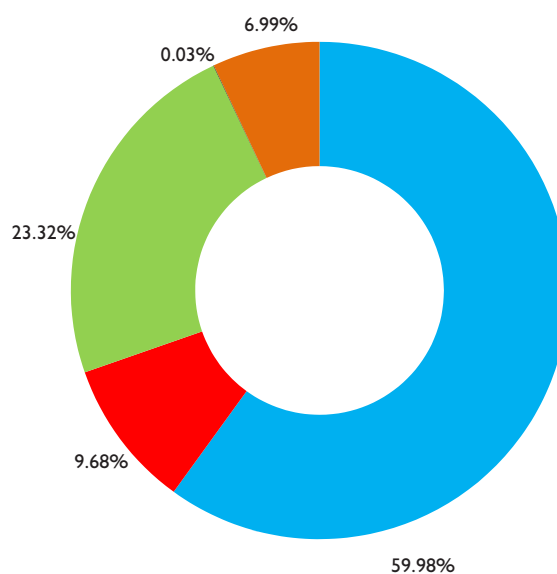
* All other billing categories which are not under "Direct Billing" or not specified as above have been grouped under 'Others'. Setting-off rebates have also been included in this category.

Percentage Quantity of Water Used by Consumer Categories



■ Domestic
 ■ Government Institution
 ■ Commercial/ Industrial
 ■ Stand Post
 ■ Others

Percentage Revenue by Consumer Categories



■ Domestic
 ■ Government Institution
 ■ Commercial/ Industrial
 ■ Stand Post
 ■ Others

Summary of Investments

“The current method of disbursing funds for capital works enabled the NWSDB to carry out Rs.30.18 billion worth of investments in 2017 including the expenditure made out of the Treasury bond provided.”

Financial Sources

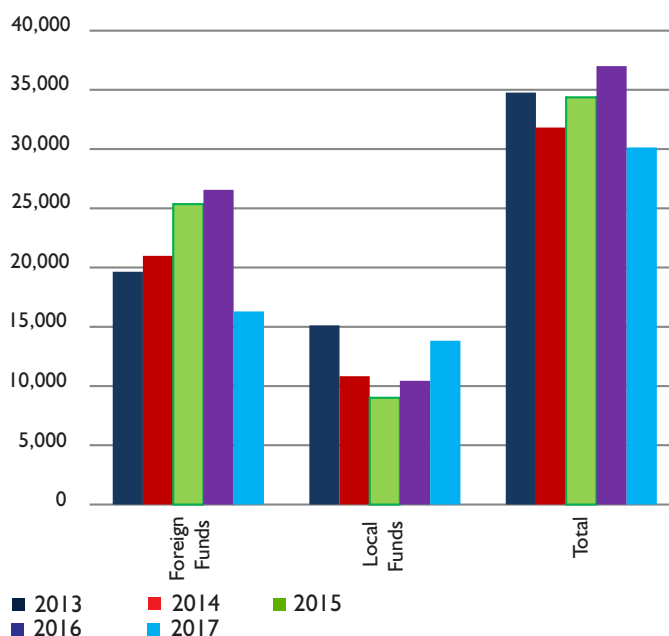
The NWSDB was allocated with local consolidated funds only for Emerging Small Townships (Small & Medium) Water Supply & Sewerage Projects and 4 selected large scale Water Supply/ Sewerage projects. Reimbursible Foreign Aid Grants were allocated for one selected Large Scale Sewerage Project. There was another allocation of Rs.16 billion for the foreign loan disbursements of Large Scale Water Supply and Sewerage Projects. The balance local counterparts of the foreign funded water supply and sewerage projects were managed with the Treasury Bonds made available for NWSDB.

The NWSDB was able to make payments for development activities without restrictions in the case of Large Scale Water Supply & Sewerage Projects in 2017.

Meanwhile the NWSDB was able to implement 15 Water Supply Projects (continued from 2016) by borrowing Rs. 6,914 million during 2017 from Local Banks. For the purpose of water sector community facilitation, Rs. 1,322.84 million in domestic funds and a supplementary allocation of another Rs. 158 million of domestic funds were provided.

Capital Budget Allocations

Rs. million

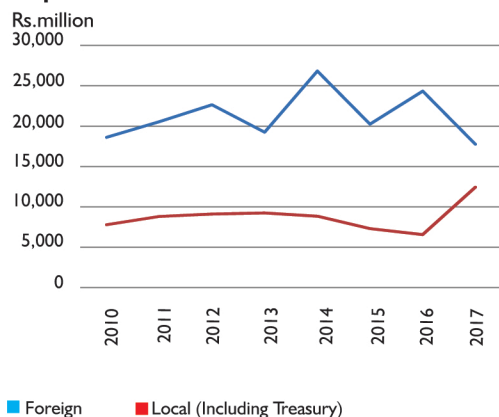


The total allocation on water supply & sewerage progress was gradually increased during the period of 2014 to 2016. In the year 2016, the total allocation was Rs.37 billion. However, this has been dropped in year 2017 to an amount of Rs. 30.18 billion. The current method of disbursing funds for capital works, enabled the NWSDB to carry out Rs.30.18 billion worth of investments in 2017 including the expenditure made out of the Treasury bond provided. However, this is in addition to the expenditure made on LBF projects.

Utilization of Capital Funds

Capital fund utilization stood at 100.2 % in the year 2017.

Capital Fund Utilization



Comparison of Capital Fund Utilization 2016/ 2017

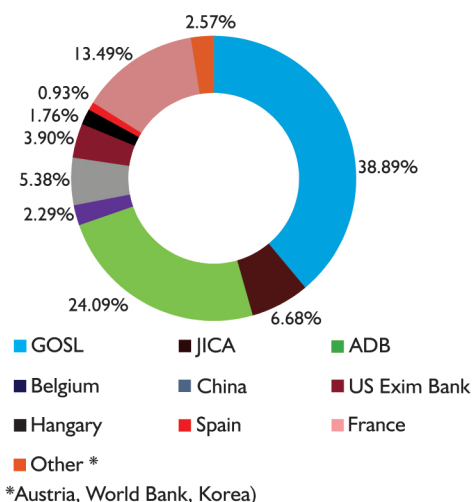
Description	2016		2017	
Foreign Component (Rs. million)	24,335	91.8%	17,749	109%
Foreign Aid Related Domestic Component (Rs. million)	4,640	66.31%	11,293	98%
Consolidated Funds for Local Projects (Rs. million)	1,927	55.9 5%	1,135	48%
Total	30,902	83.6%	30,177	100.2%

GOSL Funding through small-scale Infrastructure Rehabilitation and Upgrading Projects

The NWSDB used to have locally funded projects which are planned, designed and expended by NWSDB. The implementation of such projects are supervised by the respective provincial staff and taken over by the provincial O&M staff when completed. Most of such locally funded projects were started few years ago and owing to small annual budget allocation these projects have been prolonged. As a result, their Total Cost Estimates have increased due to price escalation.

Furthermore, funds have not been released on time to settle the contractors' claims for the work done. The GOSL allocations on Small & Medium projects, has been reduced since 2015. This year, Rs. 735 million has been

Foreign Aid Contribution by Donors and Related GOSL Funds



Rehabilitation and Improvement of Existing Water Supply and Sewerage Schemes

The NWSDB continued to rehabilitate and improve existing water supply and sewerage schemes using allocation of Rs. 945.74 million of its own finances in 2017. These funds were used to improve the quality and quantity of water supplies and maintain sewerage schemes, maintain NWSDB assets and undertake related support services in operational activities.

That means NWSDB spent Rs. 533.99 million for rehabilitation, Rs. 88.52 million for reduction of NRW, Rs. 95.20 million for energy conversation and Rs. 228.03 million for replacement of capital assets. Priority was given to improvements in schemes where there are no donor assistance or major funding.

allocated under this category for two ongoing small and medium projects and for Utility Shifting works from all over the country.

By beginning of 2017, there were 38 ongoing small and medium projects (36 water supply and 2 sewerage projects) at different stages of completion with need of funds for the completion.

Those projects had to stop (mostly with partially completion) due to lack of funds. Only a supplementary allocation of Rs. 130.28 million was provided on the same for paying retention and outstanding bills of completed projects. However, 39.4 % of the allocations on this category has been utilized during the course of the year because the NWSDB did not receive the funds as requested.

District-wise Capital Works Programme 2017

District	Allocation 2017 Rs. million	No. of Projects with Allocation	Beneficiaries
Ampara	19.65	2	30,000
Anuradhapura	14.36	2	155,855
Badulla	22.18	2	16,000
Colombo	18.93	2	30,300
Galle	87.86	3	71,700
Gampaha	3.30	1	20,000
Kalutara	30.46	1	120,000
Kandy	66.46	4	187,000
Kegalle	66.30	4	58,675
Kurunegala	73.21	4	106,185
Matale	27.96	1	400,000
Matara	58.59	2	10,000
Monaragala	0.40	2	16,000
Nuwara Eliya	89.64	2	5,000
Polonnaruwa	39.92	2	74,800
Jaffna	1.38	1	200,000
Ratnapura	73.99	6	152,900
Trincomalee	8.81	1	25,000
Hambantota	33.72	3	35,500
Total*	736.52	45	1,714,915

*In addition, Rs.763.48 has been allocated for interprovincial items including utility shifting.

Details of Projects Completed during the year 2017

RSC	Project Name	Agent	TEC Rs. Million	Beneficiaries
Uva	Monaragala - Buttala Intergrated W.S	KBC Belgium	5,515.00	50,000
Western	Rehabilitations & Augmentation of Labugama Kalatuwawa	WTP Hungary	7,302.00	375,000
Eastern	Eastern Province WSDP	JICA	6,526.00	267,000
Northern	Kilinochchi Rehabilitation WSP	JICA	1,942.50	38,000

Employees

“Manpower Development & Training (MD&T) Division continued to provide training opportunities to employees as in the past. There were 41 new training programmes/workshops/awareness programmes introduced during the year 2017.”

Staff Strength

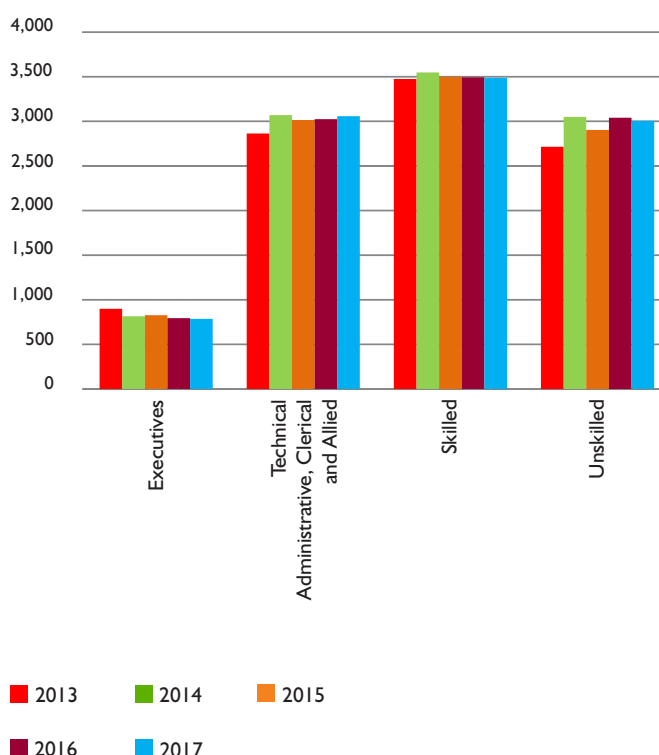
Staff	2016	2017	Variation (%)
(a) Permanent*	10,110	10,082	(0.28)
(b) Casual	3	1	(66.67)
(c) Contract	215	229	(6.51)
(d) Plant Technician Apprentice & GT	24	26	(8.33)
Total	10,352	10,338	

* Staff recruited for foreign funded projects are excluded from the permanent staff figure

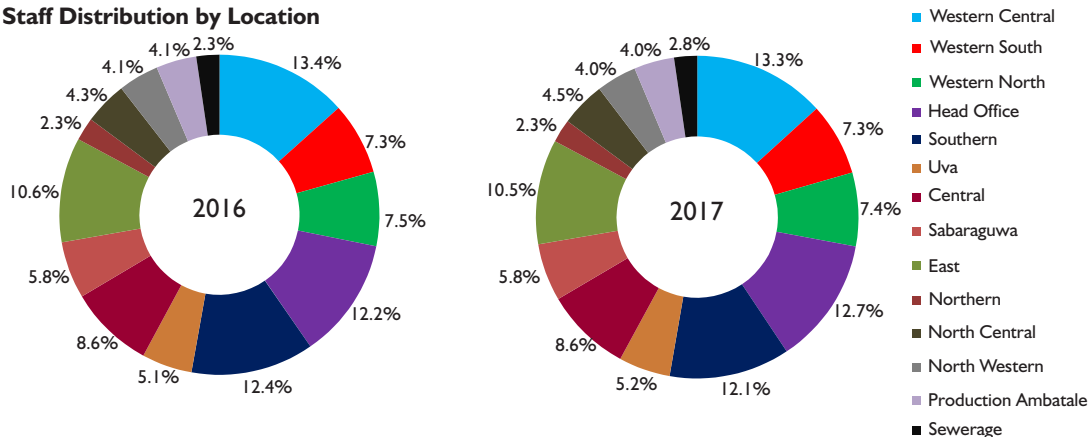
There were 229 contract, 1 casual and 26 plant technician apprentices in addition to a permanent staff of 10,082 at the end of 2017. Most of the contract employees were recruited to work for foreign funded projects.

There were 648 permanent, 119 contract and 22 plant operator technician apprentice recruitments of various staff categories during January to December in 2017. In the same period there were 676 permanent, 2 casual, 105 contract and 20 plant operator technician apprentice terminations which includes retirements, resignations, vacated posts and deaths in different categories of staff. This resulted in decrease of total staff by 14. The 26 plant operator technician apprentices are likely to be made permanent later.

Distribution by Key Job Function



Staff Distribution by Location



STAFF BENEFITS

- An Annual Bonus of Rs. 40,000.00 inclusive of a productivity incentive was paid during the year.
- Encashment of unutilized medical leave was continued as in the previous years.
- Employees who had rendered an unblemished service to the NWSDDB were felicitated at the World Water Day Ceremony held in the Nelum Pokuna Mahinda Rajapaksha Theatre in March, 2017.
- Transport facilities were made available to the staff at a concessionary rate.
- Death donations were granted in respect of the permanent employees who had died whilst in service.
- Local/ foreign training facilities were provided to the employees.
- Rs. 650/= person / month granted as a tea allowance for the employees.
- Loan facilities were provided via Government Banks (Housing loan and vehicle loan through the Peoples Bank and the Bank of Ceylon respectively).
- A Festival Advance of Rs. 10,000/= per employer was paid to the employees.
- Rs. 45,830,615.00 among 120 employees as 12 month loan and Rs. 1,522,846,639.00 among employees as 10 month loan have been distributed at a concessionary rate during the year 2017.
- Rs. 88 m (approx.) was incurred for the reimbursement of medical expenses of employees (including family members). In addition, medical expenses incurred for critical illnesses.

STAFF REMUNERATION AND BENEFITS

Comparison of Staff Remuneration in 2016 and 2017

Description	2016 Rs. million	2017 Rs.million
Salaries	10,104	10,421
Contribution to Employees' Provident Fund	902	911
Contribution to Employees' Trust Fund	226	228
Total	11,232	11,560

MANPOWER DEVELOPMENT & TRAINING

The manpower Development & Training division of NWSDB has introduced 29 new training courses have been introduced during the year 2017. Those are, Basics of M&E Layouts for Draughtsmen, Design Operation and Maintenance of RO Plants for Engs/EAs; Alum Lime analyzing Tests and Maintenance and Calibration of Lab Measuring Equipment for Lab Assistants; Pipe Line repairing Methods, O&M of Panel Board and How to become an Effective Leader for EAs; Algae Treatment for Water Purification, Design and Operation of Air Condition System and FIDIC Contract Conditions for Engineers; Responsibility, Issues raising in Accident and Reporting, RWS Activities, How to Create and Deliver High Impact Presentation, Financial Procedure, Training Programme on Creating Effective Multimedia Presentations for Executive for Executives; Water Meter Connection and Meter shifting for Pipe Fitters /Labourers; Outbound Training to Boost Teamwork, Customer Service Excellence, Use of Mail Merge for Mass Mailing, Computer Assisted Report Preparation, Use of Spreadsheets in Data Management, Visual Representation of Data with Spreadsheets, Computer Security and Internet Safety, Email Management with Outlook and Webmail for Mixed Groups; Supply & Materials Management, Essential Communication skills for giving Better Services, Getting Familiar with Ms Office 2010, Introduction to Use of Internet & Email for MAA; Interpersonal skills for Professional Excellence for Skill/ Unskilled Grades.

In House Training, Seminars and Workshops

This division has conducted 246 In House training programmes during the year 2017 for employees of various categories and trained a total of 9,228 employees (Manageria- 600, Other Executives- 2,385, Supervisory- 2,593, Clerical & Allied- 2,139, Operational- 1,511).

Training at Other Training Institutions within the Country

MD&T division arranged training for 182 employees externally through other training institutes covering a total of 2450 training days. This include PhD, Masters and Postgraduate programmes conducted by local Universities, and Diploma & Certificate courses conducted by various recognized institutions such as National Institute of Business Management (NIBM), Institute of Supplies of Material Management (ISMM), Institute of Engineers Sri Lanka, Ceylon German Technical Training Institute, Center for Housing Planning

and Building, etc. Further employees were nominated for several short courses in areas of Human Resources Management, Supply Chain Management, Construction Management, Mechanical and Electrical fields, Machinery Operations and Maintenance etc.

Overseas Training and Official Visits

Under this category, overseas **short term** training were provided for 98 employees of the Board with the financial assistance from ADB and other bi-lateral short fellowship from JICA, KOICA, ITEC, AIT, with EBARA, Asian Productivity Organization, WHO and Singapore Cooperation Programme & Chinese Academy of Science, etc., In addition MD&T Division facilitated official visits for 134 officers in respect of Pre-shipment Inspections, Factory contract negotiations, Twinning Programmes, etc. through various projects implemented in year 2017.

During 2017, the following **long term** fellowships have been received by the NWSDB Engineers and Manager (Commercial) for full time study abroad.

- a) International Executive Master Degree Programme Sponsored by Government of France (02 Nos).
- b) M.Sc. In Water Management and Governance with Specialization Water Services Management by the Netherlands Fellowship Programme.
- c) M.Sc. in Water Science and Engineering with specialization Hydroinformatics: Modelling and Information Systems for Water Management by the Netherlands Fellowship Programme.

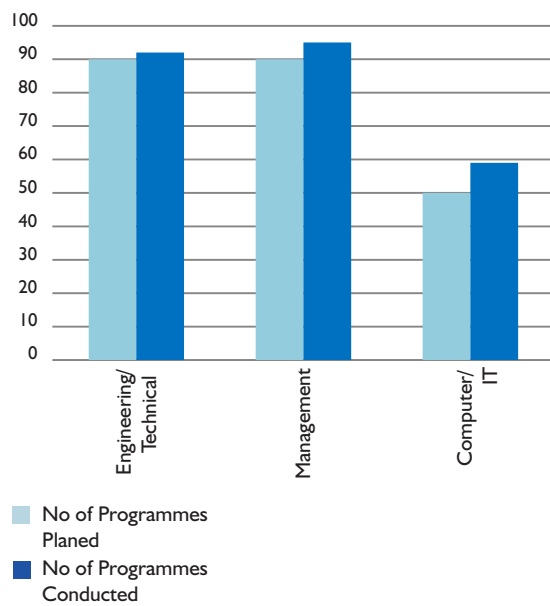
On the Job Training

On the job training was provided to apprentices (Undergraduates, NDT/HNDE students, Craft apprentices, students of Technical Colleges, Institute of Chartered Accountants, AAT, Vocational Training Authority, National Apprentices and Industrial Training Authority (NITA) etc. Under this, training was provided for 133 undergraduates, 60 technical trainees, 03 accounting trainees and 37 clerical/other trainees covering 33,953 man days.

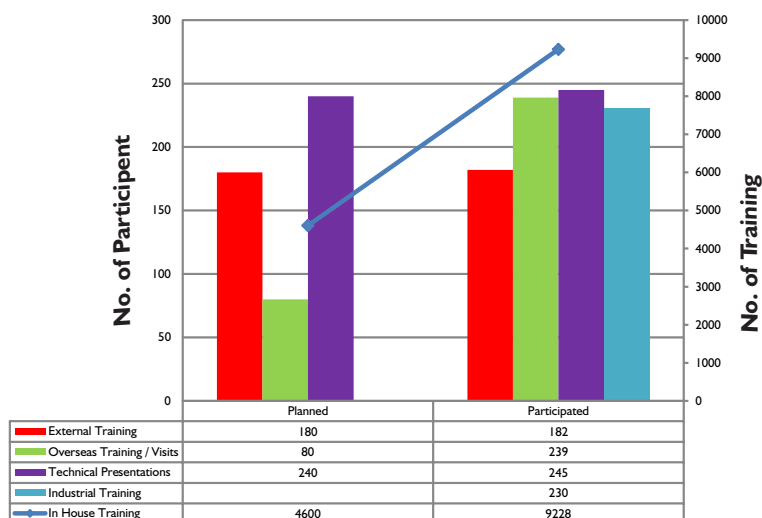
Summary of Training Provided for Internal Staff.

Type of Training	No of Employee Trained			Man Days
	Planned	Trained	% Trained	
In House Training	4600	9228	200%	13328
In Country External Training	180	182	101%	2450
Overseas Training	80	239	299%	3758
Workshops/ Technical Presentations Conducted by External Institutions	240	245	102%	245
Total	5100	9894	194%	16867

Summary of Training Provided Through MDTD



Progress 2017 - No of Participants





“Pure water is the world’s first and foremost medicine.”

- Slovakian proverb





Information Technology Solutions For Improving Service Excellence and Operational Efficiency

Innovation through Information Technology Developments

With the understanding that the Information Technology is the most important contributor to promote innovation, which is crucial for growth and sustainability of the organization in modern context, the organization continued its focus on Information Technology Developments throughout the year.

While continuing to improve and maintaining the existing systems and solutions, IT Division was able to bring in further innovation through several new solutions to cover most important functionalities of the organization. The main focus of the IT Division was to improve the traditional approaches by introducing the information technology solutions to streamline the business processes through re-engineering. Keeping in line with evolving eGovernment concepts, various steps were taken to improve the customer care services and various stakeholder interactions.

In order to cater for the increasing demands, the existing IT Infrastructure was continuously improved to extend the reach and availability of the solutions upto the bottom levels of the organizational structure.

IT Infrastructure Developments and Maintenance

The IT infrastructure is the platform for utilization of the IT solutions. The central server infrastructure, connectivity solutions and end user level hardware are the main components of the IT infrastructure of the organization. While taking steps to improve the facilities of the data center, large collection of end user hardware such as personal computers, peripheral devices were added to the system.

The IP VPN solution was further expanded by connecting more and more important locations such as Area/District Engineer offices, OIC offices, Stores Locations etc. through regular wired IP VPN connections and for other less data intensive locations the accessibility was provided through Remote VPN connections. Steps were taken to establish the disaster recovery facility which is considered as a crucial requirement in assuring the availability of the existing solutions without interruptions.

Infrastructure maintenance is one of the key areas that the IT Division responsible. The maintenance activities of the hardware and connectivity solutions continued with the involvement of the hardware/networking staff with the

support of the service providers when necessary. In order to reduce the downtimes, most of the maintenance activities were carried out by the inhouse staff.

Software Solutions

One of the most important software solutions in the organization is the Commercial Operations Management System which was developed by an in-house team of software developers. This solution was launched in year 2015 and continuous improvements were done to extend the scope of the solution incorporating more and more functionalities. The new functionalities incorporated to the solution included the complaint handling, new connection processing, facilities for NRW calculations, support for field activities etc. The Legal Recoveries module was developed and implemented as an extension to the Commercial Operations Management System.

A mobile application was developed to assist the meter readers to collect the meter reading data and prepare the bills on site. This mobile app was developed as a supplementary facility to the Commercial Operations Management System replacing the existing meter reading collection and data entry process, effectively reducing the human errors in the manual bill calculation process.

The continuous improvements and modifications to the HRM and Payroll modules were carried out to suit the new requirements and business process changes. The improvements to the Inventory Management System and implementation of the solution islandwide were among the main activities of the IT Division. The development activities of various new software solutions for Finance Division were commenced and improvements to the General Ledger System were carried out.

Solutions for Customer Care Services

The Call Center facility was further improved and this solution was amalgamated to the Commercial Operations Management System as a generalized complaint management system for islandwide usage. This solution is now used by the Call Center facility at Maligakanda as well by the regional offices to handle the customer complaints. The work orders to the field officers are generated from the same system. SMS messaging is used as the delivery mechanism of complaint information to the field officers. Customer feedbacks are auto generated through the system and

delivered to the customers by SMS messages.

The online service portal which facilitates the customers to view bills and payments and submission of various service requests was further improved to enhance the customer convenience. The online bill payment facility is incorporated in the online service porta. This online payment facility is also accessible directly through NWSDB official web site.

A customer self-care mobile app was developed as an improvement to customer support functions. This mobile app, which is now available in NWSDB official web site, facilitates the customers to view the balance amounts to be paid and the history of billing and payment details (last 3). A web based facility which is accessible by the customers through a kiosk type work station located at the Cashier points of the NWSDB was launched. Through this solution, the customer can see the balance outstanding and the payment history without inquiring from officers. This facility helped to reduce the workload of Consumer Relation Officers by allowing the customers to see the information themselves without visiting the busy offices.

The development of a customer self-service mobile app commenced incorporating all the facilities offered through online services web portal to the mobile platform.

Utilization of Emerging Technologies for improving Service Quality

Innovation is the key factor in improving public service. While e-Government concepts are emerging as the driving force in improved government service delivery mechanisms, the technologies such as Geographic Information systems (GIS). SCADA systems, SMS and mobile based technologies are fast emerging as platforms for innovative solutions in the public utility sector worldwide. Keeping in phase with these new trends, throughout the year, NWSDB has made remarkable attempts in adopting these emerging technologies to enhance the operational efficiency, service quality and customer care services ensuring better customer satisfaction.

The initiation of the activities such as establishment of a NRW Monitoring Center and Development of GIS solution for water utility assets are few steps taken by the NWSDB towards this motive. Proposals for Automation, Central Monitoring and Review Facility and Automated

Metering and Billing System are now being evaluated as a means of improving the operation and maintenance of the water and sewerage systems efficiently. The latest trend in automation and central monitoring is to utilize the fast evolving Internet of Things (IoT) technology, which facilitates the accessibility of the important devices through internet. The possibility of utilizing the IoT concepts for automation and monitoring the operations of various important devices is now under evaluation in the organization.

NWSDB Official Web Site

The Official Web Site of the NWSDB was updated continuously to reflect the most current image of the organization. While providing most up-to-date information about the organization, certain interactive services have been incorporated to the site to enhance the customer interactions. Application Forms, service request forms, leaflets, publications etc., are available for the users to download. Details about the important events, notices, news items are updated regularly.

The tender notices, job opportunities, procurement notices, etc., are some of the most popular sections of the site. Facilities are available to send the customer feedbacks and submit complaints/Grievances. The official web site has been converted to a content management solution using open source web design and development methodologies to facilitate more effective content updating process.

The new web site has facilities to accept payments on water bills online using credit cards.

Call Center Operations

NSWDB operates a 24 hours Call Center facility to help customers to lodge their complaints and grievances through hotline 1939. The software modules required for the call center facility were developed /implemented by the IT Division. The software package for capturing and processing customer complaints with immediate feedbacks / messages to customer and relevant NWSDB officials through SMS is the centerpiece of the Call Center operations. This solution has been in operation for the past 6 years and a major upgrade to the software solution was done with the development of Commercial Operations Management System. The Call Center software is now a module of the new Commercial Operations Management System.

Commercial Activities

The Commercial Division utilizes software to serve customers better, the in house staff training and sustainability island wide are important key areas.

Software development for service excellence

The “Commercial Operation Management System” developed by the IT division for the billing and collection was stabilized and over 400 reports have been developed for smooth operation and monitoring purposes. Close monitoring on reconciliation with finance division is made. New products are introduced to improve efficiency.

- a. Water Meter reading using an application for mobile phones has been successfully launched and island wide implementation, has been commenced. This has brought better customer satisfaction by error free bill while making it very convenient for the meter reader by reducing the calculations. In addition, Mobile metering monitoring system facilitates decision makers for better performance.
- b. Customers visiting cashiers are in a position to view the current due using the “Self service App.” and make payment accordingly.
- c. Mobile application to view the current outstanding enables field staff to verify the customer outstanding prior to disconnection of service due to unpaid water bills.
- d. To improve the customer satisfaction by issuing a computer generated bill for the months when physical reading not taken, has become effective.
- e. Institution having offices country wide “Group Bill” was initiated to issue monthly bill for all officers as one bill, to improve collection.

“Commercial Operation Management” familiarization was done for decision makers by conducting awareness program in all 11 RSC's. Participation in monthly Billing and Collection meetings of the regions facilitated to share best practices, collect dues avoiding disconnection and to emphasize the necessity of collecting long outstanding arrears.

Serving Customers Better

At the Head Office, water bill payments are accepted at the cashier. The building was refurbished to improve customer satisfaction and named as “Customer Care Centre”. The customers are in a position to verify his balance due prior to settlement of bill using “self help kiosk”, any verification or complaints could be made at the customer care desk. Customers are served in an air-

conditioned customer friendly environment with Queue Management System, TV entertainment, adequate seating arrangement and drinking water. This model is to be replicated in all regions.

Arrears Recovery

Revenue generation of the board had to be increased. Additional effort was made to collect the long standing arrears from disconnected premises. Special program was initiated to concentrate on collecting over Rs 100,000/= and Rs 200,000/= arrears which resulted in bring in Rs. 7.34 million. Special meeting was initiated with Colombo area DIG and this initiation paved the way for collection of current outstanding arrears and the long outstanding arrears. It is noteworthy that very old arrears since 2003 also had been collected. Another large arrears of Rs. 10.1 million is being collected on installment basis. All the regional offices played a key role in adopting different strategies to collect additional revenue from disconnected customers.

Performance Enhancement and Productivity Improvement

Monthly progress meeting with staff, monthly all island commercial managers meeting, and once in six months sub section staff meeting, were held as regular meetings focusing on enhancement of performance. The staff is allowed to discuss the hindrance in performance and solutions were given. In comparison with previous years, significant improvement had been made in revenue collection, reduction of debtage closer to 0.67, disconnected arrears collection and reliable information transformation to Finance Division.

In March 2017 World Water Day celebration, Head office Commercial Division was placed 1st under the category “Implementation of 5s in Head office & Surrounding Offices Evaluation”.

Small group meetings were conducted with cross section of staff to identify the areas that needed attention to improve productivity. Suggestions given by the work team was discussed and approach and facilities were made to improve their skills by training/ access to knowledgeable persons. Knowledge sharing enabled to overcome many issues. As the section is heavily depended on computer trivial computer issues were identified as hindrance for performance. Participatory management was encouraged in all activities, where all staff contributed to any common activity and their views were given due recognition.

This year many training programs were conducted to focus groups covering all categories of the staff, for

improving their skills (overall 86 sessions which is 2.5 for each staff on average). Some of them are; Creating and Delivering an Effective Multimedia Presentation – for all commercial officers, Workshop on Customer Service Excellence, Disciplinary Procedures, and Positive Thinking Boosting Productivity.

At Kandana Water treatment plant, all the staff of the division was given an outbound training which was a good opportunity for the staff to interact with each other in addition to its main scope of improving the skills in team work. Also the plant visit gave an opportunity to have a better understanding of the capital intensive treatment process.

All the staff visited the Ranaviru Apparel on 28th December 2017. The apparel is managed by the Sri Lankan Army, where disabled soldiers involve in the production line. This apparel has achieved many awards for productivity and this is one of the recommended places to visit to improve productivity and learn about the systems.

Capacity Improvement for all the Commercial Officers Island wide

The training needs of the commercial officers are identified and the suitable programs are developed through the training center. This year, many special programs like Positive Thinking to Serve Better,

workshop on Customer Service Excellence, “Towards Service Excellence: Managing Customer Relationships in Public Sector Organization”, Creating and Delivering an Effective Multimedia Presentation, Budget Preparation, Awareness on Commercial Circulars, and Continuous update on “Commercial Operation Management” were being initiated.

Training Identification

The training division has been intimated on the training that has to be carried for different level of commercial staff in the board. The type of training and the identified in-house resource persons has been given. Accordingly training had been carried out to staff in different regional support center's.

Different level of staff has to be trained to upkeep with the trends and the identified training needs has been informed to the training center in order to incorporate for 2018. The category of staff include commercial officers, commercial Assistants, commercial clerks, Management Assistants, Divers, Peons etc.

Customer Awareness

At the exhibition “Thirasara Yugayake Haritha Udanaya” (“ නිරසර යුගයක හරිත උදානාය “) a stall was allocated to NWSDB. Staff of commercial division educated general public about the treatment process, cost of water and formulation of water tariff.

Rural Water and Sanitation

Performance and Major Activities in Rural Water and Sanitation Section

RWS section played a major supportive role in many events held in parallel with the World Water Day 2017, which was held at the Nelum Pokuna Theater on 22nd March under the theme “Why waste water”. Parallel to the main event, selection of the best CBO Treatment Plant competition was planned, visited in each district and three best schemes were selected by the RWS unit. In addition, major support was given to the Research and Development Study Symposium 2017, competition among school children (singing/art/essay) and launching of a magazine at the main event.

CBO site visits and conducting awareness programs parallel to World Water Day 2017, CBO Forum meeting “Supan Praja Abimani” at Sugatha Dasa Stadium, collecting data to update RWS database by visiting several districts (Rathnapura, Kurunaagala, Kaluthara) and

completing the database were also carried out in 2017. Conducting rehabilitation, catchment improvement and awareness programme at Rideevita CBO and preparing an action plan to launch productivity programme in RWS Section are some other activities carried out. In addition, major supportive role was given to World Bank project in 7 districts.

Digital maps with GS divisions named, were compiled and input in RWS website. Three Water safety plan posters further developed in English and Sinhala were translated into Tamil and educational videos were translated and subtitled in Sinhala for RWS awareness programs. A statistical guide book for community based water supply was also launched.

The 9th Inter Country Working Group (ICWG) meeting, was held in Maldives to monitor the progress of SACOSAN Activities. The Regional Center for Sanitation (RSC) was launched in Sri Lanka as a knowledge

management and networking hub.

Action was taken to open up more channels of data collection, and speeding up in updating data, enabled to

improve the completeness of data base. The piped Rural water coverage by CBO's is 10.5% as per data compiled at end of 2017. Several new features were added to the RWS web site – nwsdbwrs.org.

Public Awareness Programme

Public Relations Unit conducted various education and awareness programmes targeting customer groups, school children and consumer societies. Major focus was placed on water conservation and environment aspects and protection of water bodies etc. This has been done throughout the country. The number of school programmes was 35 while the number of government institutes and private sector programmes were 10. Various events were held to mark the World Water Day 2017. Drama, art and essay competitions for school children were held.



World Water Day 2017

The PR unit engaged in publishing of periodicals to educate the target group on many different aspects related to water. Three issues of water magazine (Jalaya) were published in 2017 for the months March, June and December.

The public relations unit was also engaged in the task of educating public, the true state of affairs of the NWSDB through the media outlets of both the electronic and print. The top management briefed concerning issues of the office. Information was also provided regarding opening ceremonies of the NWSDB through the media. Additional newspaper articles were compiled for the same. The education of media outlets related to mobile water services at Mahiyangana and Kandy was also done. The education was also provided related to Credit Cards. The task of taking prompt action related to various issues raised by the public or the water consumers as well as the necessary guidance provided towards the education of students countrywide, can be considered as public services during the year.

All the staff in the PR unit was tend to work in unison having a close rapport with each other while the working environment is appealing to all.

Groundwater

The groundwater section is engaged mainly in groundwater development activities for providing water supply facilities to urban, semi urban and rural water supply schemes. There are many such activities conducted by the groundwater section in the year 2017. Groundwater development activities including hydrogeological investigations, construction of deep and shallow boreholes and assessment of wells and aquifers for long term groundwater extraction were conducted under NWSDB and WASSIP project during the year. Further, development and flushing of deep and shallow borehole wells; installation of new hand pumps under UNICEF funds and public requests; repair and rehabilitation of public hand pump tube wells using UNICEF, Pibidumu Polonnaruwa and NWS&DB Drought relief programme funds and public requests; implementation 3Tier system for maintenance of hand pump tube wells under UNICEF funds and groundwater studies, monitoring and stream gauging can be considered as other major groundwater activities

conducted in 2017.

As a total, 797 nrs. hydrogeological investigations, 296 nrs. drilling of deep and shallow boreholes, 1,189 nrs. flushing and well developments, 679 nrs. new hand pump installations, 2,118 nrs. repair & rehabilitations of hand pump tube wells, 132 nrs. pumping tests, 7 nrs. 3Tier training programmes under UNICEF funds have been conducted during the year.

Under the above activities, source capacity of existing pipe water supply schemes, were increased by 7,642 cu.m/day using groundwater. Repairing and rehabilitation of existing public hand pump tube wells in Kurunegala, Monaragala, Vauniya and Mannar districts were conducted using UNICEF funds while Pibidemu Polonnaruwa and Drought Relief funds were used for Polonnaruwa and Anuradhapura districts respectively. As capacity building programs of groundwater section, new machineries were provided using various funds

while training programmes were conducted for the groundwater staff and others.

Continuous Monitoring of selected groundwater based

WSS, preparation of Water Safety Plans and Groundwater Modeling for Attanagalu oya basin are the new future focuses of the section.

Energy Management

The Energy Management of NWSDB is handled by the Energy Management unit under the M&E Services Division. Other than the Energy Management unit, this division has three other sections namely M&E Support Service, Transport and Building Maintenance.

Energy Management Unit

In NWSDB, the annual cost for the electricity consumption in 2017 was nearly Rs. 4,120 million and 94% of this has been spent for water production and pumping (Rs. 3,935 million), Rs.48 million has been spent for sewerage pumping. NWSDB is the main consumer for Ceylon Electricity Board. To reduce the electricity consumption in NWSDB, the energy saving programme was introduced in the year 2004 and it has gradually achieved a substantial progress. Activities were upgraded to a higher level qualitatively and quantitatively for the last years. The M&E Services Division is fully equipped with energy measuring equipment to carry out all type of energy audits for pumping systems as well as energy management works. The tariff category rectifications, electrical & mechanical improvement works and energy saving programmes which were completed from year 2004 to 2017 has resulted a high energy and cost savings. Also Energy Management Unit is implementing several solar energy projects, to reduce the electricity taken by main grid.

Twenty nrs. of energy audits were carried out during the year 2017 and out of that 15 nrs. of projects were

completed. The annual cost saving due to these projects is Rs.17.81 million and expenditure for the same is Rs.84.19 million. Also it is decided to implement 31 nrs. of new projects during year 2018 and cost investment for these projects including ongoing projects in 2017 is nearly Rs. 372 million.

M&E Support Service Unit

Following works are handled under this section.

- a) Preparing M&E Tender documents and specifications for vehicles, water meters, measuring equipments and other mechanical and electrical equipments.
- b) Supply, installation and maintenance of level monitoring system.

Transport Section

There are 1822 numbers of vehicles in NWSDB and the Transport Section is responsible for all the administration issue of these vehicles including licenses, insurance, accident repairs, transferring etc.

Premises Management

This section handles all repairs, maintenance and operational activities in entire head office and official quarters in Rathmalana including Badovita Quarters (7nrs.), Soysapura (B20,B23) quarters (32 nrs.), Soysapura (C23,C24) quarters (16 nrs.), Soysapura Bachelor quarters (64 nrs.) and Rawathawatte quarters (7 nrs.).

Sociological Activities

Considering the special action process, the flood damage assessment of NWS&DB employees which was entirely coordinated by Sociology section from June-August 2017 should be noted. It entailed a series of steps to get the final outcome where nearly 160 affected employees could be compensated for their house & property damages.

Energy saving activities undertaken by the division with the support of RSC sociologists includes basically, community awareness Programme & disconnection programmes. Regional sociologist at RSC (East) with its staff launched a program to take over Selvanagar RWS scheme's 433 connections to NWSDB. Also, common disconnection Programme was carried out by RSC (East)

and community awareness on Defective Meters changing program was done at Trincomalee. Meeting the disconnected consumers, making them aware, mobilizing and attending to zero bill issues were done, and support to organize awareness creation program on "Water quality, tariff and NRW reduction" for all health staffs attached to MOH office-Kattankudy and selected schools.

Development activities undertaken by the Sociology division are many and varied. To name a few, improvements to existing rural water supply schemes and CBO capacity development were carried out by regional sociologists. Their involvement in WSP process

during 2017 can be indicated, such as, preparation of report on Issues of Multi-stakeholder Programme for Kaluganga catchment, customer satisfaction survey, progress monitoring on catchment protection programme, coordinating awareness program for stakeholders under WASSIP, joining in hazard mitigation programs & improvement plan for 4 RWS schemes in Batticaloa, supporting to Intake Protection Fence for Paradeka WSS and arranging tree planting programme in Mediriya, etc. Under CKDu prevention programs, preparing reports and sending to Presidential Secretariat for obtaining RO plants for schools in Kalkuda & Batticaloa was done.

Further, meeting with estate superintendents and stakeholders, site visit for progress monitoring of toilet constructions under SACOSAN and follow up on land acquisition & preparation of resettlement plan were carried out.

As for Institutional Development activities, preparation of study reports, concept papers, working papers, TOR and MOU were prepared by sociology section (H/O) during 2017. Reports on "User Participation & Stakeholder Partnership for SHIFT Project", Participatory Development Methods in Water & Sanitation Projects, "SIA Report on Establishment of Wastewater Disposal System for Badowita Area", were prepared and copies sent to H/O library. Preparing and

Designing Gender Action Plan & Gender Monitoring Matrix was done. Social Screening Reports (SSR) under WASSIP districts were reviewed and finalized and preparation of Skill Matrix to identify staff training needs was done. SIA Report & Social Monitoring Plan for proposed RO plant in Thalaiyadi and TOR for social awareness program for fishermen in Thalaiyadi were completed.

For productivity improvement, coordination and continuation of productivity development programmes by sociologists respective to their duty station was reported. Apart from that, monitoring of sociological functions through collection of monthly/quarterly Action Plans & Progress Reports for tracking progress during the year and follow up on consumer inquiries by taking up consumer complaints and attending to public letter requests can be emphasized.



School awareness Programme

Non Revenue Water Reduction

Pipe born water is the major water supply method for urbanized areas and keeping a minimum level of water losses is a main task to maintain. The responsibilities are loaded on Non-Revenue Water section which acts a big role to save water which doesn't contribute to revenue generation. NRW section functions in DGM (WC) area focusing on reduction of losses occurring from unbilled consumption of water to maintain Non-Revenue Water at a low level and also providing smooth and reliable drinking water facilities to the inhabitation of western central area and save the water resource.

1. Introduction

Non-revenue water section, administered under DGM (WC) aims to improve water supply and increase revenue by reducing losses made through free water outlets, minimizing the unauthorized consumption, calculating and monitoring NRW through flow and pressure measurements and establishment of DMAs.

The NRW section operates under the supervision of

AGM (NRW), Manager (NRW) and CE (IDU). NRW unit and Randiya unit function under Manager (NRW) and Illegal Detection Unit functions under CE (IDU).

It is essential to break down and identify the key components of NRW and ensure the accuracy of data used to calculate the level of NRW for effective NRW management.

During the period from 2008 to 2017 NRW of Colombo City has been reduced from 53.68% to 42.30%, which has resulted in 23.05% increase in sale of water, while maintaining the supply almost the same. Table I shows the details of reduction of NRW during 2017.

Table I:

The data was worked out for each month of year 2017 and the data for the month of December 2017 with the comparison of data for December 2016 is as below.

AREA	2016	2017
	DEC	DEC
Manager (Kotte)	26.85	27.27
Manager (Maharagama)	17.10	16.13
Colombo City	44.68	42.30
Western Central	34.26	32.64
Manager (Kelaniya)	18.62	17.40
Manager (Dehiwala)	24.36	22.91

Supply and consumption of Western Central

Mm ³ /month	2016	2017
	DEC	DEC
Western Quantity Supplied	17.6	17.48
Central Quantity Sold	11.6	11.77

2. Formation of Societies, Disconnection of common outlets and Provision of individual connections under Randiya programme

There are 1571 underserved settlements in Colombo City and already 1778 societies have been formed to cover them and meter the free water outlets. Table 2 shows the details of formation of Societies and their Consumptions and Table 3 shows the details of Provision of Connections and disconnection of common outlets.

Table 2: Formation of Consumer Societies

	2012	2013	2014	2015	2016	2017
Societies Billed	749	1,578	1,735	1,756	1,762	1,778
Billed Consumption (m ³ /month)	91,844	166,103	159,445	147,923	135,282	120,807
Revenue (Rs./month)	312,732	576,609	624,438	584,933	478,796	432,171

Table 3: Provision of Connections and disconnection of common outlets

	2012	2013	2014	2015	2016	2017
Connections provided (No.)	817	948	528	54	110	131
Common outlets disconnected (No.)	121	110	72	40	31	78

78 common outlets were disconnected in year 2017 by providing 131 individual connections for a concessionary rate in order to improve hygienic condition and quality of life of the inhabitants of the underserved settlements.

3. Unauthorised consumption detection

Illegal detections area are made through regular & random checking of premises, checking of disconnected premises, attending to complaints, checking of high bill arrears list and checking of zero bills, low consumptions & estimated bills in Western Central Region. During this year 1181 unauthorized connections have been detected and Rs. 41.62 million has been levied. Table 4 shows the details of unauthorized consumption detection.

Table 4: Unauthorized Consumption Detection

	2012	2013	2014	2015	2016	2017
Premises checked (No.)	13,619	13,343	12,812	12,250	13,417	9,654
Detections made (No.)	1,166	1,661	1,521	1,196	804	1,181

4. NRW Management

Within Colombo city, critical areas were selected and area inflow measurements were taken after establishment of closed boundaries for NRW calculation. Night survey, culvert survey and house to house survey were carried out to identify visible leaks. The NRW reduced to considerable amount for those areas. Also following activities were involved in the above process.

- ✓ Identification of Leaks.
- ✓ Flow and Pressure Measurement and validation
- ✓ NRW monitoring
- valves and pipe lines locations
- ✓ Location of Underground Information Utilities
 - Valve Location Identification.
 - Identification of Underground Water Pipe
- ✓ Leaks Survey

5. Implementation of Foreign Funded Projects

The Greater Colombo Water and Wastewater Management Improvement Investment Programme (GCWWMIIIP) is being implemented with the financial assistance from the ADB to replace the old water supply network with new pipes and introduce DMA/GIS based NRW management system to reduce NRW in Colombo City below 18%. NRW activities carried out by the project are closely monitored to achieve the stipulated NRW targets.

6. Achievements

- NRW percentage of Colombo City and RSC(WC) area has been reduced by 2.14% and 1.64% respectively during year 2017.
- NRW activities were initiated in 4 DMAs in Kolonnawa area.

Supplies & Material Management

Supplies and material management are important functions in the overall operation of the NWSDB activities. The required materials for NWSDB's operation needs to be readily available and it should maintain correct purchasing policies and procedures for procurement and storing of the items.

Supplies & Material Management section had been very successful in supplying necessary chemicals throughout the year 2017 without any interruptions subject to the termination of some chemicals tender due to closure of Alum and Lime Plants in China & India. The related staff of supplies and material management helped to provide all the new connections during the year and a buffer stock too was maintained to face any critical situation.

It was maintained a high standard of clearing of shipments for more than 450 shipments coordinating with the following institutions such as the Ministry of City Planning and Water Supply, the Government Treasury, Sri Lanka Customs, Banks, Sri Lanka Ports Authority, Shipping Lines, Insurance Companies and clearing agent formalities, relevant project and O&M cargo ensuring efficiency to avoid paying demurrages. In addition, 936 purchase orders and 120 nos. award letters for local purchasing with the value of Rs.990 million were issued.

During this year, it was able to save more than Rs. 100 million by redistributing excess materials from RSCs Island wide without purchasing new materials.

A process is underway to link all the 336 stores throughout the Island by an Inventory Management Software and it is going to be implemented step by step. Until it is fully functioned, a bulk SMS system has been introduced in order to find out excess and nonmoving items to issue for the required RSCs. In addition, arrangements have been made to obtain details to analyze 6.5 billion stocks value and it was found that Rs.1.8 billion worth of stocks are from remaining items of completed projects, Tsunami and UNICEF aids. Apart from that, all the stores were categorized in to 03 categories value wise as follows.

Classification of Stores as stock value as at 31/12/2016

Category	No. of Stores	Stock value(Rs.)	Category as	Percentage (%) of stock value
A	65 nos.	4,976,546,757.07	Stock value above Rs.25 million	76%
B	60 nos.	941,031,728.80	Between 10million to Rs.24,999,999.00	14%
C	211 nos.	670,691,808.63	Below Rs.10million stock value	10%
Total	336 nrs.	6,588,270,294.50		100%

In 2017, 19 contract documents at a worth of Rs.713 million were prepared. In this year too, arrangements were made to collect redundant and unproductive items from all 336 stores and tendering for sale to be done in March 2018. During the year, the section was able to win 4th place of annual productivity Competition organized in parallel with the Commemorative World Water Day 2017. Supplies & Material Management section has managed to achieve expected objectives within the budget allocations and its overall performance of was up to the expectations.

Research and Development

Development Activities

Research on ground water dynamics of the Murunkan basin: An environmental isotopic study for effective management of Murunkan well field

Murunkan sedimentary ground water basin is the most important source in the Mannar District. This research was completed in 2017 with analyzing total 45 Nos of surface and ground water samples. This study is very important for understanding of the relationship between water level variation of groundwater and surface water bodies and potential for sea water mixings due to ground water pumping. Further, contribution of Giant tank and Malwatu oya to ground water recharge and the potential of sea water intrusion during ground water extraction. These informations are required for better management of the Murunkan well field. Actual cost for the research

was Rs.0.421 million.

Analysis of Organochlorine and Organophosphate pesticide residues in drinking water sources in Nuwara Eliya, Welimada and Bandarawela areas

Vegetable cultivation and tea plantation on the steep slopes of up-country hills with the use of extremely high levels of pesticides, to maintain high yields and profitability are vastly contributing for pollution of water bodies. Monitoring of pesticide residues in natural water bodies in selected areas of Nuwara Eliya, Welimada and Bandarawela and use of the findings for prevention of water pollution is the main aim of this study. Sample testing and field surveys were completed in 2017. Data analyzing, conclusion and report writing are remaining.

Risk assessment on pumping wells and groundwater vulnerability of aquifers in Buttala divisional secretariat area of Monaragala district

Groundwater is one of the main drinking water sources in many parts of Monaragala district. Aim of this study is to develop a criteria to minimize and mitigate the risk and to maintain the water quality and quantity of the pumping wells sustainably. The research was completed with water sample analyzing and installing of two permanent data loggers in two wells in Buttala area for continuous monitoring of groundwater level fluctuation due to pumping and recharging with rainwater. Actual research cost was Rs. 1.562 million.

Research for historical evidences on Chronic Kidney Disease (CKD) based on life pattern with respect to environmental and social factors

Main objective of this study is to identify relationship between drinking water causes for Chronic Kidney Disease and to study impact on life style due to pollution of groundwater. This research was carried out in Wilgamuwa area since the increasing number of kidney patients during the recent past, in the area. This is a joint research by groundwater section to study behavior of water bodies and RSC (Central) to study the impact on life pattern caused due to pollution of groundwater. This research was ended with analyzing water samples for chemical parameters, environmental isotopes and social surveys for life style related matters. Actual cost is Rs.0.333 million.

Research on evaluation of adequacy and effectiveness of CBO tariff system for sustainability and diversification

Focus of this research is to assess the financial capacities of the existing CBOs who manage community water supply schemes, for better functioning of them. The study was started in 2004 and carried out for selected piped water supply schemes managed by CBOs, which were used to study on tariff, income and expenditure. Aim was to clarify factors, which depict the potential of the CBOs. Questionnaire surveys were carried out for data collection. The research was completed with analyzing quantitative and qualitative data of CBOs in 15 districts. Actual cost of the research is Rs.0.034 million.

Special events

Research and Development Study symposium 2017 of the NWSDB

Third Annual Research and Development Study Symposium was held on 20th March 2017 at the BMICH

presenting 31 papers, including 03 from International Authors with about 450 participants. Hon. Rauff Hakeem, Minister of City Planning and Water Supply was the Chief Guest while Prof. Ajith De Alwis was the Keynote Speaker. This event was a group activity with the involvement of different categories and various sectional staff, to make this function a success.



Create an ideal platform for researchers, academia and professionals to disseminate the knowledge acquired and experience gained, in water and wastewater related disciplines as well as share best practices between researchers, executives, decision and policy makers, and other stakeholders, exchange the knowledge on researches /case studies from different countries on integrated water and wastewater strategies and also, effective implementation of gathered knowledge and new technology are objectives of the event.

Institutional Development Activities Undertaken by The Section

Design Manual of Package Water Treatment Plant (PWTP)

The design manual was prepared and distributed among all the regional DGMs to use as a guideline in future for PWTP designs. This contains the design calculations and drawings of a 500 m³/day capacity PWTP.

Household water consumption survey 2017

A questioner survey was carried out for 106 houses in Maharagama area. Aim of this survey is to study the variation of domestic consumption pattern with number of members in a house, to prepare a computer model for better estimation of water demand. Data collection, processing, analyzing and preliminary presentation were completed.

Korean collaborative study on membrane filtration for small-scale water purification plants in Sri Lanka

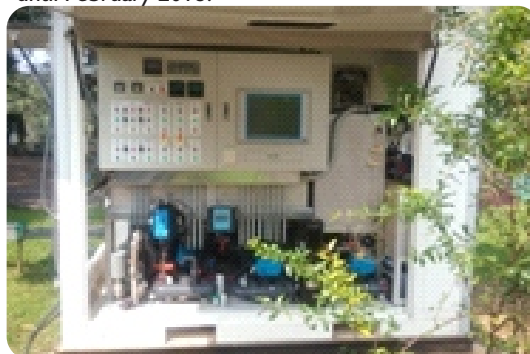
A collaborative research proposed by Kolon Global Corporation (KGC) with a financial grant by Korea, on

membrane filtration for small-scale water purification plants in Sri Lanka has been started recently with the involvement of R&D staff, DGM (WP) and his relevant staff from the initial stage. Main objectives of the research project are Providing alternatives for solving problems of environmental infrastructures through localization and demonstration of promising technologies, Initiation and acquisition of technical knowhow by a collaborative research project and Finding a cooperative way to carry forward future projects with official development assistance.

The proposed demonstration plant is a fully automated membrane micro filtering system of capacity, 100 cu.m/day that is capable of removing turbidity (max. 150 NTU) and microorganisms. Prefabricated plant, imported from Korea has been fixed and functioning with the involvement of R&D team of KGC, R&D and Bambukuliya WTP officers

of the NWSDB.

The plant was located on 11/09/2017 at Bambukuliya Water Supply Scheme site and in operation during 24 hrs. of the day if turbidity of the raw water is less than 150 NTU and the monitoring period will goes on until February 2018.



Membrane filtration plant installed at Bambukuliya WTP site

CKDu Programme

Chronic Kidney Disease of unknown etiology (CKDu) has become a major health problem in Sri Lanka. In Early Stages it was confined to North Central and Uva provinces. It is now prevalent in the North western, Northern, Central, Eastern, Sabaragamuwa and Southern provinces. According to the World Health Organization (WHO), more than 15 percent of the population aged 15–70 years in the North Central and Uva provinces are affected with CKDu. Over 35,000 deaths from the disease have been recorded in the Anuradhapura district in the North Central Province since CKDu was first identified in 1991.

Accordingly, NWSDB has developed a strategy and work plans to provide safe drinking water to CKDu affected areas as per recommendations by WHO and medical professionals. This includes short term, medium term and long term strategies.

Long term solution covers the affected areas by new water supply projects while medium term solution provides water supply extensions from existing water supply schemes to the CKDu affected areas. Short term solution includes providing bowser supplies for CKDu affected areas, establishing small Reverse Osmosis (RO) treatment plants to purify groundwater for drinking & cooking purposes and rainwater harvesting.

MCPWS has allocated Rs. 630.88 million to NWSDB for the CKDu relief related activities for year 2017 and this budget has been used for providing medium term and short term solutions for CKDu affected areas.

During the year, pipe line extensions have been given for

a length of approximately 191.8 km. Activities such as, establishment of RO plants, construction of rainwater Tanks, distribution of drinking water through bowsters, were implemented for the areas where pipe line extensions cannot be provided. Under the establishment program of RO plants, 153 RO plants have been provided for schools.

In addition, 111 RO plants have been provided directly from the ministry using the allocations under the Capital Budget.

Further, the Chinese Academy of Sciences (CAS) has initiated a project with NWSDB to investigate the root causes of CKDu. The project broadly focuses on identifying consistent water treatment technologies for CKDu affected areas in Sri Lanka and to provide safe, affordable and sustainable water supply. The Government of People's Republic of China has committed RMB 97 million to construct an Advanced Laboratory with an area of 5,000 sq.m and equipped with all the advanced water quality analyzing facility making one of the best center of the South Asian Region for water related environmental research.

A memorandum of understanding was signed between CAS and University of Peradeniya (UoP). Accordingly, the land was selected in the premises of faculty of engineering of UoP. The Chinese design team is currently working on designing of the Advanced Laboratory. The construction of the Advanced Laboratory will be commenced before the September 30, 2018. The construction is expected to be completed by the June, 2020.



Water Safety Plans (WSPs)

The World Health Organization's (WHO) guidelines for drinking water quality recommended Water Safety Plan (WSP) as the most effective means of consistently ensuring the safety of a drinking water supply. Water Safety Plan implementation in Sri Lanka continued from the year 2015 under the advocacy and implementation support from the WHO.

Eleven Urban WSP training programs were conducted for all RSCs under the Manpower Development and Training Section of the NWSDB. With the commitment of NWSDB, WSP could be implemented in 149 urban WSSs which is about 45% of the total water supply schemes maintained by NWSDB which includes all the major urban water supply schemes in the country such as Ambatale, Biyagama, Kandana, Negambo, Greater Kandy, Kandy South, Thuruwila, Gallella, Konduwatawana, Himadurawa, Batticalao, Greater Matara, Greater Galle Water Supply Schemes (WSSs). These above schemes represent more than 60% of the total beneficiaries of NWSDB.

In addition, a series of international WSP auditing programs under the category of external informal were conducted with the assistance from WHO to evaluate 16 WSSs since year 2016. Further, the internal formal auditing will be commenced in the year 2018. Besides, the World Bank Assisted Water Supply and Sanitation Improvement Project (WaSSIP) has joined the hands to strengthen the implementation process of WSPs in the seven districts and capacity building of the rural water supply sector of Sri Lanka.

Moreover, the NWSDB has discussed with the Institute of Engineers, in Sri Lanka (IESL), Institute of Standards of Sri Lanka (SLSI) and WHO country office to establish external formal auditing in the first time in the Southeast and South Asian regions setting an example for the other countries. The WHO regional office in New Delhi has already granted Sri Lankan Rs. 2.8 million to the IESL as the independent hosting agency to lead this endeavor.

Hence, no doubt that the NWSDB is exactly in the tract of meeting the set goals of the WSP Strategic Plan - 2020 by implementing the WSP as a holistic approach to ensure safe access to all citizens of the country as per the vision of WSP Team of the NWSDB, i.e. *"Safe Water for a Wealthy Life"*.

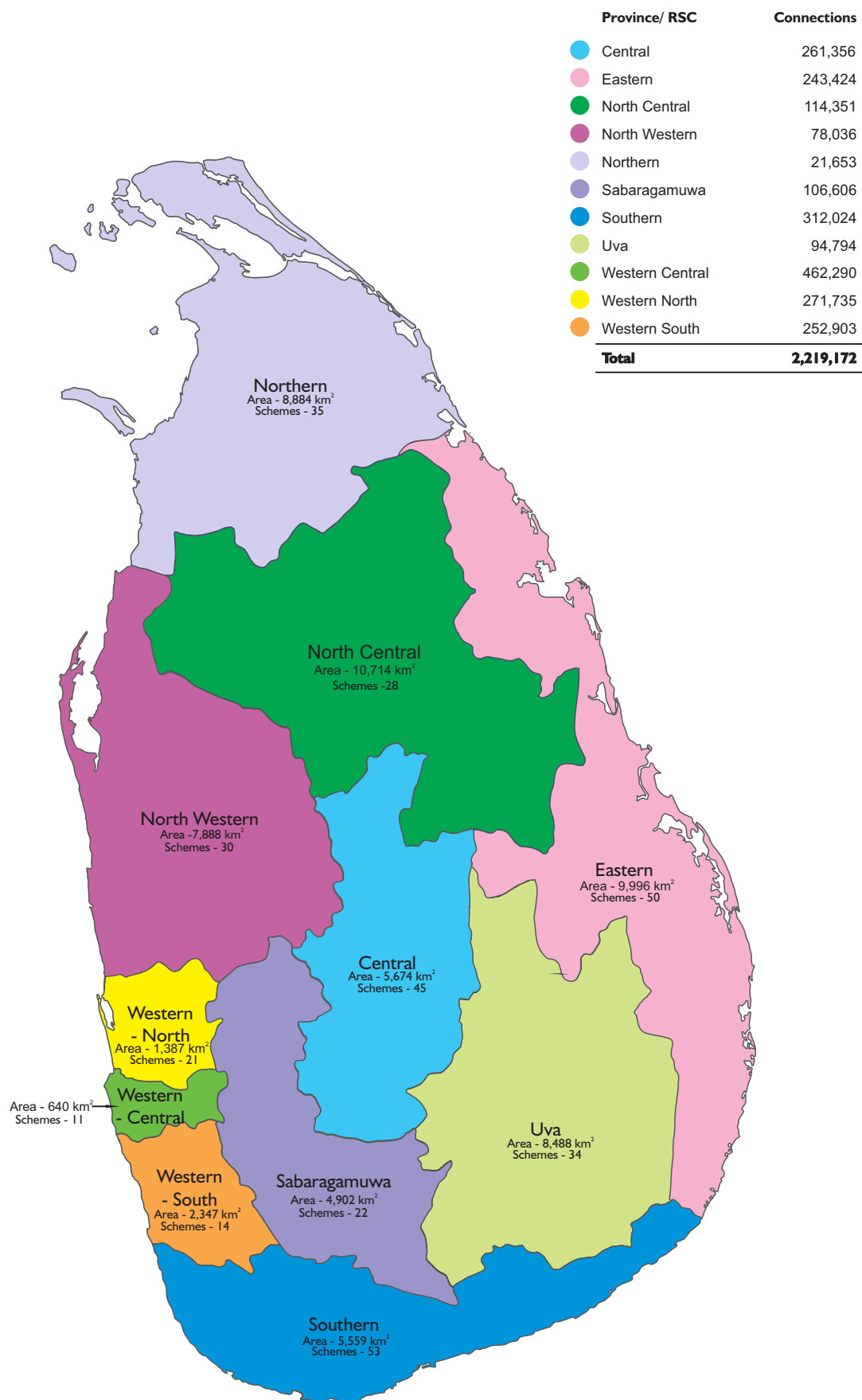


***“We never know the worth of water till
the well is dry.” – Thomas Fuller***





Regional Support Centres



REGIONAL SUPPORT CENTRES

New projects are originated from the 11 Regional Support Centers of the NWSDB. As representatives of the Project Review Committee, the staff of RSCs' closely coordinate the planning and regulatory procedures of new projects. Also, the existing WSSs and Sewerage Schemes are Operated and Maintained by them. Infrastructure Development, Reduction of Non Revenue Water, Energy Management and Institutional Development works and performance in water supply and sanitation sector of the RSCs have been included under appropriate sections. Some other important information which are not included in aforementioned sections are summarized below.

Western - Central

The western Central Regional Support Center (RSC-WC) consists of Colombo City North (CCN), Colombo City South (CCS), Kotte and Maharagama manager regions. Many special social events took place as usual in the RSC-WC region in 2017. Programmes to celebrate Sinhala and Hindu New Year, turning of the new calendar year on January 1st, Dansals on Vesak and Poson Festivals were arranged. Religious as well as recreational /educational activities such as Bana & Pirith programmes by the RSC (WC), annual trips and get together by RSC and regional managers were also conducted during the year.

Many Non Revenue Water (NRW) reduction activities and Energy Saving Activities were conducted in the RSC during the year. With NRW reduction activities (valve tracing, pipe line tracing, illegal usage detection, leak surveys, internal leak detection, defective meter replacement, leak repairs) carried out within the region, NRW could be reduced to 42.4% in Colombo city which is a 2.2% reduction compared to the last year. The NRW figure for the RSC(WC) region is 32.9% which is 1.4% reduction from the last year.

NRW reduction leads to increase system efficiency and saving energy. Renovation and laying work of the Colombo City pipe network has been commenced by the Greater Colombo Water and Wastewater Management Improvement Investment Project to sharply reduce NRW. Thus the energy used for pumping will be further reduced. Replacing old pumps in pump houses, changing indoor & outdoor lights to LED lights, changing of pumping hours in pump-houses more towards off-peak hours, prompt preventive maintenance at all energy consuming sites etc. were also some steps taken to save energy by the O&M sections in

addition to major work expected by the Project.

Pipe Line Extensions / Infilling Lines were undertaken in the RSC during the year. Total length of pipe line extensions and common line improvements by Manager Maharagama is 50.4km for lines of diameter 63mm and above. Same by Manager Kotte is 18.5km. Also small length of extension pipeline has been laid (220m) by Colombo City managers in their areas.

The pipe laying work for distribution improvement in Habarakada and Korathota areas by Rs.3.5 Billion LBF Project amounting to Rs. 184.22 million which added a pipeline length of 15.96 km with diameter 63mm and above to the system was completed during the year among other related infrastructure in the scope of the project. 1,232 new connections were also given in this project.

The targets of New Connections and Billing & Collection were successfully achieved during the year. A total of 17,513 new connections were given in RSC-WC region during the year. This is a 100% achievement and exceedance of the target as the plan was to give 15,405 connections. The target was achieved by giving 992, 643, 5456 and 9781 connections in Manager CC-North, CC-South, Kotte & Maharagama areas respectively and 641 connections by Manager(NRW). The Billing target for the year was Rs. 7,591 million and actual billing up to November 2017 is Rs. 7,629 million which is a 100% achievement. For the same period, collection is Rs. 7,721 million which is 97% achievement of the Rs. 7,992 million annual target. Debtage is 0.6 month for the total RSC (WC).

As Infrastructure and Institutional Development works in the region; Installation of chlorinators in Halpita, Miriswatta and Jamburaliya pump houses, completion of the construction of new valve house at Maligakanda reservoir, renovation of Homagama, Maharagama, Pannipitiya and Miriswatta water towers in the manager Maharagama area were done in year 2017 among many other minor development activities which were carried out by the Operation and Maintenance managers with the funds available to them to improve infrastructure facilities.

Water safety plans were prepared and implemented in Kotte and Kolonnawa areas while for Battaramulla, Maharagama and Colombo City North and South areas plans have been prepared. Under this, CI/GI pipe replacements with PE pipes, shifting pipe lines near garbage dumps to avoid leachate entering water distribution pipe lines, contamination prevention work

at storage reservoirs such as covering ventilation holes with protective mesh etc. were carried out.

An emergency response plan was prepared in Kotte-Kolonnawa areas to face disaster situations such as floods and unexpected circumstances on this area is prone to prolonged inundation during the rainy season.

Awareness programmes on schools to educate future generation on water and programmes in various government & private institutions to aware on present water situation were conducted during 2017. Selected employees of all categories under RSC(WC) were sent for various awareness programmes (occupational safety, health management, green productivity etc.) to improve their productivity during work. Meter reading through mobile application using smart phones was implemented in Colombo city and part of other areas in the region to improve productivity. Meter reading audits, defective meter replacement work were carried out throughout the region to improve billing accuracy and the quality of service to the consumers.

Western - South

The Regional Support Centre (Western-South) comprises of RSC (WS) office and 03 Regional Manager Offices Manager (Dehiwala) Region, Manager (Panadura-Horana) Region and Manager (Kalutara) Region.

Many special events were taken place in the RSC during 2017. RSC (W-S) office and three Manager Regions arranged Special programmes for positive thinking, attitude changing, Quality circle tools of productivity improvements, Pirith Chanting on 1st of January, New Year, Vesak, Poson and Christmas Festival celebrations. RSC (WS) office scheduled and improved their productivity further to participate National Productivity Competition – 2017 and several training and introduction programmes were arranged at Regional office to improve their productivity too.

Several NRW reduction activities were carried out within the Regional Support Centre – Western South and the NRW figure was maintained around 20 % within the Region. The respective NRW figures for Kalutara, Panadura-Horana and Dehiwala Regions are kept below 15%, 17% and 25% although lot of further road rehabilitation projects were carried out during the year 2017.

Water quality surveillance and water security activities were carried out in several areas including few RWS schemes. All modules of Water Safety plan were

completed in 11 Water Supply Schemes (Matugama-Wettewa WSS, Aluthgama WSS, Beruwela WSS, Payagala WSS, Panadura Zone – 2, 3, 4A & 4B Distribution System, Bobmbuwala-Pilaminawatta WSS, Ingiriya-Nimalagama WSS, Dehiwala zone E/F and Moratuwa zone A). Three WSS were completed up to Module 5 (Kalutara WSS, Alubomulla WSS & Dehiwala Zone A) and One WSS was completed up to Module 4 (Moratuwa Zone B Distribution System). Another nine WSS were completed up to Module 3 (Atalugama WSS, Dehiwala Zone B, D & G, Moratuwa Zone C, D, E, F & G). Further, 126 nrs. of RWS Schemes designed to cover more than 70,000 beneficiary families through 13,168 connections were being implemented within the region.

Furthermore, pipe line extensions for a total length of 98.0 km which consists of 20 km in Kalutara Region, 75 km in Panadura-Horana Region and 3.0 km in Dehiwala Region were completed. Many rechargeable and rehabilitation activities were also carried out in all the regions throughout the year. Further RSC (WS) is conducting new connection accelerated and pipe laying programme under the 3.5 billion connection enhancement with Local Bank Funding project and funds under Utility Shifting Budget and Pre-Stress Verification Survey funds.

Due to the dry weather condition, Manager Kalutara area was faced a critical problem of salinity intrusion. As a temporary solution, Bowser supply was arranged to cover whole Kalutara manager area and prepared EIA report to establish permanent salinity barrier across the Kalu Ganga by LHI and open to Public Review. In addition to Bowser supply of Manager Kalutara Region, several Development activities were implemented using Rs. 20.00 millions of Drought Relief Fund. In addition to the above, nearly 7000 Nos. of connections were fed from Panadura region to overcome this situation.

The water losses in the Maggona & Alwis Place Reservoirs were identified and the procurements to rectify those losses using Rehabilitation Funds were commenced. In addition to the above activities, distribution improvements of 225mm & 160mm diameter uPVC pipe laying at Ingiriya – Horana Road (length of 7.5 Km from Wagawatta to Ingiriya), 160mm & 110mm uPVC pipe laying at Horana – Galagedara road (length of 2.5 Km along Padukka Road) and I – Road Projects under the utilization of Rehabilitation Funds RSC (WS) were started. Upgrading and installation work of Net metering Solar Power System at RSC (WS) office, Panadura – Horana Manager Office and Dehiwala Manager Office were completed using Energy Savings

Fund. Installation of Centrifugal pumps at Beruwela high lift pump house was also scheduled under Energy Savings Funds.

Dehiwala Manager Region has taken 100% of their meter readings using meter reader Application Software and other two Regions have taken 75% of their meter readings using this Application.

The Special Investigation Unit of NWSDB inspected 1,148 nrs. of illegal connections island wide and was able to confirm 123 nrs. of illegal connections during the year – 2017. Out of those 123 nrs., 32 nrs. are within RSC(WN) region while 349 nrs. of connection were investigated in RSC (WS) region.

Western - North



Outer Circular Highway Project (Kadawatha to Kerawalapitiya) – Pipe laying along Gunasekara Mawatha

The Regional Support Centre (Western-North) consists of two Regional Manager areas, Manager (Kelaniya) Region and Manager (Gampaha) Region.

Many special social events were taken place in the RSC (WN) region in year 2017. Programmes to celebrate turning of new calendar year on January 1st, Vesak, Poson and Christmas festivals were arranged. A Buddha statue was constructed & established in Area Engineer(Kelaniya) office premises. Dathu puja was arranged by Manager(Gampaha) region during October 2017. Year end paduru party was successfully held at Manager (Kelaniya) region. Further donation of goods was arranged for flood victims in Kelaniya region. In addition, several events were organized by welfare society of RSC(WN) including conducting lectures on “Spiritual Development” & “Common Health & Nutrition”, organizing stage drama “Hunuwataye Kathawa” for staff entertainment, donation of goods & money for critically ill NDWSB worker family.

During the year, selected employees of all categories were sent for scheduled in-house, external and foreign

training programmes to improve their skills, knowledge and productivity. Training division of RSC(WN) also organized & conducted 20 training programmes covering several categories; Water safety, NRW, Productivity, Commercial, Audit & Accounts, Disciplinary, Stores management & Consumer relations. Further “5S” system was introduced & implemented in all 10 offices (Manager, AE & OIC offices) in Kelaniya region to enhance overall productivity of the region.

Many NRW reduction activities such as defective meter replacement, repairing of reported leaks in distribution systems, illegal connection arresting, random household inspection, supply & installation of level monitoring system for Kelaniya region etc. were carried out within the region by utilizing O&M & NRW funds. The present NRW value for the RSC(WN) region is 18.57% which is 0.51% reduction compared to the value as at end of last year.

Energy saving was achieved mainly due to re-arrangement of operation of Biyagama water treatment plant by bypassing the pump house, so that the system is operating under gravity with Churchill water head. Further arrangements were made to install solar power system at RSC(WN) office & it is 80% completed & testing to be done.

Water safety plan was implemented for seven water supply schemes (Biyagama, Kelaniya, Ja-ela, Raddolugama, Ranpokunugama, Veyangoda & Yakkala) during the year. Seven modules of water safety plan were completed for Biyagama area, five modules were completed for Raddolugama area & four modules were completed for the rest.

COD & BOD of drinking water and COD, BOD & TSS of wastewater analysis tests were started & carried out in year 2017 at regional laboratory, Kadawatha. Regular water quality testings were carried out for drinking water especially on Pugoda WSS after verifying some industries discharging their wastes directly to the Kelani river. Total of 10,071 no. of water quality tests were carried out in year 2017 at the laboratories in Kadawatha & Negombo to ensure & maintain the quality of drinking water delivered to the consumers according to the WHO standard. Line flushing programme was continued as a routine work parallel to several road rehabilitation works. Further a database was started to develop to monitor & produce reports on water quality parameters & will be linked to existing water network maps.

Pipe laying works conducted under LBF funds were completed in year 2017. Total of 16.78 km length of pipelines of 63mm, 90mm, 110mm & 225mm were added in Akkara 50 area in Katana DS division & 3.69 km length of pipelines of 90mm & 110mm were added in Pahala Yagoda area in Gampaha DS division.

Utility shifting of Municipal Council & Pradeshiya sabha roads were carried out under Capital budget. HDPE pipe laying work along Galagahaduwa road was completed in year 2017. Transferring of pipelines along Main street, Siriwardena place, St: Laurence road, Saunders road, R. Parakrama Road, Nikulas road, Weboda road and Pushparama road are in progress. AC pipe replacement works of Biyagama road (from Kelani temple to Kohuwala road) and Maradana road to Handala road are in progress. Furthermore, several pipe laying & improvement works were carried out by Construction section of RSC(WN) region under Rechargeable funds. Relaying of pipe lines parallel to construction of Outer Circular Highway - Kadawata to Kerawalapitiya (*Gala Udapita, Gunasekara Mawatha, Heenkenda, Thapowanarama Road & polpithimukalana*) & culvert crossing in Divulapitiya were completed. Further, improvements to Gampaha WSS, pipe laying works in Gampaha & Kelaniya area, raising of valve chambers in Ganemulla road, Pipe laying & connection for Katunayaka Airport improvement, AC pipe line replacement in Maradana Road etc. were carried out & completed by utilizing the savings in approved rechargeable funds. In addition, relaying of pipe lines parallel to Colombo - Kandy Road Improvement project (Miriswatta to Weediawatta), shifting of pipe lines for Ganemulla Flyover and Daranagama Bridge are in progress.

Rural Water Supply & Sanitation improvement activities were carried out under funds provided by Divisional Secretariats, Department of National Community Water Supply, Provincial councils etc. Improvement works of Meetirigala, Kalatuwawa, Akaragama, Hapanakanda, Udugoda, Atikehelgalla & Tharala RWS schemes were completed during the year. In addition improvement works of existing RWS schemes (Kuttivila, Polhena, Bolankandagama, Randiyadahara, Sarasiya, Mangalathiriya, Nikahatikanda, Parakandeniya, Uruwala, Kithulakanda & Central Kimbulapitiya) were commenced & works are on progress. Preliminary design work was started for establishing new RWS schemes; Meriland place & Heenatiyana.

Several infrastructure development activities were carried out & completed under Rehabilitation & O&M funds. Main activities includes renovation of Negombo Laboratory, Supply & installation of Gas chlorinators (*for Veyangoda,*

Raddoluwa-New & Old, Gampaha & Yakkala WSS's), Supply & delivery of bore hole submersible pumps (*for Gampaha, Divulapitiya, Minuwangoda, Udugampola & Pugoda WSSs.*), Construction of Stores Building at Katana etc. In addition, few works were started & on progress including Supply & installation of Container cabin – 20' and 40' for stores purpose (*for AE (Kelaniya), AE (Ja-Ela) & OIC (Ja-ela, Ragama, Wattala)*), Supply & installation of Ultrasonic bulk meters & Supply & installation of pumps (*Ranpokunawatta Intake pumps & Kirindiwela high lift Pumps*) etc.

Water network modeling was done at Biyagama direct pumping area, BOI gravity transmission, Enderamulla area & model updates were done for Area Engineer (Kelaniya). Water network map was updated with the details of existing & new pipelines & fittings. Further, Mobile applications were developed to support disconnection & defective meter replacement.

Detailed design, tentative estimates & BOQ were completed for improvements of production capacities and conveying capacities of Ranpokunagama & Kirindiwela WSSs & Augmentation of Gampaha WSS. In addition, tender document was completed for intake structure & raw water transmission main of Divulapitiya WSS. Further, detailed design was completed to introduce direct pumping system in selected areas in Biyagama. Existing issues of WSS's were observed & researches are in progress for improvements of Bataleeya, Mirigama & Udugampola WSSs.

Furthermore Design, Engineer's estimate & Tender document were completed for pipe shifting/laying works parallel to road rehabilitation projects; Improvements of Colombo-Kandy road (Miriswattha to Nittambuwa), Outer circular highway (Kadawatha to Kerawalapitiya), Central expressway & Construction, Rehabilitation of bridges etc.

Rehabilitation of Negombo RO plant & construction of 1000 cu.m capacity ground reservoir & pump house for Katana WSP are the projects which received PAC approval during the year. Accordingly RFP document was completed for Negombo RO plant. Further RFP document for Mirigama WSP –Stage-I was re-submitted for document evaluation under Chinese funds.

In addition, Detailed design, Engineer's estimate & Tender document were prepared for improvement of infrastructure facilities; Construction of structural steel warehouses(03 nos) in Manager (Kelaniya) area & Construction of retaining wall for Manager(Kelaniya) office etc. Further, detail design was completed for two storied building for Negombo Laboratory & Chlorinator house at Churchill.

Assistance was provided for several water supply projects during the year. Comments for preliminary design of Katana WSP-Stage I were prepared & submitted. PAC report was prepared for NRW reduction project proposed for Manager (Kelaniya) area under ADB funds & to be sent for approval. Further Water network modelling & DMA design works of the project are in progress.

Total of 12,745 new connections were given in RSC(WN) region during the year. This is 85.4% achievement of the target despite having severe issues due to unavailability of sufficient water quantity in both Gampaha & Kelaniya regions. During the year preventive maintenance works were carried out for treatment plants, reservoirs, water towers, tanks, pump houses, chlorinators, distribution system and all other components of pipe distribution network on priority basis.

Due to extreme dry weather conditions experienced during February to May 2017, Gampaha district faced critical problems due to drying of available dug wells. As a temporary solution, continuous bowser supply was arranged to areas not covered by NWSDB in Katana, Divlapitiya, Mirigama & Minuwangoda with the assistance of Disaster Management Center & Western Provincial council. Bower supply was extended up to October 2017 for Katana area due to prevailing dry weather conditions.

RSC(WN) started to use "Meter reading app" which was introduced by IT section in year 2017.

Southern



Pipe laying at Baddegama Hikkaduwa High way access road

In view of improving interactions & social service, many events such as the annual cricket tournament, alms giving, scholarships from welfare society for the children of the employees of Southern region who successfully passed the Grade 5 Scholarship examination; two awareness programs on Health & Nutrition and Reduction of Waste Generation; and a free eye clinic at RSC premises for the employees were taken place during the year of 2017.

Many areas managed by the RSC(S) were affected by the flood occurred in May 2017. Due to this flood, a considerable damage occurred to the properties of the NWSDB specially Pump houses, motors, pumps & equipment, boreholes, Intakes, quarters and offices which resulted in abrupt stoppage of water supply and reduced level of service to the consumers. It also made it extremely difficult to carry out operation and maintenance activities due to the curtailed accessibility. But with the utmost contribution and dedication of all personnel of the NWSDB, the damage done to the critical areas was rectified within 3 days and the water supply was restored. Learning lessons from what happened; Emergency Action Plans are being prepared and flood protections measures are being taken to tackle situations like this in future.

Donation of dry rations, water, clothes and other necessary items to the flood victims was done during this time as well. All the employees contributed largely to this event. A post disaster analysis was also carried out to recognize the employees affected by the flood happened in Southern region and recommendations were given to compensate those who affected by the flood. By end of the year, those employees have been compensated to some extent as per the recommendations.

Supply & installation of pumps in Isadeen town was done under the Energy Savings funds in 2017 and a contract was awarded to replace low lifts pumps of the Nadugala intake as well. In addition to these, various numbers of energy audits and identification programs were carried out to identify areas that are in need of energy saving applications. Under these energy identification programs, many key areas that could be improved such as Dickwella- Arahana pump, Baddegama H/L & L/L pumps, Elpitiya H/L pumps, Muruthawela intake pumps, Wakamulla intake & H/L pumps and Ridiyagama intake pumps were identified. These improvements will be initiated in 2018 under Energy Savings funds. Number of awareness programs and trainings on Energy Saving activities for M&E personnel were done in RSC(S) as well.

Under NRW reduction activities, replacing of old water meters with new meters and lockable valves along with new meter posts were carried out in Galle region under RH funds. To minimize the pipe bursts, existing 280 mm dia. transmission line from Baddegama to Hikkaduwa was replaced with new 400 mm dia. PE pipes from the funding made available under Small & Medium improvements, Capital Budget (for Baddegama).

In Matara region, a team was appointed to detect leaks by means of acoustic methods carrying out night leak

surveys and repairing the leaks on the spot in Akuressa WSS. Also the night leak surveys were done in Matara, Mirissa, Malimbada, Weligama, Akuressa, Karagoda Uyangoda and Makandura schemes. GIS mapping in all schemes was completed and up to date.

In order to calculate the NRW precisely, bulk meters were installed in reservoirs and intakes at Hambantota region under RH funds.

Along with these specific activities, distribution improvements; replacing of defective meters; checking of illegal connections, zero bills and estimated bills and planned preventive maintenance and other NRW reduction activities were done regularly in all the three regions. Pipeline extensions were done for a total of 46 km (63 mm-110 mm) in all the regions (7.6 km in Galle, 2.4 km in Matara and 36km in Hambantota) while pipe line extensions have been limited in some schemes due to the limitations in present production.

A total of 7,393 water samples in Matara region and 5,495 samples in Hambantota regions were checked for water quality. Water quality surveillance in intakes and sources were done regularly further to these activities. In addition, water safety plans in Tangalle, Kirinda – Puhulwella, Matara group, and Pitigala WSSs were also in progress during the year.

Many rural water supply and sanitation activities were conducted in Southern area during 2017. Construction of Yakkalamulla RWS scheme & handing over to Pradeshiya saba; technical support to construction of roughing filter tank in Pahala Millawa RWS scheme as well as to activate Opata- Tawalama RWS Scheme; planning of Ganegoda south RWS scheme; planning & estimating of Neluwa Kalugaldeniya RWS scheme and donation of 63 mm PVC pipes to Neluwa & Tawalama D.S. Office for reconstructing flood affected RWS schemes were conducted in Galle region. Further, laying of pipes (4.8 km) at Godakoggalla; relaying of the pipe lines in Minikirula CBO (500 m) and under Barawakmbuka, Diulangate and Walawa Mau Nadee (4 km) due to the highway construction were conducted in Hambantota region.

There were many development activities conducted in Southern region during the year 2017. Repairing 03 filters and supply of filter nozzles at Hapugala WTP & supply of filter media; leak repairs in Galle region – Baddegama & Elpitiya; maintenance work in surface boxes and valve chambers belongs to Hapugala WTP; replacing of old meters and install new meters with lockable valve and new meter post ; maintenance work

in surface boxes and valve chambers; road reinstatement payment after relaying of water line – Kandewatta road; road reinstatement payment after relaying of water line – Wekunagoda road and construction of vehicle shed & Hapugala bicycle shed are the development activities conducted in Galle region.

In Matara Region, developing tube wells at Karagoda Uyangoda, Thihagoda, Hakmana & Makandura WSS according to the annual programme to increase the yield and decrease the iron content of raw water quality; construction of new deep tube well at Radampola and new shallow bore holes at Thihagoda to improve the raw water capacity, preparation of water safety plan for Weligama WSS, laying of pipes in circular road at Akuressa to get 1000 cu.m/d from Akuressa WSS to Malimbada WSS, laying of pipes along Kumaradasa Mawatha and Pattihena area in Devinuwara WSS to improve the water supply; supply & installation of Generators for Akuressa WTP, Issadeen town and Mirissa Pump houses and supply & installation of pumps at Kadduwa intake to increase pumping capacity by 6000 cu.m/d are the development activities conducted during the year.

In Hambantota region, under RH funds of year 2017; renovation of water treatment plant at Ambalantota WSS, installation of transformer panel at Muruthawela water treatment plant, renovation of Regional Manager's office at Hambantota, construction of pipe stores and renovation of chain link fence at Tangalle WSS and renovation of fence at Nonagama tower were conducted during the year. Further, supply & installation of computer network system to regional office Hambantota and supply & delivery of smart phones to meter readers in Hambantota region were also conducted in 2017.

There are many progress at Feasibility Stage. Pitigala water treatment process is being finalized and the Cabinet Paper on Proposals for Neluwa, Galle MC Area WSS; and Water supply to Karandeniya area has been submitted for approval. Greater Galle WSS stage III new estimate has been approved by PAC & proposal was sent to Board approval. Morawaka WSS, Urubokka WSS, Middeniya Angunakolapellessa integrated WSS, Weeraketiya Stage II WSS (Rehabilitation of treatment plant, construction of intake and distribution improvements for Muruthawela WSS), Barawakumbuka and Rote WSS, Ruhunupura WSS Stage II (preparation of feasibility report for construction of 17,500 cu.m/day treatment plant at Rediyagama), Lunugamwehera Integrated WSS are in feasibility stage.

Projects in Design Stage

Improvements of Galle Cluster water supply project (TEC Rs 1595 million), Improvement of Wakwella,

Improvements to Baddegama WSS, implementation of Kadduwa Intake, Capacity improvement of Hallala Treatment plant in Weligama WSS, construction of 5,000cu.m/day capacity treatment plant in Ellakanda WSS, construction of 5000cu.m/day treatment plant & floating intake for Weerakatiya WSS & upgrading of existing plant, Implementation of Agunakolapellassa WSS (TEC Rs 483 million) and upgrading of existing WTP in Ranna WSS and Design for quality & capacity improvement in Tissamaharama WSS (TEC Rs 392 million) are in progress.

Projects in Pre- Feasibility Stage

Feasibility reports for Nagoda WSS, Ampanagala WSS, Deiyandara WSS, Kiribbanwewa WSS and Lunugamwehera integrated WSS were prepared.

North Central

Special events such as Awurudu Uthsawaya, Bana Program, Cultural Society Program, Annual Trip to Jaffna and a Cricket Tournament were conducted in RSC (NC) during the year 2017.

As institutional development activities, several training programs and workshops were carried out. GIS data and familiarization program (23 participants), awareness program on commercial operations management system for decision making (70 participants), awareness program on highway traffic and highway signs (60 participants), personal grooming, social and business etiquette (100 participants), workshop on hand pump repair for 120 participants and workshop on 2018 action plan for 100 participants were carried out during 2017. Further, the training programs on delegation of financial authorities (60 participants), auditing (23 participants), meter reading (65 participants), for management assistants (HR- 30 participants), duties of human rights commission and power of the act (93 participants), supply and material management (50 participants), smart phones and MIS (160 participants), safety and maintenance of chlorinators (140 participants) and human resources management (31 participants) were carried out satisfactorily during the year. The total cost for the training program was around Rs.283,810.00.

Land acquisition was in progress, especially for the new projects of JICA phase II, Town East of Polonnaruwa Water Supply Project, Greater Anuradhapura & Greater Trincomalee IWSP, Eppawala, Rajanganaya, Nochchiyagama & Giribawa IWSP and Anuradhapura South Phase II WSP. Sixty five plots of lands already have been identified for the above projects.

Total assets with reference to the RSC (NC) was found to be Rs. 11,652 Million during the year 2017. Annual assets

verification was also completed during the year 2017. Kalawewa & Ranavirugama Water Supply Schemes were capitalized and Minneriya & Medirigiriya Water Supply Projects were partially completed.

30 numbers of water supply schemes were in operation under the Anuradhapura Regional Manager Office & Polonnaruwa Regional Manager Office. Total Number of Connections as at 31/12/2017 were 114,351. Number of connections given in the year 2017 alone were 6,665. Billing Target up to December 2017 was Rs.963,456,000.00 and achievement the same was Rs.1, 119,865,000.00. Collection target up to December 2017 was Rs.1, 067, 604,000.00 and achievement the same was Rs.1, 176, 737, 000.00.

Laboratory facilities & Water Quality monitoring activities have been improved to obtain ISO-17025. Some water quality parameters were higher than the permissible level (eg. Alkalinity, Hardness, fluoride etc.), as all the schemes in Northern part of North Central province are supplied with groundwater sources and surface water of Malwathu Oya. Due to inadequate yield in wells in drought period, it was unable to ensure 24 hours supply in some of the water supply schemes. However a sufficient level of service was maintained. Water Safety Plan & post assessment of Water Safety Plan for Thuruwila WSS was completed. Water Safety Plan auditing with the collaboration of WHO for Thuruwila WSS was completed & Water Safety Plans for Nuwarawewa, Ihalagama, Sacred City and Eppawala Schemes were being prepared. Basic physical, chemical and bacteriological quality analyses were done throughout the region including water quality analysis in lakes for heavy metal and algae at quarterly basis.

Productivity Improvement Activities such as improvements of Regional Workshop and Commercial section were carried out. In the competitions held in parallel with the World Water Day- 2017 Program, Anuradhapura Regional Workshop was awarded as the best workshop while Anuradhapura commercial section 2nd at the competition of commercial sections.

By end of the year, 284 nrs. of Rural Water Supply (RWS) Schemes, which are operated by Community Based Organizations (CBOs), have been registered under NWSDB. Technical consultations have been provided by the RWS section on many RWS schemes. In addition to the CBOs, the RWS district unit is acted as the main technical consultant for the rural water activities initiated by the Department of Community Water Supply in Anuradhapura District. There were 04 training programs conducted in Polonnaruwa district for CBO officials, Grama Niladaries, development officers and general public. Further, 162 RO plants and 337 water tanks have been installed in Polonnaruwa district during the year.

There were number of ground water activities carried out in the year 2017 such as 71 nrs. of drilling operations, 1 nr. hand pump installation, 417 nrs. of well flushing, 421 nrs. of hand pump repairs, 8 nrs. of hand pump rehabilitation, 64 nrs. of feasibility study and 84 nrs. of detail histological investigations and 2 nrs. of awareness programs with the help of ground water section head office for pradeshiyasaba staff in Polonnaruwa and Anuradhapura districts.

Fifteen nrs. of tenders were awarded to improve rural water supply and sanitation activities, rehabilitation and improvements of water treatment plants and stores. Another 10 contracts were also awarded under CKD funds.

Town East of Polonnaruwa water supply project has been awarded. Loan agreement of Thambuththegama Water Supply Project was signed & the project work was commenced.

North Western

The different divisions in the RSC (NW) have involved in many development and improvement activities during the year 2017. Sector Planning division has completed the project proposals for Katupotha -Bamunakotuwa Integrated WSS, Melsiripura WSS, Bingiriya_Pannala_Udubaddawa WSP, Chilaw WSP Stage II, Kalpitiya Desalination WSP and the feasibility of Wandurapinu Ela reservoir of which the TECs are totaling to Rs 64 billion.

As RSC (NW) we were able to secure commitment for ADB funded Chilaw Stage II – (Rs. 7.2 billion), Puttlam Stage II (Rs. 15 billion), Katupotha WSP (Rs. 18 billion) and Hungarian funded Bingiriya (Rs. 10 billion) water supply projects.

Planning and Design section has completed several activities under CKD, Puraneguma and Rechargeable funds. Network modeling of all the existing schemes after completion of mapping work can be listed as a special achievement for RSC (NW). By the end of 2017, we were able to hand over Narammala, Wariyapola, Rambadagalla, Dodamgaslanda and Maho/ Nikaweratiya water supply schemes to O&M.

In 2017 RSC (NW) has started several Capital funded projects under Ministry of City Planning and Water Supply. These projects have been commenced as City Planning, CKD, RWS, RWH and Utility Shifting projects with the allocations of Rs.140 million, Rs.125million, Rs.37million, Rs. 2million and Rs. 26.05 million respectively.

RSC (NW) annually spends around Rs. 120 million for its

electricity mainly for water treatment & pumping processes. The RSC has implemented one energy conservation project at Kurunegala WTP investing Rs. 2.4 million allocated from energy conservation fund which led to save of Rs. 0.66 million in 2017. At Giriulla WSS, a level monitoring and remote operation system was implemented investing Rs. 0.5 million allocated from M&E Services Division which led to save Rs. 0.65 million (three CBO operators were terminated) in 2017.

Another two projects, one at Kurunegala high lift pumping and second at Nikaweratiya WSS investing Rs. 1.8 million from NRW budget with a target of saving Rs. 3.5 million per annum were planned to complete in 2017. However due to the site conditions, the two projects have been postponed to complete within 1st quarter of 2018. Further, automation systems were added for Giriulla, Anamaduwa and Pannala water supply schemes during the year.

Operation and Maintenance section has implemented several system improvements. Those are the treatment improvement at Nattandiya and new boreholes in Chilaw, Anamaduwa, Narammala, Alawaa, Andigama and Dodamgaslanda. As a NRW reduction activity from 2017, all connections are to be given in HDPE and accordingly a pilot project was conducted in Kakapalliya and Nikaweratiya to transfer connections to HDPE. Further, around 20 km pipe line extensions have been done during the year for providing new connections throughout the region.

North Western Province was badly affected by the sever draught which prevailed for six months. However as a unit the RSC successfully handled the situation. Providing solutions for Kakkapalliya, Kurunegala, Dankotuwa Intakes, distribution PVC tanks, bowser supply, diverting pressure line from Maho to Galgamuwa, Wariyapola Bottleneck removing can be listed as few actions taken to have a continuous water supply though out the region.

Water safety plans have been conducted in Nikaweratiya, Nelumpokuna, Wariyapola schemes which were highly beneficial for identify the social and quality impacts in water sector through the large number of stakeholders participated.

RWS section has successfully completed and commissioned Deduru Nadeegama and Ragagedara in 2017. RSC(NW) has received Rs. 250 Mn from Wayamba Development Ministry for implementation of 12 RWS schemes in North Western Province.

In year 2017, RSC (NW) was able to implement several improvements in various departments. Meter Reading using mobile App, creating functioning databases for Tender, Letter (RSC) and Construction activities etc. Lots of improvements in Kurunegala Regional store and Chilaw Stores were implemented during the year simultaneously establishing stores IMS system to the two new stores, Chilaw and Construction. Establishing NRW unit can be also mentioned as special achievement in 2017. Under that unit mapping and hydraulic analysis of existing pipe networks and regularizing NRW and leaks have been performed.

As Institutional Developments, architectural design for a new RSC Building, starting ISO process, improvements to RSC premises & buildings, additional land to Wariyapola GW section and in house training programmes for ISO implementation, water treatment processes, inventory management system, network modeling using water CAD, mobile phone application for meter readers were able to carry out during the year.

Central

The commencement of work in New Year 2017 was started with the religious activities held at Regional Support Centre (Central) office with participation of all staff through the guidance of Deputy General Manager (Central) to achieve the NWSDB goals. Several activities that were planned have been achieved in year 2017. The total numbers of water supply connections was brought to 260,862 in this year with 1.1 million beneficiaries accounting to 40% of coverage population in Central province.

Several activities were carried out under measures identified to reduce NRW. Night flow testing and step testing was done at Angunawala zone of Kandy South Water supply Scheme. Around 41km of distribution lengths were covered during the night leak survey. More than 170 nrs. of invisible leaks were detected during the leak survey done on the request of Managers and Area Engineers. Summary report of the status of bulk meter condition in water supply schemes was prepared and tender documents preparation to install bulk meters and valves in all three regions is in progress now. Leak repair contracts in Harispaththuwa, Polgolla, Akurana areas of Kandy North region and Daulagala, Gannoruwa, Angunawala and Gampola areas in the Kandy South region are in progress. Tender was awarded to supply items for NRW reduction program in Eriyagama zone and the preparation of civil work document is in progress.

To improve the operational efficiency through the saving of energy and resources, main activity carried out was the implementation of 58 kW solar power panel system at RSC (Central) office. Before the implementation of the solar system, electricity bill for the RSC (Central) was Rs.150,000.00 per month and it was reduced to around Rs.30,000.00 per month. It is expected to cover the whole bill in future. Tender document evaluation for the installation of chemical dosing system in Araththana water supply scheme was completed in Kandy East region. In Kandy South, Elpitiya intake pump installation contract was awarded and Thalawakale pump installation has been completed. High lift pump of Matala water supply scheme and surge vessel and the booster pump installation in Polgolla water supply scheme were completed. Polgolla intake pump installation is in progress. Several documents are held up due to fund shortage in Kandy South and Kandy North regions.

In house training programs such as Standard Operation Procedure for Pumps, Leak Detection, Meter Reader Awareness Programs, Occupational Health and Safety, Contract Management, Awareness of Solar Power and Microsoft Access were held in the region as one day programs. Training programs for pipe fitters and labor awareness and chlorinator maintenance were held as two day training programs.

Several selected programs were carried out to improve the water quality and the catchment water quantity. In Udatenna water supply scheme, 332 nrs. of households were identified for latrine construction and 50 latrines were planned to construct. About 90% of construction work has been completed. Sanitations improvement work in the catchment of Araththana water supply scheme was commenced by constructing five latrines.

Every plant is inspected by the regional chemist in every month for water quality inspection. The heavy metal in water is monitoring in all regions as per water safety plan instructions. The lab facility in Kandy North was increased by providing equipments such as pH meters, laminar flow and COD digesters. The new regional lab was established at Kandy East region and the purchasing of Lab equipment is in progress.

For development of ground water sources, around 40 nrs. of Hydro-geological investigations, drilling of 04 numbers of wells, flushing of around 50 nos. of wells, rehabilitation of more than 70 nrs. of hand pumps and program on Management of ground water in 04 NWSDB schemes were carried out. Drilling of bore holes and

investigation in Udathenna Water Supply Scheme is in progress.

Activities related to water safety plan was continued in 2017. The Greater Kandy Water Supply Scheme and Rikillagaska Water Supply Scheme are at stage 07, Araththana and Hatton Water Supply Schemes are at stage 05, Polgolla Water Supply Scheme is at stage 03, Haragama, Maskeliya and Thalawakele Water Supply Schemes are at stage 02. The activities related to water safety plan for Nawalapitiya and Ulapane Water Supply Schemes are also continued.

Sample analysis in CKDu affected area such as Wilgamuwa, Laggala/Pallegama, Galewela, Naula and Dambulla are in progress. In 06 numbers of CWSS's, water sample analysis was done. Thirty seven CBOs were facilitated with technical advice and training programs. Supply of chlorinators and RCI test kits were distributed to 50 CBOs in Matale district and installation of the same was done in 08 CBOs. The 08 nrs. of CBOs were updated in CBO registry as registered CBOs. Estimate was prepared for 03 nrs. of new CBOs and technical advice was given for 10 nrs. of CBOs in Nuwaraeliya district. Also 03 nrs. of RO plants were installed at three schools in Matale district. Awareness programs on Water/ Sanitation was carried out in 09 schools and 03 technical colleges.

For improvement of commercial activities, several programs were introduced. Smart phones were distributed for meter reading and bill payment centers opened at Post Offices. Training program was given for the meter readers regarding the usage of smart phones. Arrangements have been established in Kandy South and Kandy North regions to replace defective meters as soon as information is delivered. Age analysis of water meters to be carried out in next year. Analysis is currently being done to minimize the issue of estimated bills. It is planned to strengthen the inspection procedure to detect the illegal connections. Random checking of disconnected consumers for their mode of water usage also carried out. The customers having high arrears were informed before the disconnection.

Customer complains handling procedure was more strengthened by assigning 03 responsible officers consisting of Commercial Officer, Engineering Assistant and Engineer (Co-ordination). New IT program was implemented to monitor the customer complains.

Plant improvement works in Polgolla water treatment plant is in progress and improvement of Matale intake was completed. Pipe laying works in Elpitiya water

supply scheme is in progress. Several planned construction work in Thalawakele, Mathale and Kundasale Water Supply Schemes held up due to shortage of funds. The tender preparation work carried out for Balagolla treatment plant rehabilitation works. Distribution system rehabilitation works are in progress for Meda dumbara Water Supply Scheme. Balana – Motana water supply system was commissioned to give 400 connections.

Under Local Bank funded projects, Laggala and wilgamuwa water supply project commenced the construction activities. Greter Matale project funded by AFD is in progress with design works. Contract negotiation is on going with the Bidders of Kundasale Haragama water supply project and the Nanuoya water supply project. Loan agreement was finalized for the Kandy North Pathadumbara Water Supply project. Some of the improvement in water supply coverage is carried out by the Water Supply and Sanitation Improvement Project in Nuwaraeliya district.

NPD clearance letters were sent for the three new water supply projects which received the board approval this year. Another two feasibility reports are preparing for two new water supply projects this year and four water supply projects are under initiation stage.

The welfare society of the central RSC has organized many events for the mutual cooperation and improvement of employee relations: Some of them are medical camp, full night pirith chanting and alms giving, Vesak Darmadeshana and Dansela , Bhodi Pooja, blood donation program and inter regional cricket match.

B.G.E Dhanasena and D.M.S.S Diassanayake , the officers who is work at the Regional Support Centre (Central) has won the several medals in national and international level (China) representing the Sri Lanka in the sport events of 800 m, 400 m, 200 m and 1500 m.



Willgamuwa Plant

Sabaragamuwa

In Sabaragamuwa province, several energy saving activities were carried out such as installation of level monitoring system and installation of capacitor banks for power factor correction of pump house of the Rathnapura region. Total costs of projects were Rs. 11.2 million. All the projects were fully completed at the end of year 2017. The monthly expected saving is around Rs. 120,000.00 excluding the indirect saving from level monitoring system. Controlling water levels of the tanks without over flowing, conduce to save the safe drinking water, energy, time and efficiency. Preventive maintenance for all pumps and other equipment related to the water supply schemes in Ratnapura and Kegalle regions were also carried out according to a properly arranged program. Many NRW reduction activities were carried out in the RSC, such as distribution improvements, replacing of bundle pipes, changing the damaged valves, construction of new valve chambers, pipe replacements, connection transferring.

Also, productivity improvement activities were taken place in the regions and RSC office which included awareness programs for basic productivity concepts. The basic “5S” concept was modified with introducing another “S” for the “Safety” and “6S” programs were implemented in the regional offices. The “6S” competition was commenced and going on parallel to the productivity improvement activities. Implementation of Quality Management System (QMS) in the water treatment plants at Rathnapura and Kegalle regions were also commenced. The final target of this is to get the ISO 9001 -2008 certification for treatment plants in the region which are having capacity of more than 10,000 cu.m/day.

Implementations of water safety plan was commenced in 2015 and continued in the year 2017. The Eheliyagoda water supply scheme was the pilot project for this program. The catchment protection activities like organic farming, tree planting and providing sanitary facilities for people are who living in the catchment area were carried out under this program. In addition to those activities, the catchment protection activities like demarcating reservation of the stream and provide sanitary facilities for people within the catchment area of Pelmadulla and Kolonna water supply schemes were carried out. The total cost of the project was Rs. 3.7million.

Seventeen training programmes related to the productivity, quality management system, plumber training and other awareness programmes were

conducted in 2017 in the RSC to enhance the knowledge, concepts & attitudes regarding water treatment and water supply. Accreditations for laboratories commenced in the year 2015 were also continued for the year 2017.

During the year, required technical assistance was provided for several rural water supply schemes in the Sabaragamuwa area, covering 48 RWS schemes in Kegalle region and 51 in Ratnapura region. Data collection from CBO schemes in the regions, water quality testing in CBO schemes were some of the other activities carried out in the year 2017. In addition, Rural Water Section has provided the support to rehabilitation activities of Water Supply and Sanitation Improvement Project which is being implemented under World Bank funding.

Furthermore, the total pipeline extensions carried out in the Rathnapura and Kegalle regions were 19 km and 12 km respectively. Also 5,342 numbers of connections were given in the RSC during year 2017.

GIS mapping program is in progress in the Kegalle & Rathnapura regions. A training program for GIS mapping was held on 24th to 29th of November 2017 at library hall Rathnapura.

The total cost of the locally funded projects for pipe line extensions is Rs. 295 million for two regions. Overall Rathnapura and Kegalle regions during the year. The total allocation for the program is Rs. 82 million. At the end of the year physical progress of the program is nearly about 80 %.

Many construction activities were carried out in the Kegalle region in the year 2017, final payments and retention of Rs. 11.3million has to be paid under capital funds and Rs. 13.6million has to be paid under utility shifting fund. Gonagala Water Supply Scheme has been planned to provide water to about 1000 families and pipe shifting work along Kegalle town is planned to minimize frequent pipe bursts in Kegalle town. The expenditure incurred for balance payments of those works is about Rs. 3.0million.

The construction works of Galigamuwa Water Supply Scheme were started and it has been planned to provide water to about 48,450 people. Also the construction works of Pambahinna water supply project was started under the World Bank funds and it has been planned to provide water to Sabaragamuwa University and 18,200 people. Both of these projects were implemented under Water Supply Sanitation Improvement Projects (WASSIP) under World Bank funds.

Bids were called for implementation of Plant Design and Build contract for Greater Ruwanwella Water Supply Scheme under the funding of Export Import Bank of Korea. The bid evaluation is in progress.

During the year 2016 National Water Supply and Drainage Board, Kegalle had to face a great challenge of providing water to nearly 2,000 families affected due to landslides and relocated due to vulnerability of landslides. This process has been continued as providing water to transitional centers and construction of new water schemes for resettlement of affected people. About 2000 families have been re-settled in more than 11 DS divisions in Kegalle district in the mid of year 2016. The intensive resettlement program was completed under the financial support of UNICEF. As per the cabinet paper wum/16/1840/714/036 dated 2016.09.27 Rs. 455 million has been granted for Providing Water Supply Facilities for Resettlement Villages of Landslide Victims in Kegalle District. As per the action plan for the year 2017, the project covered the designs of 11 Water supply schemes in 6 DS divisions and the allocation was Rs. 158 million.

Other than those activities, many special events were taken place in the Kegalle, Ratnapura regions, and in the RSC office of Sabaragamuwa. World Water Day, mobile services at several places, Cricket tournament, and get together functions were some of those special events.



Mawanella treatment plant

Uva

Staff has already moved to new RSC Office building at Badulla. Demodara Water Treatment Plant was opened on 27th September 2017. Water quality problems also occurred in some schemes and remedial actions were taken to remove blocks at intakes, reducing turbidity, install chlorinators in small WSS. Catchment Protection Programs were carried out for Haputhala WSS, Badulla WSS and Diyathalawa WSS. Energy saving activities were also carried out.

Reducing electricity cost by adjusting to the tariff system,

replacing of inefficient pumps and avoiding pumping during peak hours were some of the energy saving activities practiced during the year. In addition to reducing electricity cost, by implementing the preventive maintenance in all pumping stations the maintenance cost and the pump breakdown period has also been reduced. High lift pumps were fixed at Welimada treatment plant and capacitor bank and VSD pump have been fixed in Monaragala. Also solar panels have been fixed in new RSC office building.

Introduction of SCADA System to Buttala WSS, Augmentation of Mahiyangana water supply project and Badulla, Haliela Ella IWSP and Supply of bulk meters to measure NRW, Replacing old valves, Supply of leak detector, rectification of existing house connections, replacement of bundled pipes and relaying of old pipes were the NRW reduction activities conducted in the RSC.

Pipeline extension works done for Rathkinda, Agalaoya, Weheragalathanna WSSs in Badulla and Kumarapura WSP in Monaragala.

Under Rechargeable activities, rehabilitation of Eladaluwa quarters (physical progress 20%), pipe laying in Uma Oya affected areas in Bandarawela WSS (physical progress 30%), and CBO service contracts for Weheragalathanna (physical progress 25%) and makulalla (physical progress 75%) were carried out.

Under Umaoya Mitigation Water Supply Project (rechargeable work), there are Makulella Water Supply Scheme, Kurudugolla Water Supply Scheme and Weheragalathanna Water Supply Scheme. This project intends to provide water to 2500 connections in Makulella, Bambaragama, Ambadandegama, Egodagama, Weheragalathanna, Heeloya and Palpeperuwa areas. The total cost estimate is Rs. 443 million. The physical and financial progresses at the end of 2017 were about 95 % and 76% respectively.

Under rehabilitation works, DI supply for Lunuwatta WSS, DI laying for Boralanda WSS, renovation of regional office laboratory in Bandarawela, Buttala OIC office improvement, Alikota Ara intake improvement, rehabilitation of Thanamalwila treatment plant, rehabilitation of regional office Monaragala, repairing quarters in Monaragala, Wellawaya OIC office improvement, rehabilitation of Thanamalwila WSS and treatment plant improvement in Buttala were carried out and some are completed while the others are ongoing.

PAC approval was obtained for Bibila Madagama WSP, Ulhitiya WSP and Gawarammana Bogahakumbura WSP during the year.

There are many projects undertaken by RWS unit in RSC-Uva. They are Kuttiyagolla WSP-I70, Sinnamaligathanna WSP – around 110 connections (maintained by CBO), Rahangala WSP – 120 connections (maintained by NWSDb), Galauda WSP – 350 connections (maintained by Pradeshiya Saba Kandaketiya). Under CKD Budget, schools Water Supply Improvement Project at Badulla, Mahiyanganaya and Rideemaliyadda (supply and fixing of RO plants at 13 Schools) were carried out. Further, Agalaoya Ihala WSP – 256 connections (maintained by NWSDb as extension), Wewatta WSP – 58 connections (maintained by CBO), Ginnoruwa rain water project – 34 families and Rathkinda WSP (under puranaguma Rs.110 million) -803 connections (maintained by NWSDb) are other projects carried out in RWS unit RSC-Uva.

Pallewella – Govindupura RWS Scheme (CB-RWS funds) was completed. Rehabilitation Projects of RWS Schemes (funded by Uva Provincial Council) for Gangodagama, Kolonwinna, Kurugamwatiya and Tanwatta RWS Schemes was completed in the year 2017 and the total cost of the project is Rs. 21 million. Installation of RO plants of capacity 10 cu.m/day to CKDu affected villages was initiated in year 2017 in Monaragala District and the first three projects were completed at Lunugala Janapadaya, Galtammandiya and Ethimale Janapadaya covering about 900 families. Total Estimated cost of the project is Rs. 6.5 million.



Installation of RO Plant

Ongoing Projects –Rws Unit

Mahakele WSP (rechargeable) under Ministry of Economics Projects and three projects under Capital Budget RWS allocations (Boragas WSP - Rs.46.39 million, Pelgahathanna WSP - Rs.22 million & Rahuppola WSP - Rs.17.8 million) were ongoing during the year. Improvement of Indigasella and Thotillakatiya RWS Schemes were also ongoing.

Budget Ekiriyanakumbura (Rs. 150 million) & Kuralewela WSP under Puranaguma Project are ongoing.

Makaldeniya WSP for Koslanda land slide affected community is now completed, the scheme is functioning and some balance works are ongoing.

Balagolla WSP (Rs.24million) and Vilaoya RWS under CKD fund is ongoing. Kumarapura Extension with coverage of 250 families is ongoing. Pipe laying works were completed in year 2017 and culvert crossings, fixing of valves and construction of valve chamber are to be completed in 2018.

Installation of Village RO plants were progressing in Dambepitiya and Villaoya Villages with physical progresses of 80% and financial progress of 60%. Installation of RO Plants to the schools was done under CKDu fund. 14 no of rural schools with poor quality of water were selected with assistance of Uva Provincial Council to provide RO plants. Supply and installation of RO plants were completed and 90% of civil works was completed during year 2017. Total beneficiaries of the project are about 3000 students and 250 teachers of the schools. Total Estimated cost of the project is Rs. 5.6 million. Balance civil works and commissioning of RO plants to be completed.

Nine training programs for CBOs in nine DS divisions in Badulla district and training on Water Safety for the CBO leaders from seven GNDs in Monaragala were conducted during the year. Training programme on water safety and safe sanitation were done in two Schools. Training for O&M Staff of RWS Schemes of Madulla, Siyabalanduwa, Monaragala, Sinnamaligathanna, Wewatta and Kuttiyagolla were also conducted. Participated to the CBO & Sansada meetings (around 60 meetings) conducted during the year.

Northern

The Deputy General Manager (DGM) heads the RSC-Northern with the support of one Assistant General Manager (North). Operation and Maintenance (O&M) activities are divided into two regions namely Regional Manager (Jaffna) and Regional Manager (Vavuniya). Total population of the Province is 1.23 million (Census in year 2015). Total connections maintained by NWSDb is about 21,085 nos. (Up to 31st, December-2017) and the pipe borne water supply overall coverage is 8.60% while rural water supply coverage is about 1.13%.

The main functions of RSC(N) is to provide necessary support to both regional Managers' offices for O&M activities and also special attention in the existing scheme rehabilitation and augmentation works in this region. Totally, 230 Nos. of staff served in RSC-North at the end

of December 2017.

The AGM (North) is responsible to all development activities identifying new project areas to enhance the coverage of Urban and rural population, addressing CKDu prevention activities and Ground Water development activities.

The Regional Manager Jaffna covers three districts namely Jaffna, Killinochchi and Mullaithivu. There are 22 nos. of water supply schemes operated by RM Jaffna region. Under this region, some NRW reduction activities were carried out during the year of 2017 such as distribution improvements including AC Pipe line replacement in Karaveddy due to RDA road widening activity, changing the damaged valves and construction of valve chambers in Karaveddy, Nedunkerny, Oddusuddan and Mallavi. As Energy saving activities, solar power system (25 KW) was introduced at Regional Manager's office on mid of October 2017 with the fund of JKWSSP. Solar power systems (5.2 KW & 4.8 KW) were introduced at Vempirai WSS on last week of December 2017 with the fund of World Vision Lanka. Centrifugal pump was replaced at Kaithady on mid of August 2017, according to the recommendation given by the Energy Audit Report through utilizing Energy fund. Centrifugal pump was replaced at Kayts on first week of September 2017, according to the recommendation given by the Energy Audit Report through energy fund. List of Unserviceable items listed in the Post Verification Report 2016 were removed to reduce stock levels. Institutional development activities such as Construction of Pump Houses at Sankuveli for Chunnakam WSS and Mallavi WSS was carried out. The Regional Laboratory is one of the leading water testing laboratories in Sri Lanka, working the high range of analytical capacity; they can perform most of the basic water quality parameters and especially the heavy metal analysis. The last two year they are operating the Atomic Absorption Spectrometer (AAS) for heavy metal analysis; all problematic heavy metals can be analyzed (Lead, Cadmium, Chromium, Mercury, Arsenic, Copper, Zinc, Aluminum, Sodium and Potassium) and monitoring, Ground water, Surface water and Seawater supply schemes which are applying different treatment methodologies. A mini laboratory setup is established in Kilinochchi Treatment plant site to monitor the Kilinochchi treatment plant and extend the laboratory services to Kilinochchi and Mullaithivu districts. Most of the water supply schemes are depending with the groundwater and all the schemes are facing quality and quantity issues, due to that, we are unable to increase the number of connections significantly in the region and looking for alternative sources, especially for Jaffna District. Hardness,

Salinity and Nitrate are very common problematic parameter in Jaffna region and the town areas are facing high bacteriological contamination. In addition to this Oddusuddan and Nedunkerny Water Supply Schemes are facing high fluoride problem. Based on the aquifer condition, all the production wells are having very limited yield capacity. We have initiated to implement the Water supply Plan (WSP) for Point Pedro and Vempirai Water Supply schemes in Jaffna district and Mallavi Water Supply Scheme in Kilinochchi District. The five Rural Water Supply Schemes named Mathagal, Shanthai situated in Jaffna district, and Akkarayan, Vaddakkachchi and Iyakachchi situated in Kilinochchi district are being monitored by RWS unit Jaffna and operated and maintained by Community Based Organization of each schemes. 39km of pipe line extension works were carried out in Point Pedro, Valvettithurai, Karaveddy, Velanai, Delft, Nainathivu, Oddusuddan, Pandiankulam, Mallavi and Kilinochchi water supply schemes. Under other activities, Bowser supply has been carried out to affected areas by oil contamination in Chunnakam. Uduppidy extension funded by local bank is almost completed. Furthermore, Water Supply and Sanitation Improvement project funded by World Bank, Jaffna Kilinochchi Water Supply and Sanitation Project funded by ADB 6 is ongoing in these areas. Iron Content in Point Pedro WSS, Moderate Fluoride Content in Oddusuddan & Nedunkerny WSS and Oil Contamination in Chunnakam are the general issues in the Regional Manager Jaffna.

The Vavuniya region which covers Mannar and Vavuniya districts have catered drinking water and secondary water for 600,000 devotees who gathered at Madhu shrine during gazzetted Madhu festival. Newly constructed Dry Zone Urban Water Sanitation project and Periyamadhu water supply project were ceremonially opened. Drinking water supply facilities have been provided to the 300,000 pilgrims who gathered at Thirukketheeswaram temple for Mahasivarathiri festival. Fencing work of Murungan well field has been commenced in order to protect the well field land. Renumbering for the Mannar WSS has been initiated. Water distributed through bowser supply in drought affected areas. NRW reduction activities such as day to day leak repairs, night surveys, defective meter replacement, illegal connection arresting, Zero bill inspections, pipe replacement, fixing bulk meters, replacing valves were carried out. Several energy saving activities have been carried out. Replacing the normal bulbs with CFL bulbs and controlling of pumps operation hours to save the electricity bill are some of the energy saving activities. Pipe line extension were done for a total of 25 km in the Mannar district which included Adampan

WSS, Vidaththalthivu WSS, Thevanpiddy WSS, Erukkalampiddy WSS, Mannar WSS and Madhu WSS. Water quality issues (Presence of iron & Manganese) in the Erukkalampiddy WSS and the remedial actions was decided that the improvement will be done under the ongoing Dry Zone Urban Water Sanitation Project. Damages to the transmission line & distribution line (280 mm) occurred due to road widening and rectified immediately. Route maps have been prepared for Mannar Water Supply Scheme in order to facilitate the Billing and Collection.

Under the proposed water supply scheme originated by RSC-North, PAC approval for Greater Mannar Water Supply Scheme was obtained and the TEC amount is Rs.37, 532.86 million. Surface water sources for each District were identified, which are of Malwatthu Oya, Kal Aru, Viyadikulam and Koorai for Mannar District; Malwathu Oya and Paranki Aru for Vavuniya; Per Aru for Mullaithevu; Iranamadu and Koorai tank for Kilinochchi; Lower Paranki Aru reservoir and Pali aru for Jaffna District. We are in the process of obtaining water allocation consent for the whole Northern Province. Water allocation request was sent to Director General of Irrigation for water allocation from Lower Malwathu Oya Reservoir for Vavuniya; Lower Parangi Aru for Mannar and Jaffna. Feasibility studies were commenced Mannar, Vavuniya. Mankulam and Vavuniya North Water resources studies completed by Mahaweli Consultancy Bureau (MCB). MCB study reveals the potential sources are Upper Paranki Aru Reservoir and Lower Paranki Aru reservoir. Mapping Works we have commenced data collection related to existing WS Schemes, RO Plants, HPTW and Rural Water Supply schemes from each sections of RSC-North and prepared water supply coverage maps for each district.

The construction division has carried out construction worth of LKR. 65.9 Million using local bank funds, UNICEF, Rehabilitation funds. The works are supply, laying and commissioning of infill pipeline related civil works in distribution system works of Mannar and Jaffna Water Supply Schemes to enhance the pipe water supply coverage; further completed the supply and laying works and construction of 80 m³ Ferro-cement overhead tower; improved the existing facilities like fencing around Thottakadu intake in Mannar District; Rehabilitation works of RSC (N) office and some quarters.

M&E section have completed the disposal of 15 nos of unserviceable vehicles lying at North region yards for a long time and initiated the ownership transferring of NWSD vehicles of 15 numbers with board approval,

which had been handed over to other government organizations during the conflict & Tsunami period in North region. Pump & vehicle data base were maintained and implemented energy audit programs with the assistance of M&E Services of head office and replaced the pumps under energy funding at Allaipiddy & Kaithady in Jaffna region. Completed & handed over Rs 3.94 mn worth M&E installation (including the rechargeable job of worth 0.59 mn) for water supply schemes to both Jaffna & Vavuniya O&M sections of North region and continuing of execution of M&E works at water supply schemes of worth Rs 9.24 mn; Further prepared tender documents for rechargeable job as M&E works for Welioya BOI of worth Rs. 23.59 mn.

The RWS section in Vavuniya region prepared a feasibility study at Madukarai wss in Mannar district for the amount of Rs.4.80 million. Under CKDu budget, Construction of 02 nos. of WSS were commenced in 2016 and construction continued in 2017 in Mullaithevu district and 800 families will get benefits from both of this projects. Further 10 nos. of 10m³ capacity of RO plants were installed among the villages and 34 nos. of RO plants installed for the selected schools in Northern Province.

Four Training programs were organized and conducted for school children on the subject of Water Management & CKDu in the year 2017.

East

RSC(East) O & M activities are managed by four Regional Managers namely; Trincomalee, Ampara, Batticaloa and Akkaraipattu.

Special Events

Serunuwara WSS was opened on 15.07.2017 to serve 5,418 families in Serunuwara DS Division in Trincomalee district at the cost of Rs.950 million. Also, eight CBO schemes were improved and taken over by NWS&DB. Consultancy services provided for urban council Ampara to establish Night soil Treatment Plant at Buttangala and handed over in December, 2017. OIC offices at Paragahagala, Gonagolla and DE office in Ampara district were constructed at a cost of Rs.79.0 million and was opened in April 2017.

Mobile service was conducted with the participation of Hon. Minister, City Planning & Water Supply on 15.07.2017 at Trincomalee and out of 314 complaints received, 277 complaints were immediately resolved. Pipe line extension of 334km length was requested and agreed but only 12 km pipe laying has been completed during the year 2017 and balance was proposed under several funding.

Provided water supply and sanitation facilities at the cost of 7.0Mn for Younpura programme which was held from 29th March 2017 to 2nd April 2017 in Trincomalee District under the direction of Ministry of National Policies and Economic Affairs.

Mobile service was conducted under the direction of Regional Manager, Trincomalee in order to expedite new service connection in Serunuwara area and 536 feasibility & spot estimation were completed in one day.

Wan Ela water supply scheme (Rs. 250.00 million) for 2,000 beneficiaries was ceremonially opened on 08.01.2017.

ISO standard was obtained for Vavunathivu Water Treatment Plant.

NRW Reduction and Energy saving

Many NRW reduction activities were conducted during the year under the NRW reduction programme. Changing defective meters (6,336 nrs.) repairing leaks (18,443 nrs) and detecting illegal connection (44 nrs) were carried out in all regions as major activities. In addition, to monitor and control the scheme wise NRW, Zoning arrangement has been completed in Eravur & Irruthayapuram areas in Batticaloa region.

Solar Net Metering System to Manager office & AGM's Office was installed at Ampara (25kw capacity for each office) and cost of Rs.6,300,000.00. Portable power analyser & digital compound pressure gauge was purchased at the cost of Rs.564,800.00 for the usage of entire RSC. Capacitor Banks of 150kVA & 60kVA were installed in Kalmunai & Sammanthurai WTP respectively at a cost of Rs.1.057 million.

Development Activities

Many Rural Water Supply Activities were conducted during 2017. Civil works for installation of RO plant for Padavisiripura Hospital and Nochchikulam village have been completed and plants have been brought to the site for installation. Backmeegama Rural Water Supply Scheme was completed at a cost of Rs. 24.0 million for the benefit of 1,120 beneficiaries in Trincomalee district. Construction of Sooriyapokkana Pussalawinna RWS scheme (Rs. 35.0 million) for 5,000 beneficiaries was completed and the rehabilitation of Santhumpura Lihiniyagama RWS scheme (Rs.21.00 million) for 3,700 beneficiaries and construction of Henanigala RWS scheme (Rs. 31.3 million) for 5,000 beneficiaries were in progress.

Under the Augmentation of Trincomalee WSS programme, improvement of Kanthale treatment plant,

intakes & pumping main, replacement of old distribution pipes and extension of distribution lines were commenced at a cost of Rs. 350 million and works are in progress. RFP was called for Valaichchenai Water Supply project (TEC- Rs.12 billion). Feasibility study is in progress for Grater Trincomalee Water Supply Expansion Project and the feasibility study was completed and awaited for PAC approval for Integrated Heda Oya Water Supply System.

As rechargeable works, 12.5 km pipe line extension (Rs. 11.5 million) in Trincomalee district, 46.5 km pipe line extension (Rs. 69.6 million) in Batticaloa district and 10.0 km pipe line extension (Rs. 10 million) in Akkaraipattu region were carried out in 2017. In addition, PE pipes have been purchased at a cost of Rs. 5.0 million and handed over to the Department of Aquaculture in Paragahagala, Ampara.

As an additional work to local bank funded project (original scope completed in year 2014), 52 km pipe line extension and construction of ground sump to extend the service to Ottamavadi area were in progress at a cost of Rs. 104 million.

General Activities and Issues

The total service connections provided by RSC(East) has reached to 244,061. Collection of Rs. 1,680.49 million has been reported against the billing of Rs.1,524.67 million. Total number of tenders handled were 127 nrs. and 70 nrs. of contracts worth of Rs.447.95 million.

In relevant to reducing stock levels at regional stores, unserviceable and non-moving stock has been identified during the stock verification of 2017 and will be removed after the board of survey. Excess slow moving materials are being shared with other regions where ever requested. Centralised data base has been established with respect to available materials in all regional stores and all supply (uPVC/DI) tenders are being reviewed with the data base before calling tenders.

As asset management activities, fixed asset verification was carried out and fixed asset register for RSC East (RSC wise & region wise) was updated. Acquiring lands for new projects was coordinated with relevant organizations (DS Office, Survey Department) and the Treasury report on RSC wise vehicles, infrastructures, plant machinery, other equipment, mobile equipment, computer & land details was prepared.

For stores improvement, rehabilitation of store building at Regional Store, Trincomalee was carried out at the cost of Rs. 5.0 million under the Augmentation of Trincomalee WSS Programme.

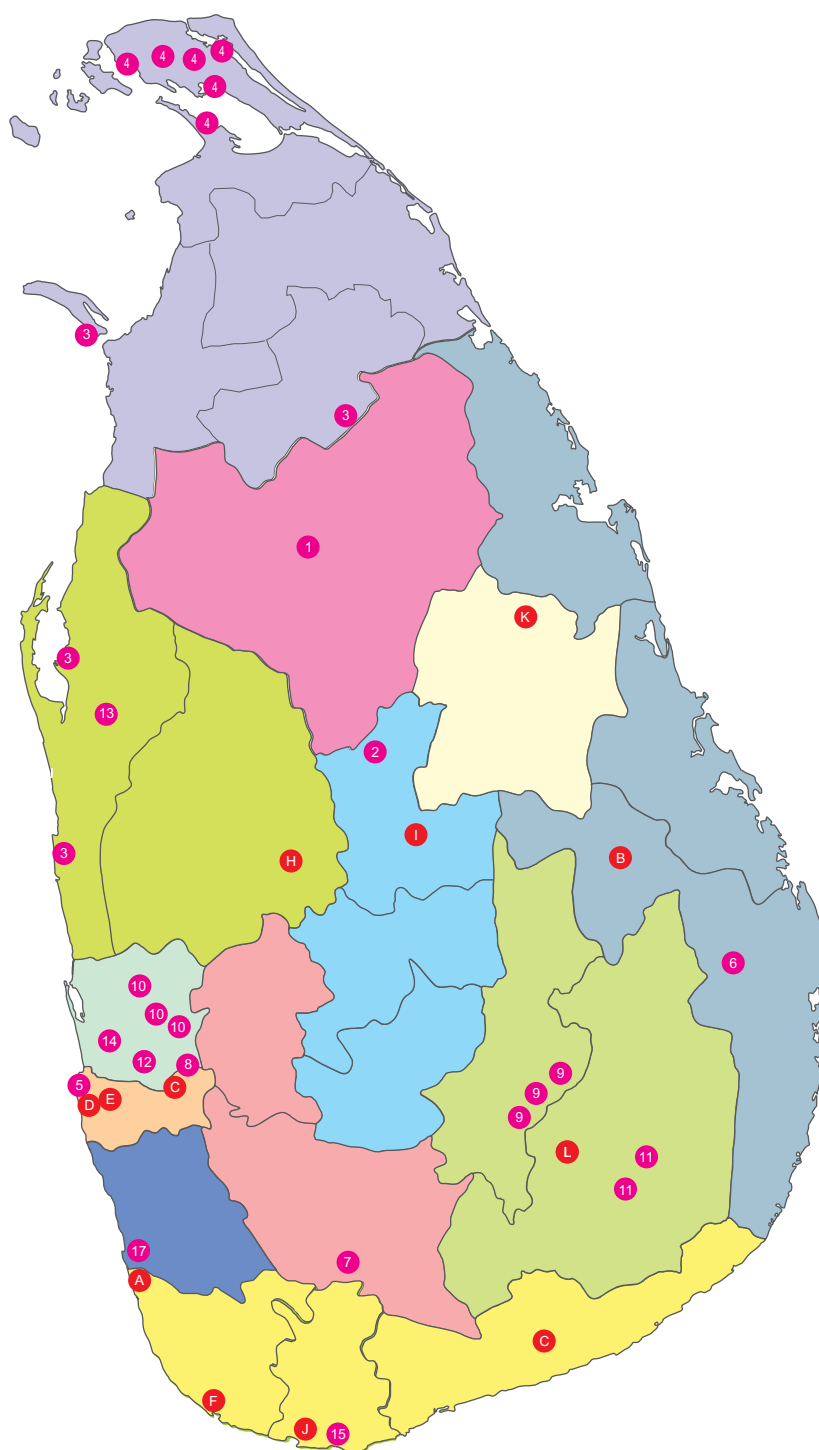
There are few main issues faced by the RSC during the year. There is an issue in security of water at the intake of Pulmoddai WSS and a new source has been identified for construction. In Muthur WSS, water level goes below the strainer at Neelapola intake during dry season. In Thirkkovil WSS, there is a limitation in extraction of water from the Sagamam Irrigation tank during dry season due to the demand of farmers. Also, a two hour limited supply are being practised in Pottuvil area due to ground water shortage in Pottuvil WSS.

Ongoing Foreign/ Local Bank Funded Water Supply Projects

Accomplishments of Major Water Supply Projects under the Ministry of City Planning & Water Supply,
Location Map of Foreign-funded/ Local Bank Funded Projects under Construction/ Augmentation during 2017

Foreign Funded Projects		
Project Name		Funding Agency
1 Anuradhapura North WS		JICA
2 Greater Dambulla WS - Stage I		India
3 Dry Zone Urban Water & Sanitation		ADB
4 Jaffna - Kilinochchi WS & Sanitation		ADB
5 Greater Colombo Water & Wastewater Management Improvement Investment		ADB
6 Integrated WSS for the Unserved area of Ampara District Phase III		ADB
7 Kolonna /Balangoda WSP		Belgium
8 Labugama Kalatuwawa WTP		Hungary
9 Badulla, Haliela & Ella WS		US Exim Bank
10 Gampaha, Attanagalla & Minuwangoda WS		China
11 Monaragala Buttala Integrated WSP		KBC Belgium
12 Ambatale WS Systems Improvement & Energy Saving Project		AFD
13 Anamaduwwa Integrated WSP		Spain
14 Kelani Right Bank WSP - Stage I I		France
15 Matara Stage IV		NDB
16 Grater Matale WSP		French
17 Aluthgama Mathugama Agalawatta Integrated WSP		Exim bank of India

Local Bank Funded Projects	
A	Bentota WSP
B	Ampara Distribution Network WSP
C	Ruhunupura Distribution WSP
D	Colombo Water Supply Improvement Project
E	Towns East of Colombo District WSP - Package I
F	Galle Cluster WSP
G	Avissawella & Kosgama Integrated WSP
H	Galagedara / Mawathagama WSP
I	Laggala New Town WSP
J	Weligama WSP
K	Medirigiriya WSP
L	Attampitiya WSP
	3.5 billion project



FOREIGN FUNDED WATER SUPPLY PROJECTS

Projects undertaken with JICA Assistance

1. Anuradhapura North Water Supply Project (Phase I)

The scope of this project is to provide safe drinking water a population of around 115,600 (in 2034) by constructing a water supply system in Medawachchiya and Rambewa Divisional Secretary Divisions in Anuradhapura District covering 75 GNDs (In addition to this 02 GNDs in Mihinthale DSD also covered by the project) where the people depend on unsafe ground water which causes dental and skeletal fluorosis and highly tend to have chronic kidney diseases of unknown etiology (CKDu).

The donor agency of the project is JICA and the initial project cost is JPY 5,166 million and Rs. 2,786 million. The loan was effective from 5th July 2013 and the consultancy contract was commenced on 15th July 2014.

The project components are 19,800 cu.m/ day capacity intake at Mahakanadurawa Tank, treatment plant of capacity 9,400 cu.m/ day, 89 km HDPE Transmission mains, 163 km HDPE Distribution mains, 330 km of PVC Distribution system, 4 Elevated Tanks and 3 Ground Sumps and M&E works.

Detail designs and preparation of contract documents for all Contract Packages are completed.

JICA concurrence for Lot A contract package (construction of intake facility, water treatment plant, water storage structures, mechanical, electrical and building works) was received on 22.11.2017 & pending cabinet approval for contract awarding.

The Lot B (supply & laying of transmission, transmission sub mains & distribution mains) contract was awarded.

The Lot C-1 (laying of uPVC pipes, fittings and specials and supply & laying of DI & GI pipes, fittings and specials in Issinbessagala distribution zone) contract was awarded and 94.8 km of pipe length has been laid up to end of December 2017.

The Lot C-2 (supply & delivery of uPVC pipes, fittings and specials) contract was awarded and completed on 06.02.2017.

The Lot C-3 (laying of uPVC pipes, fittings and specials and supply & laying of DI & GI pipes, fittings and specials in East Rambewa, Ethakada and Rambewa distribution zones) contract was awarded and 113.4 km of pipe

length has been laid up to end of December 2017.

The Lot D-1 (purchasing of O&M equipment) contract was awarded for four equipment & DPC decided to recall balance equipment. The Lot D-2 (purchasing of bowsers, cabs, mini backhoe, motor cycles) contract was awarded and completed on 28th April 2014.

Overall physical and financial progress of the project as at the end of 2017 was 12.23% and 8.64% respectively.

As general Issues of the project, awarding of the contract Lot A (construction of intake facility, water treatment plant, ground sumps, elevated tanks, office buildings, mechanical and electrical works) and Lot B (supplying & laying of transmission main & sub main distribution main) were delayed due to delays in document evaluation, submission of bids, bid evaluation and receiving of JICA concurrence.

Projects Undertaken with Indian assistance

2. Greater Dambulla Water Supply Project - Stage I

The Greater Dambulla WSS— Stage I is a design and build contract and was commenced in March, 2012. It is funded by Exim Bank of India and People's bank of Sri Lanka. Total project cost is US\$77.8 million.

The objective of this project is to implement the water supply scheme to cover Dambulla development area. The beneficiaries will be 174,100 people living in Dambulla, Galewela, Kekirawa, Palagala, Palugaswewa and surrounding areas.

The project components are 65,000 cu.m /day capacity intake, 32,000 cu.m/day capacity fully automated water treatment plant with 2,500 cu.m clear water tank including secondary pumping station and ground reservoir with 1350 cu.m and other 6 ground reservoirs and 2 Elevated towers for a total capacity of 5500 cu.m., 0.7 km long DI raw water transmission main with 900 mm dia., 71.5 km long DI transmission mains of 450 mm to 250 mm dia., 218 km long distribution mains of 280 mm to 63 mm dia. uPVC pipes and operational buildings (an OIC office building, 01 maintenance office, staff quarter and 03 operator quarters).

The intake, raw water main, water treatment plant, Inamaluwa secondary pumping station and two distribution zones (Inamaluwa and Sigiriya) were pre-commissioned and are currently being operated by NWSDB. The progress of the construction of reservoirs and tower is 90%. The progress of transmission and distribution systems are 89.6% and 91.5% respectively. The overall physical and the financial progress of the

project as at 31.12.2017 are 93.6% and 85% respectively. The project is expected to commission in year 2018.



Water Treatment Plant

Projects Undertaken with Asian Development Bank Assistance

3. Dry Zone Water Supply and Sanitation Project (ADB 5th Project)

NWSDB in implementing the DZWSP for water supply and sanitation improvements in North Western and Northern Provinces. Under this project Vavuniya, Mannar, Chilaw and Puttalam towns will be provided with enhanced water supply and sanitation facilities. The total cost estimate of the project is USD 144.73 million (Approx. Rs. 17,196.39 million). The overall physical and financial progress at the end of December 2017 is 93.84% and 91.0% respectively. Twenty-seven numbers of contracts were awarded in 2014, 08 numbers of contracts were awarded in 2015 and 02 numbers of contracts were awarded in 2016. 04 numbers of contracts awarded in 2017. Number of shopping contracts not detailed in this report.

Vavuniya:

In Vavuniya, the project will provide a water treatment plant of capacity 12,000 m³/day which is a physical progress of 99.1%. In the treatment plant contract all the civil work has been completed, mechanical and electrical installation has completed and tested. Construction of an impounding reservoir capacity of 3.83 MCM across the Peru Aru stream including causeway construction has completed. Both surface water and ground water will be combined to provide 9,800 m³/day of treated water to 15,950 families in 2018. The major elements consist of 3 new water towers, a reservoir and 245 km of distribution pipelines which are at completion stage (about 07 km distribution line and 16.5 km transmission main remaining). There is a sanitation component to provide Four public latrines, improvement of existing septage plant with the inflow capacity of 28 m³/day and 500 household toilets in

Vavuniya which has been completed. It is planned to cover 109,432 numbers of beneficiaries in year 2035.

Mannar:

Mannar improvements include, developing 10 bore holes to provide 12,000 m³/day treated water to Mannar Murulakan, Vankali & Thiruketheeswaram. One new tower and two groundwater reservoirs are being constructed with 27.6 km transmission and 105 km distribution line system to provide fully treated water to a designed population of 6,672 families in year 2017. Four public latrines and 330 household toilets are in the construction stage. All the work has been completed.

Septage treatment facility, water storage structures, public toilets and supply and laying of DI, HDPE and PVC pipes for distribution system contracts were awarded. Septage treatment facilities and the public toilets are completed. Pipe laying is 100% completed. The water storage structures civil construction and installation of M&E equipment are completed in December 2016. Total number of beneficiaries 55,000 after the commissioning the scheme in 2017 and 90,000 numbers of beneficiaries will be covered in year 2035.

Chilaw:

In Chilaw, water will be extracted from Deduru Oya and it is expected to provide 12,000 m³/day of treated water to a designed population of 93,165. The major elements of the scheme will consist of 12,000 m³/day water treatment plant in Bingiriya (Physical progress 95%), 2 reservoirs, 49 km of transmission lines and 79 km of distribution lines. All the Transmission and Distribution works has been completed. Under the sanitation sector, five public latrines and 500 household toilets are being constructed. Septage treatment facility and most of the pipe laying contracts are completed. The construction of the intake is in progress (92%).



Chilaw WTP

Puttalam:

Puttalam WSS includes a 12,000 m³/day intake and water will be extracted from Kala Oya. The population to be

served is 197,440. The proposed scheme will consist of 2 reservoirs, 7 pumping stations, 48 km transmission system from Eluwankulama to Puttalam and 12,000 m³/day water treatment plant (Physical progress 95%) and 129 km distribution system. The sanitation component will include the construction of six public latrines and 500 house hold toilets in Puttalam town and suburbs. The septage treatment facility and the public toilets were completed. The pipe laying contracts has been completed and the construction of the intake is in progress of 92%.

Mannar water supply scheme was ceremonially commissioned on 07th July 2017 by Hon Prime minister.

4. Jaffna - Kilinochchi Water Supply & Sanitation Project

The Jaffna Kilinochchi Water Supply and Sanitation Project (JKWSSP) restructured due to the change of water source from Iranamadu tank to a desalination plant and to strengthen the water supply component. The following changes are proposed: (i) cancellation of water treatment plant and bulk water transportation from Iranamadu tank originally cofinanced by the Agence Française de Développement (AFD), (ii) exclusion of the sewerage component, (iii) inclusion of a desalination plant, (iv) inclusion of the household water connections, and (v) inclusion of water resource management and outreach activities. Based on the revised cost estimates and the cancellation of the AFD financing, the government has requested additional financing of US\$ 120 million from ADB to meet the change in project scope and the additional loan was signed on 15th December 2017. The closing date of current loan had been extended from 14th August 2017 to 31st December 2020 to complete the revised project scope through the current project and the proposed additional financing.

The total restructured project cost estimate is of US\$ 266 million (Additional Financing US\$ 120 million from ADB and US\$ 33 Million from GOSL).

Out of the major packages under this project, two packages including Assistant General Manager Office (Rs. 282.36 million) and Staff Quarters (Rs. 29.51 million) are completed. The supplying and Laying Distribution Networks – package I (Rs. 354.88 million) substantially completed. Four contract packages including two water transmission mains (187 km) (Package I - Rs. 2646.18 million and Package II - Rs. 2890.39 million), two elevated water towers (15 nos.) (Package I - Rs. 525.34 million and Package II – Rs. 614.77 million) and Iranamadu Tank head works are ongoing. The Balance Distribution Networks – Package 2 (248 km)

and Jaffna City Area (285 km), Elevated water tower – Package 3 (5 nos of towers) and M&E SCADA are on procurement stage. The Chunnakam Water Supply Scheme is at document preparation stage.

Overall physical & financial progress of the project as at the end of 2017 was 24.91% & 13.91% respectively.



Construction of Old Park Tower

5. Greater Colombo Water and Wastewater Management Improvement Investment Programme (GCWWMIIP)

Colombo was one of the few Asian cities to receive piped water supply in the 1800's. Many parts of distribution network were built over 100 years ago. Although there have been many projects to address increasing water demand, there was no significant rehabilitation of the network, resulting in an extremely high level of non-revenue water (NRW) of 49% in Colombo city. Further, fluctuating pressures and intermittent supply are commonplace in some parts of the city. In 2011, on average 290,000m³/day of water supplied through 127,000 connections to Colombo city to serve approximate 700,000 population, of which 49% of water is lost and does not generate any revenue, makes it imperative to reduce NRW on an urgent basis. To address this significant issue Asian Development Bank (ADB) and GOSL has invested US\$ 202 million & US\$ 73 million respectively.

The major objectives of the project are: (i) to increase of water supply availability and efficiency in Colombo city; (ii) enhance the distribution system and reduce NRW from 49% to below 18% by the year 2020; (iii) to this establish a long-term mechanism to reduce NRW, (iv) to enhance the institutional, operational and project management capacity of NWSDB.

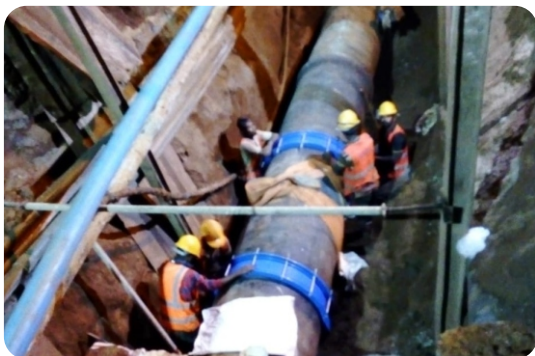
CWSSIP project mainly covers CMC area of Colombo, which has been divided to 75 DMAs for easy operation & maintenance. Key deliverables of the project are replacing the 565km pipe, installation of Seventeen System Input Meters (SIV) at the Colombo city

boundary, relocating the water meter and replace the defective water meters, calibrating and updating of the GIS network and construction of buildings.

According the DMA design pipe laying works in 26 DMAs commenced and of which 3 DMA works have been 100% completed. This implies 142km of pipe laying out of 565km has been completed up to December 2017. Further, the NRW Management studies in the above two completed DMAs (DMA-I & DMA-3) indicates that NRW has reduced below 18%. In addition, installation of SIV meters in the input points to the Colombo City has been completed. Due to the above project and regular operation & management (O&M) activities Colombo city NRW has been reduced to around 42%.

The ceremonial launching of the project was held on 27th March 2017 at Taj Samudhra with the participation of the Hon. Minister of Finance, Hon. Minister of City Planning and Water Supply, Hon State Minister of City Planning and Water Supply and all the stakeholders of the project. Sinhala and Tamil New Year festival was held with the collaboration of all partners of the project.

The exhibition and prize giving of the school art competition titled 'The renewing water supply for the developing Colombo' and many other events were organized in order to increase public awareness of the on-going Colombo Water Supply Service Improvement Project (CWSSIP).



Pipe Laying

Delay in receiving GOSL payments, route changes due to Port Access Elevated Highway Project in the Colombo city area, inadequate financial allocation (it was within the budgetary bulk allocation of 15 bn.) and un-expected underground utilities (CMC Sewerage line, CEB lines, SLT line, etc.) are the general issues faced during 2017.

Projects Undertaken with Australian Assistance

6. Integrated Water Supply Scheme for the Unserved Areas of Ampara District - Phase III Project

This project is to serve about 200,000 people living the un-served areas of Ampara District and some areas of

Monaragala and Batticaloa Districts as well. Main components of the project are construction of 27,000 cu.m /d treatment plant and intake, elevated towers (Koneshapuram and Bakkiella 1,000 cu.m, Namal Oya, Inginiyagala & central camp 750 cu.m., Tottama 600 cu.m.), water sumps (Himidurawa 2,500 cu.m, Paragahakele, Dhadayanthallawa and Gonagolla 1,600 cu.m.), supply and laying of DI transmission mains for 100km and Supply and laying of PE pipes and fittings for distribution system (about 900km). This project can provide nearly 40,000 new water connections and total cost of the project has been estimated as Rs. 20,825 million.

The project has achieved 98.95% physical progress and 76.17% financial progress as at end of December 2017. Original scope completed except water towers.



Project undertaken with Belgium Assistance

7. Kolonna / Balangoda Water Supply Project

This scheme comprises two main components, the augmentation of Balangoda Water Supply Scheme and construction of a new water supply scheme for Kolonna. The project is funded by government of Sri Lanka and government of Belgium. Total (revised) estimated cost was SL Rs 4,988 million of which SL Rs 1,562 million from local funds (GOSL) and SL Rs 3,426 million from foreign funds (Belgium). These were 100% physically completed by end of 2015.

Augmentation of Balangoda Water Supply Scheme was planned to expand the water supply coverage by issuing new connections for 8,000 families and fulfill current deficiencies. In this regard, the augmentation of Balangoda WSS will serve 40,000 population and commercial & industrial water demands in Balangoda Pradeshiya Sabha area, Balangoda Urban Council area and a part of Imbulpe Pradeshiya Sabha area which are situated in Ratnapura District. Accordingly, the total water demand has been assessed as 7,000 cu.m. /day in

2030 which will be abstracted from Walawe river at Weliharanawa where the existing intake is situated in existing Balangoda WSS.

Kolonna Water Supply Scheme was designed to provide safe drinking water to 40,000 people in Kolonna Pradeshiya Sabha area throughout the year and a part of Embilipitiya Pradeshiya Sabha area during the rainy season. Therefore 8,000 new connections will be issued, in addition to commercial and industrial demand. Total water demand has been assessed as 7,000 cu.m. /day in 2030, which is extracted from Eperuwa river at Vijeriya by constructing a 3m high and 25 m long weir. Further the Irrigation Department and Agrarian Development Department abstract water from the downstream of the said weir for paddy cultivation of about 1,500 acres area. Therefore Memorandum Of Understanding was signed (MOU) among Irrigation Department, Agrarian Development Department and National Water Supply & Drainage Board for water sharing specifically during the dry season. Slope stabilization of Panamura ground reservoir (GOSL) and replacing of AC pipes of Balangoda existing raw water main (GOSL) were also conducted using the balance funds of the project.

Since Panamura ground reservoir was in vulnerable situation to land sliding, stabilization of the slope was done under this project.

Existing raw water main (AC) at Balangoda was not in a good condition for functioning. Also it is planned to increase the capacity of existing plant from 3000 cu.m to 5000 cu.m in future. Therefore, 1785 m length 400 mm dia. HDPE pipe laying was done for replacing 200 mm dia. AC pipe.

Since all works of Kolonna Balangoda Water Supply Project were substantially completed and all tests were passed, a substantial completion certificated was issued on 30th September 2015. Treatment plants are operating by NWSDB – O&M staff without any major issues and providing water connections to the public is on going. Also all the project has been handed over to O&M section for operating activities.

Slope stabilization of Panamura ground reservoir and replacing of AC pipes of Balangoda existing raw water main were completed. Also two contracts were awarded during last year, Supply, Delivery and Laying of HDPE/DI Pipes, Fittings, Specials, DI Valves And Accessories for Distribution System of Kolonna Water Supply Scheme (Panamura Zone) and Supply, Delivery and Laying of HDPE/ DI Pipes, Fittings, Specials, DI

Valves and Accessories for Distribution System of Balangoda Water Supply Scheme which are currently on going under the GOSL funds allocated for K&BWSP and under the supervision of K&BWSP.

In the year 2017, the major issue was the obtaining RDA approval for pipe laying activities. Also adverse weather condition and inadequate fund releasing was affected to the progress of the project. Another issue was inadequate attendance of contractor for defects aroused during operation time of treatment plants.

All constructions of Kolonna Balangoda Water Supply Project were completed during the year 2015. Water quality and required capacity were checked for both Water Treatment plants and pass all tests. Therefore the project can be considered as successfully completed.

Treatment Plants are not operated at full capacity since there are only limited distributions provided in the scope of the project. Therefore, Phase II of this project (distribution) shall have to be implemented soon.

Projects Undertaken with Hungarian Assistance

8.Rehabilitation of Labugama - Kalatuwawa Treatment Plants Project

This Project is functioning under the funds of the Hungarian government and local government. The project cost is Euro 16,714,045 for rehabilitation of Labugama WTP and Euro 17,383,906 for rehabilitation of Kalatuwawa WTP.

The Project includes renovation work and new construction work for identified components at Labugama & Kalatuwawa water treatment plants. The Project was commenced on 21st October 2013 and was taken over on 26th February 2017.

The objective of the project was to improve the production capacity as well as the water quality of both water treatment plants at Labugama and Kalatuwawa. Accordingly, the total production capacity of Labugama & Kalatuwawa was increased by 45,000 cu.m/day.



Sludge Treatment Unit

Currently, the Project is in 3rd phase, which is 12 months technical assistance for Operation and Maintenance of new systems at plants.

Project undertaken with United States of America and GOSL Assistance.

9. Badulla, Haliela and Ella Integrated Water Supply Project

The project is implemented as an integrated water supply scheme to cover Badulla, Haliela and Ella by developing pipe water supply scheme and providing safe and reliable water to the project area. The project aimed to support smooth and timely implementation of the Badulla, Haliela and Ella Development plan and contribute to the industrial development and economic growth in the project area.

Construction of the project was completed by last December. The water supply system originates at the new Demodara Dam, located on the Badulu Oya (Badulla River) about 12 kilometers (km) upstream of the city of Badulla. The dam has created a reservoir to store raw water for the system. A new pump station constructed downstream of the dam transfers raw water to the next major component of the system: the Demodara Water Treatment Plant. The new water treatment plant can treat up to 15,000 cu.m/d using four high-solids packaged treatment units. Storage and distribution facilities in the integrated water system of the treatment plants included eight bolted steel tanks and skid-mounted booster pump stations at multiple remote sites. The pipeline system included 46 km of transmission, trunk, and rider mains and 111 km of distribution system lines.



Demodara Water Treatment Plant and Reservoir

Approximately 110,000 people will be benefited from the project and can rely on a steady supply of safe drinking water, a direct improvement in quality of life for the entire coverage area. Rehabilitation of existing treatment plants and intake structures at Bandarapura, Eladaluwa, Madiriya and Haliela are also completed by the project.

RSC office building and seven Staff quarters at

Bandarapura, Pingarawa, Kumarasinghe mawatha, Demodara and Gotuwala were completed and handed over to NWSDB. Tender documents for balance pipe supply and laying valued Rs. 1,322 million have been prepared by NWSDB under GOSL funds. Permanent road reinstatement is being done by NWSDB.

Projects Undertaken with Chinese Assistance

10. Gampaha, Attanagalla & Minuwangoda Integrated Water Supply Scheme

The scope of the Project is to provide safe and reliable drinking pipe borne water to 449 GNDS in Gampaha, Attanagalla, Minuwangoda DS Divisions and part of Meerigama, Mahara DS Divisions. The proposed project is anticipated to supply water to uncovered areas and also improve the service level of the existing consumers in the project area. The project duration is from 20th February, 2017 to 19th February, 2020.

The project was Gampaha, Attanagalla and Minuwangoda DS Divisions, Part of Meerigama DS Division and Part of Mahara DS Division. Expecting to provide new Service Connections for 300,000 persons and service level improvement of existing system for 100,000 consumers. Water Source is Basnagoda Reservoir in Attanagalu Oya.

The Project components are 3.5 MCM capacity Impounding Reservoir, 85,000 m³/day capacity Intake facility, 54,000 m³/day capacity Water Treatment Plant, 10,000 m³ capacity High Level Reservoir, five 1,500 m³ capacity Elevated Water Towers at Ranpokunugama, Belummahara, Naiwala, Minuwangoda and Pasyala, 89.2 km DI gravity transmission main, 630 km pipe laying under seven sub projects of Naiwala, Attanagalla, Pasyala, Minuwangoda, Balummahara, Gampaha and Nittambuwa and 500 m² Regional office, 200 m² Area Engineer's office, two 150 m² OIC offices and five 150 m² Quarters.

Present Position As at December, 2017

The main contractor has completed ground preparation for the Treatment Plant and the design works of treatment plant components were commenced from February 2017.

Design work of Distribution with Elevated Towers for areas namely Pasyala, Balummahara, Niwala and Minuwangoda has been commenced.

Projects Undertaken with KBC Belgium.

11. Monaragala - Buttala Intergrated Water Supply Project

Monaragala-Buttala Integrated Water Supply Project was commenced on 30th December 2014 in order to cater for the need of safe water supply facilities to 53 GN Divisions in Monaragala (22), Buttala (20) and Madulla (11). This is to fulfill the current and future needs of pipe borne water supply facilities of the beneficiaries in the area and enhance their health and living standards.

Including 6,000 new connections and upgraded service level for 12,000 existing consumers, 60,000 Nrs. of people are benefited from this project. This project is a design and build project and the total cost of the project is Rs. 5,515 million, out of which Rs. 4,205 million was funded by Belgium government through KBC Bank, Belgium and HNB Bank, Sri Lanka and balance Rs. 1,310 million was funded by GOSL.

The project was commenced on 30th December 2014 and completed on 30th March 2017 which was 3 months ahead of the schedule.



Kubukkan Oya Intake

Project undertaken with France Development and Asian Development Bank Assistance.

12. Ambatale Water Supply Systems Improvement & Energy Saving Project

The National Water Supply & Drainage Board (NWSDB) has implemented the Ambatale Water Supply Systems Improvement & Energy Saving Project as per the recommendations of Colombo Master Plan Project conducted in 2012/2013. The Scope of this Project is to enhance the reliability of production, introducing energy saving measures & improving the efficiency of the conveyance facilities at Ambatale. The Agency of French Development (AFD), Asian Development Bank & Sri Lankan Government provides the funds for this project. The total project estimated cost is US \$100 million.

There are five contract packages under this project. They

are Design Review & Construction Supervision Consultancy Services (DRCSC), Construction of Gothatuwa 15,000 cu.m Reservoir and Booster Pump Station with supply and laying of 5km, 1200 mm DI Pipes (ICB 03), Supply and laying of 9km DI pipes (1200 mm dia.) and Accessories from Ambatale to Ellie House Reservoir (ICB 04), Reliability Enhancement and Energy saving of Ambatale Production Facilities (ICB 05) and Supply of Equipment & Machineries to Western Production, NWSDB (ICB 06).

Mainly, the project is implemented to save the energy consumption in water supply system of Ambatale by improving the water conveyance system to minimize the energy loss due to the high friction of transmission mains, construction of filter back wash recovery system, introducing of pumps with high working efficiency & installation of process automation system to optimize the operational efficiency. These improvements have been mainly targeting the population in 2040.

From the above five packages, there are three packages (DRCSC, ICB 03 & ICB 04) has been awarded and being implemented. Under the ICB 03 Contract, two land issues were sorted out (IDH land for ground reservoir constructions and Gothatuwa/ Moragasmulla land for Booster pump house construction). Under ICB 04 Contract, 50% of supply of Pipe & Fittings has been completed.

However, the unavailability of necessary local funding, the payments of NBT & VAT to the contractors are being withheld & the contractor might claim the interest for un-paid VAT & NBT. Other than that, there was a long delay in 1st consignment of supply of pipe & fittings under ICB 04 Contract. This was due to the Contractor's delay for obtaining of necessary approvals and delay in necessary procurement works. Therefore, the progress of the project is behind the schedule.

The overall physical progress of the project is 7.70% out of 26.94% of target physical progress. The overall financial Progress of the project is 5.49% out of 19.54% of target financial progress.

Project undertaken with Government of Spain.

13. Anamaduwa Integrated Water Supply Project

The project is funded by Government of Spain and Hatton National Bank in Sri Lanka. The project is Implement under the NWSDB and has been designed to increase access to safe pipe-borne water supply facilities in the Puttalam & Kurunegala districts.

The proposed Anamaduwa Integrated Water Supply

Project will cover a population about 81,700 who presently depend on groundwater and suffer a severe water shortage even during a moderate dry spell in Puttalam & Kurunegala districts. The project will permanently address the drinking water issue in Anamaduwa Divisional Secretary area and surrounding areas. This will also eliminate water quality issues in scheme operated by community based organizations (CBOs) within the project area as they will be able to obtain a bulk treated water supply from the proposed project.

The Anamaduwa Integrated Water Supply Project is to construct a new intake at Inginimitiya reservoir with a capacity of 12,500 cu.m/day, a modern full treatment plant with capacity of 11,000 cu.m/day including wastewater treatment, 1 km long rawwater main, 61 km long clear water transmission main, service water towers with capacities of 1,500 cu.m, 1000 cu.m, 300 cu.m and 328 km long distribution system including all electro-mechanical equipment which are included in the proposed Anamaduwa Integrated Water Supply Project.



Kotawehara Tower Site

Detailed design of transmission and distribution systems along with geotechnical & hydrological investigations are almost finished. Nawagattegama & Kotawehara distributions networks are finished. Preliminary design for all the towers are completed. Detailed design for Kotawehara tower is completed and construction is already started. The overall physical and financial progress of the project as at 31.12.2017 are 17% and 21.9% respectively.

Project undertaken with Credit Agricole Cooperate & International Bank of Franc

14. Kelani Right Bank Water Supply Project - Stage 2

The Kelani Right Bank Water Supply Project Stage 2 is a design and build contract and it was commenced on 23rd January 2017. The funding agencies are Credit Agricole Cooperate & international bank of France, Hatton National Bank and Treasury of Government of Sri Lanka. The project cost is Rs. 32,700 million.

The scope of this project includes investigation, design, execution and completion of the 180,000 cu.m/day capacity water treatment plant, laying of drinking water transmission mains & network, and improvements on river water quality at the water intake to the treatment plant. Additionally, this project provides funds to a feasibility study and EIA for the proposed Wee Oya reservoir at Kegalla district.

Number of beneficiaries are 1,750,000 with 120,000 of new water connections. The purified water shall be distributed to Kelaniya, Kadawatha, Mahara, Wattala, Peliyagoda, Ragama, Biyagama, Welisara, Kandana, Ja-ela, Pamunugama, Ekala and Katunayake.

Project works are already started and work is in progress. Design works, preparation of construction drawings, soil investigations, acquisition of lands, supply of DI/ PE pipes and fabrication of steel pipes etc. are in progress. Part of the DI/ PE pipes has already been delivered to the sites and laying of DI pipes has been started.

The physical progress as at end 2017 is 13% where the planned physical progress was 15%. Contractor submitted 4 numbers of interim payments and payments were already made to the contractor. The financial progress achieved by end of 2017 was 31.84 % for the planned financial progress of 31.04 %.



Water treatment plant

Project undertaken with NDB Assistance

15. Matara Stage IV Water Supply Project

The Project started on 11th October 2017. Objective of the project is to increase the level of service, service coverage and to achieve effective & sustainable use of water in proposed service area in Matara District & a part of Hambantota District.

The total production capacity of the project is 60,000 cu.m/d. All the structure including pipe lines except treatment plant will be constructed to cater 60,000 cu.m/d but the treatment capacity under this stage will be 30,000 cu.m/d. The present service

coverage of existing Matara - Mirissa integrated water supply scheme is 284,808 population and the new project estimated to cover 285,000 population in year 2046 in divisional secretary areas of Matara, Thihagoda, Devinuwara, Dickwella, Weligama, Welipitiya, Malimbada, Kamburupitiya, Kirinda-Puhulwella, Athuraliya, Beliatta & Tangalle.

Nilwala River served as a source of the project. Intake (66,000m³/day) at Katuwangoda, Treatment Plant (30,000m³/day) at Katuwangoda, Raw Water Main (approx.) - 300m, Transmission main (approx.) 78km, Distribution System (approx.) 200 km, 06 nos. of Ground Reservoirs at Malimbada, Galketiya, Yatiyana, Dandeniya, Kodigahakanda and Miriswatta.

Total Estimated Cost of the Project is Rs. 18,208 million (Foreign - Rs. 14,000 million and Local - Rs. 4,208 million) and the contract period of the project is 36 months (excluding 90 days operation & maintenance period). Board Allocation amount Rs. 4,208 million has not been finalized and Water Treatment Plant land and other acquisition process to be carried out immediately.



Hon. Ministers and Government Officials attended

Inauguration of Matara Stage IV Water Supply Project was held on 06.08.2017, with the participation of Hon.Minister of City Planning and Water Supply and other distinguished guests. Project Staff was established with minimum required staff (project director, three chief engineers, two engineers, secretary and six engineering assistants). Preliminary design has been completed and detail design review is being carried out. Loan Agreement was signed with local bank (NDB), Contract Agreement was signed and Advance payment has been paid on 11.10.2017.

Projects Undertaken with Exim Bank of India & BOC Bank

16. Aluthgama Mathugama Agalawatta

The objectives of this project are to provide safe drinking water facility to meet the increasing demand for water in 269 GN Divisions of Mathugama, Dodangoda, Kalutara,

Beruwala, Agalawatta and Madurawela DS areas by expanding the production capacity of Kethena Water Treatment Plant and to mitigate the current Salinity Intrusion Issue.

This project is financed by Exim bank of India, Bank of Ceylon and Government of Sri Lanka.

Total estimated cost is Rs. 32,278 million of which Rs. 24,285 million from Exim Bank of India, Rs. 4,286 million from Bank of Ceylon and Rs. 3,707 million as Contribution of Government of Sri Lanka.

This project is implemented by National water supply & Drainage Board under the guidance of the Ministry of City Planning & Water Supply.

The project is designed to provide 32,000 new water supply connections and improved service facilities for 573,000 beneficiaries by year 2030.

The main components of the project are, construction of new intake at Kolemmodara, construction of raw water transmission system to Kethena water treatment plant, rehabilitation of Thebuwana intake & Kethena existing water treatment plant with new WTP having 3MGD capacity, reservoirs (Mathugama-2,000 cu.m, Dodangoda - 1,500 cu.m), water towers (Neboda - 600 cu.m, Mathugama Kanda - 225 cu.m and Agalawatta - 600 cu.m), DI /PE transmission mains of 58km (800/300 mm dia.), distribution system (260 km), offices & staff quarters and complete automation with SCADA system.

This project has been commenced on 15/05/2017 & planned to be completed on 14/05/2020. The overall physical & financial progress as at 31 /12/2017 are 8.5% and 26.59% respectively.



Rehabilitation of Existing Clarifier at Kethena

Projects Undertaken with France

17. Greater Matale Project

Greater Matale Water Supply Project commenced its works on 17th April 2017. For the 08 months period in year 2017, the project moved on with the design activities and the construction works are expected to

start in year 2018.

This project comprises of five treatment plants and five intakes with five separate distribution systems, within Matale District. The total project expects provide safe drinking water covering the areas of Matale, Raththota, Ukuwela, Pallepola, Yatawatta and Naula DS divisions.

The main contract is for an amount of EUR 105,645,791 +Rs. 8,210,959,043 (Equivalent to a total of EUR 156,115,758 at the exchange rate of 1 EUR = Rs. 162.69) and the contract period is 36 months. The project is a Design and Built type contract, where the initial design was done by Sector Planning Section of RSC (Central) of NWSDB. The part of the project has to be done under GOSL funds, and Rs. 5,081 million has been allocated for the same. However, it is expected to get increased up to Rs. 14,500 million. The project progress is satisfactory, though there is a slight delay in design of distribution systems.



Awareness Programme

Procurements of supply of pipes for transmission lines have already started by the contractor, while bids are called from local contractors for treatment plant construction works.

As a special event during the year, an *Awareness Program on the Project activities for Government Officers* was organized and conducted by the project staff. National Steering Committee meeting was held at 26th November, at the Ministry of City Planning and Water Supply. Four of the proposed Treatment Plants which have been planned to tap from Mahaweli River at Several Locations, approval of MASL has been granted for the extraction quantity, locations and proposed intake structures. The other sources, Bambarakiri Ella and Weralugasthenna, which are proposed as intakes for Rattota Water Supply scheme were got approved by Department of Agrarians, for the extraction quantity, after having several discussions with farmer organizations.

Out of 17 nrs. of lands proposed for the 05 treatment plants, intakes, service reservoirs, office buildings and quarters, 12 nrs. are at the taking over stage and the

other 5 lands are still under the aquisition process due to change of land locations during design stage. Granting approvals for pipe laying along RDA and PRDA roads is on progress. The issue of damaging newly carpeted RDA roads is still remaining unsolved and the approval for pipe laying along roads maintain by other authorities are in progress.

Non – availability of GOSL funds has become a major issue for the progress of the project. Some payments have been delayed and further works from the same institutions are unlikely to obtain due to this issue. This leads the project to be delayed. VAT, Custom duties, RDA charges, sludge removal systems, salaries of staff etc. comes under this fund.

Otherthan the Project Director, 02 Chief Engineers and an Engineer, the rest of the staff is newly assigned to the project from outside NWSDB. Due to the recruitment done according to the MSD circular 2016, difficulties have been arisen in obtaining capable and efficient staff. Training programs are planned to be held in year 2018.

LOCAL BANK FUNDED WATER SUPPLY PROJECTS

1. Bentota Water Supply Project

The objective of the project was to extend distribution along Galle-Colombo road about 9 km length and by roads of 22 GNDs in Bentota DS division from Kosgoda to Bentota Bridge. The Estimated project cost was Rs.1,239 million. Funding is from NSB. Main project components are supply of PVC/ DI pipes, valves, Laying of PVC/ DI pipes and accessories, supply & installation of surge vessel & accessories at Baddegama, supply and installation of booster pumps and accessories at Ambalangoda. The project was started in November 2014 and all the works have been completed in October 2017. The project has been handed over to Operation & Maintenance section for connections. Expected number of connections are 4,500 and number of beneficiaries are 18,000.



Surge vessel installation at Baddegama WTP

2. Galle Cluster Water Supply Project

The Project is consists of improvement of distribution network of Weligama, Uragasmanhandiya, Gonapinuwala & Dikkumbura water supply schemes. The Estimated project cost was Rs.1,755 million. Funding is from People's and BOC banks. Main project components are supply of 93.5 km PVC/DI pipes DI/CI valves & accessories, laying of 89.7 km PVC/ DI pipes and accessories at 4 schemes. Pump installation at Uragasmanhandiya, Gonapinuwala, Kowulhena, Wakwella & Weligama, 100 cu.m capacity ground reservoir & high lift pump house at Uragasmanhandiya, 225 cu.m ground reservoir, care taker quarters and pump house at Weligama are other components of the project. This project covers 55 GNDs altogether. Expected number of connections are 20,000 and number of beneficiaries are 82,000. The project was started in March 2017. Overall physical progress of the project is 19 % and financial progress of the project is 18 %.

3. Ampara Distribution Network WSP

Ampara phase III Project which was started in the year of 2010 and the construction of main component were completed in the year 2014. The main components are construction of 27,000 cu.m/d treatment plant and intake, water sumps (Himidurawa 2,500 cu.m, Paragahakele, Dhadayanthalawa and Gonagolla 1,600 cu.m.), supply and laying of DI transmission mains for 100 km and supply PE distribution network length of 698 km.

However due to the unavailability of necessary funds, it was remote to supply and laying of required distribution system. Final endeavor of the project is 40 000 new connections for needy people living in the area. Therefore, GOSL have decided to initiate the Ampara Distribution Network Water Supply Project under the funds from several local banks of Sri Lanka.

Under Ampara Distribution Network project, NWSDB has awarded the construction of 1,119.33 km distribution network, supply of 527 km length PE pipes, necessary fittings, specials, which are arranged in several packages as shown in below and 10,000 + 2,000 house connections.

Package A consists of Supply & Delivery of HDPE Pipes and Fittings with the total length of 527 km and Supply & Delivery of DI/CI Valves, Accessories, Manhole Covers and Surface Boxes.

Package B consist of Laying of PE Pipes, Fittings, Specials, DI/CI Valves and Accessories for a length of 124 km in Bakkiela area and length of 218 km in Gonagolla area including Bridge Crossings, Culvert Crossings, Valve Chambers and some other related structures.

Package C consists of laying of PE pipes, fittings, specials, DI/CI valves and accessories for a total length of 776 km including bridge crossings, culvert crossings, valve chambers and some other related structures.

Package D consists of construction of bachelor quarters, staff quarters, manager quarters, district engineers quarters, engineers quarters, caretaker quarters with stores in Paragahakale, Gonagolla and Namal oya areas, O.I.C quarters in Uhana, Damana & Central Camp.

Ampara Distribution Network Water Supply Project is on schedule. All the works completed as at 31st October 2017, except additional works. As of the plan, 10,000+2,000 connections have already been provided.

Allocation for 2017 was Rs. 1,278.5 million and the expenditure was Rs. 731.37 million while the physical progress achievement was 99.6%.



OIC Office - Paragahakele

4. Ruhunupura Distribution WSP

The objective of the project is to enhance water connections in 24 GNDs in Sooriyawewa, Hambantota, Lunugamwehera and Sevanagala DS Divisions. The project cost is Rs. 1,929.61 million and the project period is from 20th November 2014 to 31st August 2017. Funding bank is the Commercial Bank in Sri Lanka. 15,630 nos. of connections are available in Sooriyawewa and Hambantota DS Divisions. Pipe laying has been completed for 238 km length of Type 600 & Type 1000 PVC pipes of diameters from 63 mm to 225 mm. Physical progress is 99.97% and financial progress is 53%.



Pump House

5. Colombo City Water Supply Improvement Project - Phase I

Colombo City Water Supply Improvement Project - Phase I was implemented to improve the existing Colombo City Distribution network in Kollupitiya, Fort, Galle Face, D.R. Wijewardena Mawatha, Borrella and Union Place areas to cater future developments by considering year 2040 demands. Under this project it is planned to lay approximately 6.1 km DI pipe, construct six numbers bridge crossings and 3.6 km length of HDPE pipes. The total project cost is USD 6.3 million + Rs. 1,948 million and implemented under the aid of local

Bank funds. Date of commencement is 20th November 2014, scheduled to be completed on 19th November 2016 and time extension given up to end of September 2017. Physical progress of the project is 100% and financial progress is 94.9%. Project was delayed due to objection from CEB to cross a 132 KVA power cable at Garmini hall Junction and PD (GCWRP) requested to complete the pipe laying simultaneously at Maligakanda Valve House premises with their project to eliminate possible construction difficulties.



Pipe Laying

6. Towns East of Colombo District WSP

Towns East of Colombo District Water Supply Project is implemented with the aim of providing safe pipe borne water to an estimated population of 373,000 in Homagama, Kaduwela, Padukka, Seethawaka and Horana DS areas. Over 91,000 water supply connections are proposed to be provided by this water supply project to the people. The project consist of 03 contract packages and the project cost of Package-01 (transmission main – 4 km and distribution main – 222 km), Package 02 (transmission main – 8 km, distribution main – 10 km, ground reservoir – 18,000 cu.m capacity and buildings) and Package 03 (Distribution main – 400 km and house connections -10,000) are Rs.5,170 million, Rs. 4,823 million and Rs. 10,049 million respectively. By December 2017, all the three contract packages were in different progress levels.

Under Contract Package 1, distribution pipes to a length of 201 km and transmission pipe to a length of 0.64 km have been laid. Physical progress is 87% & financial progress is 57%. In Contract Package 2, distribution pipes to a length of 4.6 km and transmission pipe to a length of 2.6 km have been laid while the construction work on the OIC building was nearing completion. Physical progress of Package 2 is 23% & financial progress is 28%. Under Contract Package 3, distribution pipes of 321 km have been laid while achieving a physical progress of 72% & financial progress of 54%.



Hot Tapping Process at Godagama Junction

Although the Contract Package 01 and Contract Package 03 were due for completion in year 2017, due to delay in obtaining RDA approval, the completion dates are pushed back to the year 2018. The Contract Package 02 has also been delayed as the reservoir site was handed over to the contractor with a 15 month delay since the occupants in the site had to be evacuated.

There were several ambiguities found in the contract documents and these were not addressed during the time of evaluation. Therefore contract administration had become a challenge. In addition, delay in pipe laying due to issue in RDA and PRDA roads, pending MSD approval for recruitment of necessary staff, issue in connecting the completed pipelines to existing Transmission Main due to restrictions in water availability, delay in RDA approval, delay in evacuating unauthorized inhabitants in the reservoir site there by delaying the construction of reservoir, and awaiting permit from Department of Forest are the other general issues faced.

It is a prime requirement that properly qualified staff who willing to work as a team shall be recruited to the project with the consent of PD. This requirement was not fulfilled in the project. Further, the project is a good example that if preparation of contract documentation and tender evaluation are not properly done, the problems will be passed to the construction stage at a greater magnitude.

In spite of all the constraints it is programmed to complete the transmission main in year 2018, so that the problems faced in transmitting the available water could be resolved.

7. Avissawella and Kosgama Integrated Water Supply Project

The objective of this project is to enhance the water pipe line distribution system in Avissawella and Kosgama area.

The contract has been awarded (Rs. 1382.4 million) for the supply and laying of PVC/ DI pipes, fittings and accessories and other works of Avissawella and Kosgama Integrated Water Supply Project under the contract number P&P/D&B/LBF/AVISSAWELLA/2013/01. The source of funding is of local bank funds (LBF) and the project duration for Kosgama sub project is 12 months while the same for Avissawella is 18 months from the date of start. The actual date of commencement of the project was 01/06/2016.

The works under this project includes supply and laying of 51 km (*total length revised on January 2017*) long distribution pipe system in Kosgama and Avissawella area, intake improvement works at Kosgama and building construction and rehabilitation works at Avissawella site. At the end of the year 2017, the progress of the project; Physical 85.80% and Financial 45.29% and the total loan disbursement is Rs. 626.1 million.



Pipe line culvert crossing

8. Galagedara/Mawathagama Water Supply Project

The NWSDB has initiated this project to supply drinking water facilities to Galagedara, Mawathagama and suburbs including all the GNDs in Galagedara DS division, 23 GNDs and BOI at Mawathagama DS division and 02 GNDS in Mallawapitiya DS division. The number of beneficiaries are 33,000 families and the project cost is Rs. 3,126 million. The funds are from DFCC Bank PLC under Local Bank Funds (LBF).

Under this project 5,000 cu.m of treated water will be diverted from Katugastota WTP of Greater Kandy Water supply Project. Out of this, 3000 cu.m/day will be provided to Mawathagama & suburbs including BOI Mawathagama and the balance 2000 cu.m/day will be provide to Galagedara WSS.

The project componants are; supply & laying of transmission main 27 km long (400 mm – 280 mm dia. HDPE & 250mm – 200 mm dia DI); supply & laying of 113 km long (280mm – 63 mm dia) uPVC distribution

system; construction of 1,000 cu.m water tower at Mawathagama, 450 cu.m reservoir at Pillassa, , two break pressure tanks, office building and Chlorinator room.

The project was commenced on 17/11/2014 and has been suspended for the period 12/02/2015 to 23/08/2016. Then the project was re commenced on 23/08/2016 and expected completion date is 12/06/2018.

Currently, the project is progressing well. However due to incomplete land acquisition, some project items may not be completed on time. The reservoir land & OIC building lands acquisition are delayed. Pipe laying work of distribution system is 70% completed and 1,000 cu.m elevated water tower is 71% completed.

Laying of HDPE/DI transmission main is in progress. Around 40 km of pipe line extension requests were received. Over all physical progress at site is 56.39% and the financial progress is 41%.

9.Laggala New Town Water Supply Project



Pipe Laying Work

Laggala New Town WSP has been implemented in order to provide safe drinking water facility mainly to resettlement area of the population displaced due to Moragahakanda - Kaluganga Irrigation Development Project. It will cater 11 Grama Niladari Divisions including adjacent areas in Laggala Pallegama Divisional Secretariat of Matale District of Central Province.

The total number of beneficiaries will be 30,133 through 8,000 service connections at the design horizon year 2036. Project cost is Rs. million 4,496 and is funded by Local Bank Fund (HNB). Project was commenced on 21.07.2016 and expected to be completed by July 2018.

The water source is Rambukoluwa stream, which is a tributary of Kaluganga. The scope of the project consists of an intake of capacity 4,250 cu.m/day, a treatment plant of capacity 4,000 cu.m/day, 05 nrs. service reservoirs (capacity 200 cu.m, 225 cu.m- 2nrs., 450 cu.m & 600 transmission mains, distribution mains & distribution system of approximate lengths 23.5 km, 17.5 km & 190 km respectively. In addition, other infrastructure facilities such as OIC office & quarters, laboratory, stores & 03 nrs.

caretaker quarters will be provided under this project.

Construction work has been commenced in mid November, 2017. Pipe laying and construction of office & quarters are in progress at present.

The locations of the intake & treatment plant had to be changed due to public protest, and thus the routes of raw water main & treated water transmission mains also had to be changed. This affected a considerable delay in designing work. These activities will have to be carried out under a variation order due to scope change. Also, approval for access to site at Rambukoluwa intake and Wellawala reservoirs is still pending from Forest Department/ Mahaweli Authority. Another issue is the delay in recruiting staff for the project. Approval is pending from the Management Services Department for recruiting project staff.

In November, an awareness programme on LNTWSP was held at Dambulla with the participation of officers from other stake holders, contractor and NWSDB.

The cumulative expenditure of the project is Rs. 883 million. Overall Physical progress of 17.5% and a financial progress of 17.44% have been achieved by end year 2017.

10.Wilgamuwa water supply project

Wilgamuwa water supply project is a local bank funded project on a loan from National Development Bank and the contract sum is Rs. 3,580 millions. The project commenced on 21st August 2016 and the Scheduled date of completion is 31st July 2018.

Wilgamuwa Water Supply Project is launched in order to provide water supply facility to Wilgamuwa Divisional Secretariat in Matale district as a measure to overcome the CKD issue prevailing in the area. Water shall be abstracted from Heenganga. Population to be covered is 33,725 in year 2034. Capacity of WTP is 5,500 cu.m/day. As the water will be transmitted to the Treatment Plant by means of pumping, supply and installation of electro mechanical devices and supply and installation of pumps and related accessories will also be a part of the project.

The main Components of the project are 5,500 cu.m/day capacity treatment plant, 800 cu.m storage tank, 2 Nos. 225 cu.m storage tanks, 100 cu.m storage tank, 1 km raw water main, 18 km clear water transmission, 100 km distribution lines, an OIC office , an operator quarter, a single story staff quarter and a caretaker quarter.

The expenditure of the project as at 31st December 2017 is Rs. 665 million and the physical and financial progress are 12.8% and 18.57% respectively.

A 4-day training programme on “Construction Project Management” was held for Project Staff and RSC Staff involved in project works, Chief Engineers, Engineers and Engineering Assistants.



R/F & F/W fixing work for Sludge Thickener Base at WTP Sulugune

General Issues faced during the year were, delay in granting approval for sharing water from Heenganga – Anicut, from Department of Irrigation; delay in acquiring of lands from Forest Department and, Divisional Secretariat – Wilgamuwa. Further, the procurement of HDPE Pipes and all other material also got delayed since approved vender list was not included in the Tender Agreement.

11. Attampitiya water Supply project

This project intends to provide water to 15,000 beneficiaries in Haliela area in Badulla district covering Attampitiya, Uva Mahawelagama, Neludanda, Dehiwinna, Maliththa, Hinnarangolla, Niliatugoda, Kudumahuwela, Neluwa, Maligathenna, Pallegama, Wepassawela, Katugaha, Pahamunuthota and Udagama. The water source is Uma Oya impounding reservoir. The treatment plant capacity is 3500 cu.m/day. The total cost estimate is Rs. 2,244 million. The physical and financial progresses at the end of 2017 were about 6% and 15% respectively.



Booster Pump House

12. Medirigiriya Distribution Phase I I

Medirigiriya Distribution Phase II project was started as a LBF project to cover the water supply distribution system of part of Medirigiriya DSD. This has been

planned to provide 15,000 house connections by covering 31 GNDs in Medirigiriya DSD by the year 2030. It was started on 01st of March 2016 and planned to be completed by 2018. The funding Bank is Bank of Ceylon (BOC) by amounting Rs. 1,500 million.

The major components of the contract are Supplying & laying of PVC/DI pipes, fittings and specials for Old Town and New Town distribution system including surveying and design, construction of pipe bridge across Kaudulla Oya and design & construction of office and quarters.

Total length of laying of the project is 243 km (Old Town tower distribution main -14km, New Town internal distribution system – 102 km and Old Town internal distribution system – 127 km). Pipe laying of 217 km has already been completed. Overall physical progress of the project is 91% at the end of year 2017. Pipe laying works has been delayed due to delay of RDA approval for road crossing in Hingurakoda – Medirigiriya road and delays in DI pipe supplying. Overall financial progress of the project is 54% up to end of the year 2017.

The new connection programme has been already started at the completed sections and it was ceremonially started by His Excellency President on 06th of December 2017. Further, Rs. 45 million has been allocated from Presidential Task Force for CKDu Prevention programme to provide 5,000 connections for low income and CKDu affected families.

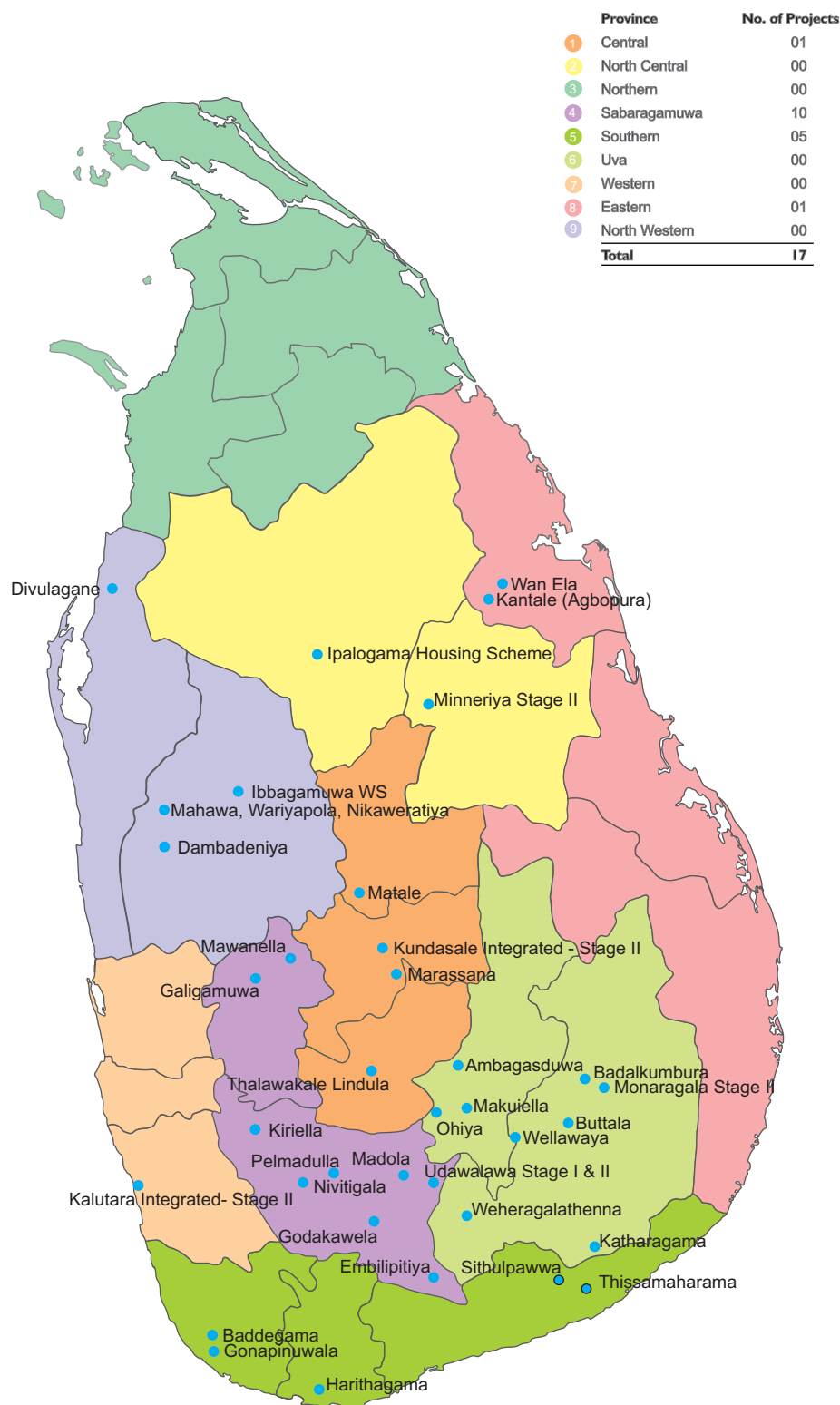
13. 3.5 Billion project (22 Water Supply projects)

This project was implemented under the Local bank Funded Projects (LBF). The objective of the project is to improve the no. of connections in the 11 RSC's (Uva, Southern, North, WC, WN, WS, East, NW, NC, Central, Sabaragamuwa) providing the extensions and infillings to the existing distribution systems. The total estimated cost of project is Rs. 3.5 Billion and the expected number of connections is 33,250 at the end of the project. The project was commenced in 2014 and planning to complete in year 2018. The overall physical progress is 89% and the financial progress is 61% as at December 2017.



GOSL Funded Small and Medium Scale Water Supply Projects

Location Map of Projects under Construction/ Augmentation During 2017 Funded by the Government of Sri Lanka



GOSL FUNDED SMALL AND MEDIUM SCALE WATER SUPPLY PROJECTS

1.) Central Province

Under the GOSL funded project Rehabilitation and augmentation works of Kundasale Integrated water supply project, Mathale water supply Project, Marassana Water Supply project and Thalawakele /Lindula water supply projects which were continued from the year 2016 were planned to be completed in 2017. However, the allocation of Local funds for those projects was not made in 2017. Hence the progress of above projects were same as end of year 2016.

2.) North Central Province

There were no small and medium ongoing projects in North Central Province during the year 2017.

3.) Northern Province

There were no small and medium ongoing projects in Northern Province during the year 2017.

4.) Sabaragamuwa Province

i) Embilipitiya Water Supply Project

This is an augmentation of existing scheme with a treatment plant which intends to serve 84,000 beneficiaries in Nindagampelessa, Embilipitiya, New town, Pallegama, Udagama, Kalagediara, Halmillaketiya, Yodagama. Kubugoda ara, Moraketiya, Hingura, Thunkama ketagal ara. Total cost estimate is Rs. 607.89 million. Construction of intake, water treatment plant, Water tower, Office building, Distribution system etc. were completed. The physical and financial progress at the end of 2017 was 100 % and 101 % respectively. Project has been already commissioned and Rs3,630,067.00 has to be paid as retention.

ii) Udawalawa Water Supply Project - Stage I & II

This is an augmentation of the existing WSS. TCE is Rs. 973.20 million. The total beneficiaries are 62,500 in Kolombage Ara, Nindagam Pelessa, Ranchamadama, Thibulketiya and Udawalawa, yaya2, Andaluwa, Maduwanwala, Panahaduwa, Rathkarawwa, Gageyaya, Sankapala Miriswelpotha, Mahagama. Original scope of the works were Completed. The physical and financial progress at the end of 2017 was 100 % and 75 % respectively. Project has been already commissioned and Rs. 461,318.00 has to be paid as the retention.

iii) Godakawela Water Supply Project

This new project intends to provide safe drinking water to 22,500 beneficiaries in Godakawela, Galahitiya, Masimbula, suburbs, Alpitiya, Balavinna East,

Godakawela, Wara yaya, Balawinna West, Balawinna North, Kompitiya, Mawatalanda Meddegama, Ridivita, Dambawinna, Kapuhenatenna, Balawinna East, Mawathalanda, Malwatta areas. The water source is Rakwana Ganga and the water is fully treated in a WTP with the capacity of 4,500 cu.m/day. Water intake, WTP, Storage Tank & Distribution system were completed. Original scope was completed. Total cost estimate is Rs. 288.80 million. The physical and financial progress at the end of 2017 was 100 %. Project has been already commissioned and Rs.575,700.00 has to be paid as for the contract retention.

iv) Galigamuwa Water Supply Project

The implantation of the project under GOSL funding has been closed during this year. Only balance payment of retention for executed contracts for pipe laying amounting Rs. 0.84 Mn. to be paid and the project transferred to implement under World Bank Funding.

v) Nivithigala Water Supply Project

This project intends to provide safe drinking water to 6,000 beneficiaries covering Watapotha, Sidurupitiya, Thuththiripitiya Halkandaliya, Nivithigala, Yakdehiwatta areas in Ratnapura District. Total cost estimate is Rs. 153.4 million. Project components of the scheme was completed. Construction of office building was omitted due to land issue. The physical and financial progress at the end of 2017 was 100 % and 68 % respectively. Project has been already commissioned and Rs. 236,850.00 has to be paid as the retention.

vi) Pelmadulla Water Supply Project

This project intends to supply safe drinking water to 22,500 beneficiaries in Pelmadulla covering Ihala Bopitiya, Pelmadulugama, Pelmadulla town, Pahala Bopitiya, Kuttapitiya, Ganegama, Godagama, Rilhena, Udathula, Denawaka, Udakada, Panawenna Borala, Morathota, Nugawela east, Nugawela west, Kattange, Kotakethana, Wellandura, Yainna and Narangoda. The Total Cost Estimate is Rs. 421.09 million. The physical and financial progress at the end of 2017 was 100 % and 98 % respectively. Original scope of works is completed. Project has been commissioned and Rs 359,472.00 has to be paid as retention.

vii) Kiriella Water Supply Project

This project intends to supply safe drinking water to 8,000 beneficiaries in Idangoda, Kiriella areas in Ratnapura District. The Total cost estimate is Rs. 205 million. Stage I of the project was completed. The physical and financial progress at the end of 2017 was

100% (stage I) and 25 % respectively. Project has been commissioned and Rs. 680,723.00 has to be paid for retention.

viii) Madola Water Supply Project

This project is to provide pipe born water to Madola, Vikumsihagama GN Division under Avissawella WSS. The number of beneficiaries of the project is 4,000. Total cost estimate of the project is Rs. 132 million. Project completed without distribution extension to Rajasewaka gammanaya (due to practical problems). The physical and financial progress at the end of 2017 was 82% (possible work completed) and 58% respectively. Project has been commissioned and Rs 1,147,878.00 has to be paid as retention.

ix) Mawanalla Water Supply Project

Augmentation of Mawanella water supply scheme was carried by completing construction of flocculator, rapid sand filters, pump house, supply and installation of intake pumps, high lift pumps etc. Accordingly, treatment plant capacity has been increased by 5,500 cu.m/day where existing capacity was 9,500 cu.m/day. The contracts were completed and final bills and retention of Rs .1.6 million to be paid.

x) Padalangala water Supply scheme

This new project intends to supply safe drinking water to 10,000 beneficiaries in Padalangala area. Total cost estimate of the project is Rs. 609.05 million. Project components are construction of pump house and 100 cu.m water tower, supply and laying of distribution system, supply and laying of pumping main, supply of pumps with M&E equipments. First three part of components will be done under the water supply and sanitation improvement project and other two components will complete by the NWSDB. Total cost estimate of NWSDB part is Rs 185.7 million. Supply and laying of pumping main is ongoing and physical and financial progress at the end of 2017 was 45 % and 20 % respectively.

5.) Southern Province

i) Baddegama WSS

Baddegama water supply scheme was commenced in the year 2013 for distribution improvement to Baddegama and suburbs. This project comprises of supply and laying of upvc pipes/ DI pipes/PE pipes in the area. Works have been completed for the present and financial progress is 85 %. The Estimated project cost was Rs. 441 million. Expected numbers of beneficiaries are 33,800.

ii) Sithulpawwa WSS

Sithulpawwa water supply scheme consists of

construction of intake well, crib chamber, pump house control room and 25 cu.m capacity intermediate sump, supply and installation of low lift pumps, high lift pumps, Back wash pumps and accessories, construction of operational building and associated work. The scheme with 500 cu.m/day production capacity expects to serve Sithulpawwa temple & 10,000 pilgrims. All the works have been completed except operational building. The estimated project cost was Rs. 116 million. Overall physical progress of the project is 85 % and financial progress of the project is 65 %.

iii) Thissamaharama WSS

Under the augmentation of Thissamaharamaya water supply scheme, estimated project cost is Rs. 393 million. First phase of the project consists of improvement of Thissamaharama water supply scheme and the contract was awarded to Rs.113 million. The contract consists of construction of aerator, sedimentation tank, chemical house and operational building. Expected numbers of beneficiaries are 10,000. Physical progress of the project is 9 % and financial progress of the project is 18 %.

iv) Andaragasyaya water supply scheme

The objective of the scheme is to serve Andaragasyaya and Bandagiriya areas. Andaragasyaya water supply scheme consists of supply & delivery of DI pipes fittings and laying of DI pipes fittings. Level monitoring system has been fully completed while 75% of supply and 24% of laying pipes have been completed. The estimated cost of the scheme is Rs. 214 million, but the cost of committed contract is Rs.66 million. Physical progress of the project is 44% and financial progress is 45%.

v) Palapotha water supply scheme

Pumping main laying is expected under Palapotha water supply scheme and the work consists of supply and delivery of DI pipes & fittings, laying of DI pipes, fittings and accessories of Palapotha pumping main. DI pipe supply has been already completed and pipe laying is in progress. Physical progress of the contract is 8% and financial progress of the contract is 20%.

6.) Uva Province

There were no small and medium ongoing projects in Uva Province during the year 2017.

7.) Western Province

Western North, Western Central & Western South

There were no small and medium ongoing projects in Western North Western Central & WS Provinces during the year 2017.

8.) Eastern Province

Kantale (Agbopura) Water Supply Project was commenced and completed in 2015. However, additional pipe line extension for Madagama, Thalassawewa, Peramaduwa villages were under taken at a cost of Rs.29.0 million during the year of 2016 and completed in 2017. Wan Ela WSS pipe laying work has been completed and water supply is in process through direct pumping.

Pipe line extension of 7.0 km to Iruthayapuram, Chenkallady & Eravur areas in Batticaloa region was completed at the cost of Rs.12.0 million.

9.) North Western Province

There were no small and medium ongoing projects in North Western Province during the year 2017.



Projects in Pipeline (WSP)

1. Kirama Katuwana WSP

Objective of this project is to improve the provision of safe and reliable drinking water to the people living at Kirama and Katuwana areas. At present there is a gravity pipe borne water supply system based on streams named Nebilidola, Beerideniya dola and Ethawalakanda dola in Katuwana area. Existing Katuwana WSS has 976 Nos. of house connections and 58 Nos. of commercial connections. Likewise, existing gravity pipe borne water supply scheme based on stream named Rammalekanda dola in Kirama area has 497 Nos. of house connections and 31 Nos. of commercial connections. Kekiriobada reservoir constructed by Department of Irrigation could be used as the additional water source for the proposed water supply scheme. Average drinking water requirement for Kirama and Katuwana is about 3500 m³/day of which Department of Irrigation has agreed to provide 2,500 m³/day. Hence, the balance 1000 m³/day is supposed to be extracted from the present sources.

Under this proposal, it is proposed to cover 34 GNDs in Katuwana Pradeshiya Sabha which belongs to Hambantota District.

2. Hasalaka Water Supply Project

The project area under this proposed scheme is located in Eastern boundary of Kandy district within the Minipe Divisional Secretariat of Central Province. Minipe DS division comprises of 48 GNDs and the total land area of the DS division is 165 km². However, the proposed Hasalaka WSS covers only 33 out of 48 GNDs due to complex geographical terrain in the area. This coverage area includes Morayaya, Hadaganawa, Bulathwelkandura, Weragantota, Diyabubula, Hasalaka, Rathna Ella and Dambepitiya of Minipe DS division in full or part depending on the location and the elevation of the respective GN division. At present, there are several water supply schemes maintained by Hasalaka Local Authority such as Gurulupotha, Oruwalayaya, Bogahayaya, Mahaaswedduma, Dobagahawela and Lunumadalaketiya in Minipe DS division among which Gurulupotha is the main scheme which serves the

Hasalaka town and suburbs. At present there are about 950 service connections in the existing distribution system.

3. Giridara WSS

The objective of this project is to find out the suitable method to provide potable water to Giridara and surrounding water scarcity areas. Proposed Giridara area is situated near Kelani River right bank. The proposed project is anticipated to supply water to uncovered 16 GNDs in Dompe DS division in Gampaha district. The existing water sources of the project area are dug wells, tube wells and rivers. During the dry period, dug wells get dry in many areas and the people in the area face severe problems in collecting water for their daily needs.

Kelani River is the main water source present in this area and other water source available in the area is the ground water. However, due to the high demand for potable water and the quality problems of ground water, it cannot be used as reliable water source. Some of the wells in the area go dry during the drought period. Therefore, Kelani River has been identified as the only reliable water source in Dompe DS Division.

4. Valachchenai WSP

The Valachchenai WSP contributes to the reconstruction and improvements of the living conditions of the population in response to the heavy damages caused by Tsunami struck in Sri Lanka in 2004. Public water supply systems do not exist in this proposed area. Sample testing of the wells indicates that the chloride content of the well in the densely populated area exceed the recommended value of 250 mg/l and the shallow wells tested show the presence of e-coli bacteria.

The proposed area under this project includes 06 divisional secretariat areas namely Koralaipattu, Koralaipattu West, Koralaipattu Central, Koralaipattu South and Koralaipattu North and Eravur Pattu. The proposed project will integrate the ADB 4th project starting from Valachchenai up to Eravur along the coastal

divisions. About 148,581 populations in year 2025 will directly benefitted by this project which requires a water demand of 27,000 m³/day. The water is extracted from intake at Rugam irrigation reservoir and treated at water treatment plant located closer to the intake. The water will be distributed to four main areas such as Valachchenai, Kalkudah, Kiran Siththandy and Rugam covering about 423km of pipelines.

5. Polonnaruwa East WSP

Among the 07 DS divisions in Polonnaruwa District; Welikanda, Dimbulagala, Thamankaduwa, Lankapura and Hingurakgoda DS areas have a very low coverage of safe pipe borne water supply. Presently, a limited area is covered by the existing water supply schemes and most of the people depend on deep or shallow groundwater sources such as tube wells, dug wells etc. the quality of groundwater is not according to the standards due to high fluoride and hardness.

Considering the target area it was decided to have two separate zones with two water supply schemes. Proposed Manampitiya Water Treat Plant with a capacity of 15,000 m³/day will supply water to Welikanda and Dimbulagala DS areas situated on the right side of Mahaweli River whereas proposed Gallella Water Treatment Plant with a capacity of 12,000 m³/day will supply water to Thamankaduwa, Lankapura and Hingurakgoda DS areas situated on the left side Mahaweli River.

6. Bandarawela, Haputale , Diyathalawa Integrated Water Supply Scheme

The objective of this project is to provide pipe borne water to the people living in Bandarawela, Haputale and Diyathalawa areas. There are three functioning water supply schemes already available in the project area namely Bandarawela WSS, Diyathalawa WSS and Haputale WSS. However, it is expected to increase the water production due to the limited availability of raw water during dry spells and the limited production capacity in wet spells. In addition, the areas where there is no water supply will be benefitted with pipe borne water from this project.

The project area covers Bandarawela, Diyathalawa and Haputale towns and their suburbs which consist of 52 GND's. About 141,000 populations will be benefitted from this project in the design horizon in these areas.

7. Kundasale, Haragama WSS

The project area under this study is located at eastern boundary of Central Province combining Kundasale, Kandy Four Gravets and Pathahewaheta Divisional Secretariats of Kandy District. The project area under this

study is situated about 15km away from Kandy along Kandy – Mahiyanganaya Road and Kandy- Badulla road. There are five water supply schemes namely Kundasale WSS, Haragama WSS , Araththana WSS, Marassana WSS and Medadumbara WSS maintained by the NWSD in the proposed area. However, the capacities of all existing water supply schemes are not sufficient to cater the demand in the area. All of these schemes are in urgent need of improvement.

By implementing this proposed Kundasale- Haragama water supply project, pipe borne safe drinking water will be facilitated to 136 GND's. 251,387 of total projected population are expected to be served in the design horizon. Total number of projected connections is 70,500.

8. Pathadumbara- Kandy North Integrated Water Supply Project

The objective of this project is to provide a 24-hour potable water supply to Northern part of Kandy city covering six Divisional Secretariats viz. Pathadumbara, Pujapitiya, Akurana, Harispattuwa and part of Gangawata Korale and Galagedara in Kandy District.

Proposed Pathadumbara- Kandy North Integrated Water Supply Project is located in a mountainous region which spans over the northwestern part of the hill country of Sri Lanka.

The same source identified on Phase I of GWSP, 4.1 km upstream of the Polgolla barrage has been taken for the proposed Pathadumbara- Kandy North Integrated Water Supply Project.

After implementation of this project, a total of 450,000 people are expected to be benefitted in Kandy city and suburbs 6 DS divisions.

The following projects are also Projects in Pipeline

1. Anuradhapura North WSP (Stage II) JICA loan SLPI 15
2. Greater Anuradhapura North & Trincomalee Integrated WSP
3. WS to BOI Zones Biyagama/ Koggala/ Wathupitiyala WSP
4. Makandura, Pannala, Kuliapitiya
5. Ambathale Treatment Plant Improvement WSP
6. Kaluganga WS - expansion Project Phase I
7. Nau Oya WSP
8. Katankudy WWP
9. Anuradhapura South WSP
10. Galgamuwa WSP

11. Eppawela Rajanganaya Giribawa WSP
12. Delthota WSP
13. Ampara Distribution Infilling WSP
14. Extension of Dehiwala Mt Lavinia WWMP
15. Dankotuwa WSP
16. Partial Treatment WSP
17. Hambantota WWDP

Planning and Design (WSP)

Planning and Design (Water Supply)

Western Section

Planning works carried out during 2017

The western sub section of Planning & Design Division has carried out the Planning Works of the following projects.

- Preparation of Feasibility Report for Jubilee System Improvement Project.

Jubilee reservoirs are dedicated to supply water to the southern part of Colombo Municipal Council Area and part of Kotte and Maharagama Divisional Secretariat Areas.

Considering the anticipated critical needs for water supply in the above area, this project has been included in the priority urban water supply projects proposed under the ADB's Country operations Business Plan (2018-2020).

This project includes the enhancement of storage capacity at jubilee, new transmission main, Distribution Improvements with the DMA management, construction of pump house and other institutional development activities.

The total cost estimate for this project is Rs. 8,627 million.

- Expansion of Ambatale Water Treatment Plant by 50,000 cu.m/day

According to the Western Province Master Plan Study – 2013 entire Colombo Municipal Council Area (CMC) and few suburbs will be supplied from Ambatale Water Treatment Plant. Hence, capacity improvement for Ambatale water treatment plant is inevitable due to ever increasing water demand for multi-disciplinary developments proposed by the Western Province Megapolis Plan in CMC Area.

Therefore, Ambatale Water Treatment Plant Expansion

Project is planned to increase the existing capacity by 50,000 cu.m /day by constructing intake, clarifier unit, 02 nrs. filter units and some other related work.

The cost estimate for this project is Rs. 5,460 million.

- Preparation of RFP document for Consultancy services under Kalu Ganga Water Supply Expansion Project (I).

Proposed project comprises of 294,000 cu.m./day capacity intake and 140,000 cu.m/day capacity treatment plant at Kandana, DI transmission mains, distribution network and construction of towers and ground reservoirs.

- Planning of head office improvement works.

Detailed Design Carried out during 2017

- Detailed design and preparation of drawings for 10,000 cu.m capacity ground reservoir at Jubilee Site.
- Detailed design and preparation of drawings for 6,000 cu.m capacity ground reservoir at Jubilee Site.
- Renovation/improvement of head Office buildings.

Design Review work carried out during 2017

- Design review of Gampaha, Attanagalla and Minuwangoda Integrated Water Supply Scheme.
- Design review of Kelani Right Bank Water Supply Project -Stage II.
- Towns East of Colombo District Water Supply Project Packages 1, 2 & 3.
- Preliminary Design Review of Katana Water Supply Project.
- Design Review of Aluthgama, Matugama & Agalawatta Integrated Water Supply Project.

(North / North Central) Section

Planning Work carried out during 2017:

- Preparation of bidding documents Mullaitivu water supply scheme and calling of tenders (under World Bank funds).
- Planning of Erukkalampiddy water supply scheme.
- Preparation of bidding documents of Mulankavil water supply scheme and calling of tenders (under World Bank funds).
- Planning of Deduru Oya water supply project (EDCF – Korean Exim Bank funds), preparation of Consultancy services RFP, Design Build contract document, Obtaining EDC & SCAPC approvals, conduct Pre-conference, pre-bid meetings etc;

Design Review work carried out during 2017:

- Review of detailed designs of Treatment Plant of Anamaduwa Integrated Water Supply Project.
- Review of detailed designs of Polgahawela Water Supply Project.
- Review of Transmission and Distribution network designs and conceptual designs and working papers of Water Treatment Plant of JICA Anuradhapura North Water Supply Project Stage I.

Detailed Designs carried out during 2017:

- Designs & completion of Roughing Filter, Tower and Sump, Pump House & Ancillary Buildings for Mullaitivu water supply scheme (under World Bank funds), completion of drawings and tender documents.
- Designs & completion of Aerator, Lime dosing Tank, Roughing Filter, Tower and Sump, Pump House & Ancillary Buildings for Mulankavil water supply scheme (under World Bank funds), completion of drawings.
- Designs & completion of Distribution network and Water Tower Buildings for Mulankavil water supply scheme (under World Bank funds).

Southern/Eastern Section

Planning Works Carried out during 2017

- Eheliyagoda Water Supply Scheme

Project preparation of Eheliyagoda WSS is funded under ADB Loan 3348 PDF assistance (Tranch 3 of GCWWMIP). The P&D section is entrusted to carry out project preparation. P&D finalized the lands for infrastructure and land acquisition is in progress. Preparation and calling of tender documents for Geological surveying, topographical survey were

completed and NBRO approval for land stability was obtained.

- Heda Oya Water Supply Scheme

The PAC approval was obtained for the pre-feasibility study report.

- Badulla – Haliella Water Supply Project

The designs for Demodara foot bridge crossing was completed.

Detailed Designs carried out during year 2017

- Haldumulla Water Supply Scheme

Designs of Haldumulla WSS is completed and tender was called.

- Ruwanwella Water Supply Project.

Consultancy

Carried out the re-calling of EOI and short listing of the consultants. Awaiting for Bank Concurrence to issue RFP.

Design Build

Revision of Engineer's Estimate (3rd revision) was carried out as requested by the SCAPC. Evaluation is in progress.

Design Review Works

- Reviewed the Matara Stage IV Preliminary designs.

•Ampara Phase III - Water Supply Scheme – Yard Piping

Design of Yard piping of six tower sites of Ampara Phase III project is in progress.

M&E Section

The M&E sub selection of Planning & Design Section has carried out the following Design works during the year 2017.

Design of Schemes & Document

- Gothatuwa – Moragasmulla pump house.
- Supply & installation of sewage pumping sets & accessories at Dehiwala, for male student hostel of University of Visual & performing Arts.
- Heda-oya RFP & Engineering estimate preparation for M&E works.
- Proposed office premises for Audit / Sewer / IT section A/C & Electrical works specification & BOQ preparation.
- Moratuwa - Rathmalana sewer project RFP preparation.

- Town - East Polannaruwa WSP Engineering estimate preparation for M&E works.
- Uma-Oya WSP Employer's requirement & Engineering estimate preparation for M&E.
- Pibidemu Polannaruwa M&E design works.
- Mulathiv water supply system.
- Ruvanwella Engineering estimate.
- Updating D5 manual & ICTAD publications.
- Mulankavil WSP.
- Design of small power & lighting for E-branch & Audit section .
- Solar proposal for Jubille pumping station .

Design Review work carried out

The following Design Review works have been carried out during the year 2017.

- Gampaha, Attanagalle & Minuwangoda Integrated WSP.
- Water supply scheme for un-serviced area of Ampara district phase III.
- South wing Building Mechanical & Electrical work supervision work.
- Kelani Right Bank (KRB-2) stage II WSP.
- Greater Mathale WSP.
- Anamaduwa integrated WSP.
- Deduru oya WSS.
- Pogahawela Alawwa IWSP.
- Aluthgama, Maththugama & Agalawatta IWSP.
- Katana WSP.

Documentation Section

Documentation Section comprises three sub sections, namely Documentation Sub Section, Design Manual Updating Sub Section and Quantity Surveying Sub Section.

1.Documentation Sub Section

The Documentation Section under takes preparation and updating of Standard Bidding Documents, Standard, Specifications, Pre-Qualification Documents and uploading to NWSDB website.

Completed in year 2017 has been summarized as follows:

- Preparation of 05 new Standard Bidding Documents.
- Revisions of 62 Standard Bidding Documents.

- Preparation of 02 new Specifications.
- Revision of 08 Specifications.
- Preparation of 01 new Pre-Qualification Document.
- Evaluation of 08 DI pipe manufacturers for prequalification .
- Evaluation of 02 DI/CI valve manufacturers for pre-qualification

In addition to the above activities the documentation sub section also functioned as the Secretariat for the Standard Bidding Document Review Committee which was re – established in year 2008 to review the Bidding Document and to resolve the procurement issues in National Water Supply & Drainage Board. The Standard Bidding Document Review Committee held 22 meetings.

Further the Documentation Sub Section has been acting as the secretariat for the monthly progress review meeting conducted by the P&D Section.

2.Design Manual Updating Sub Section

Design Manual section of P&D undertakes updating/preparation of Procedure/Design Manuals of NWS&DB. During year 2017 following works have been carried out under the guidance and instructions of the Planning & Design Manual Review Committee (PDMRC).

- Final draft of the PI Manual was completed and it was submitted for the PDMRC comments.
- Final draft of the D3 Manual was completed by incorporating the PDMRC comments on the Manual. It shall be circulated to the PDMRC for final approval. In order to complete this task, in year 2017 five numbers of Design Manual Review Meetings on D3 Manual have been held out of total twenty six numbers of review meetings.
- Final draft of the Pre Stressed Concrete Manual for Circular Tanks (DI0) and detail structural calculation has been completed with the participation of Contractor ABE Nikko, JPU Section and CE (Design Manual). It shall be circulated to the PDMRC for the final approval.

- Review of the D2 Manual was started and continuing by Engineer (Design Manual).

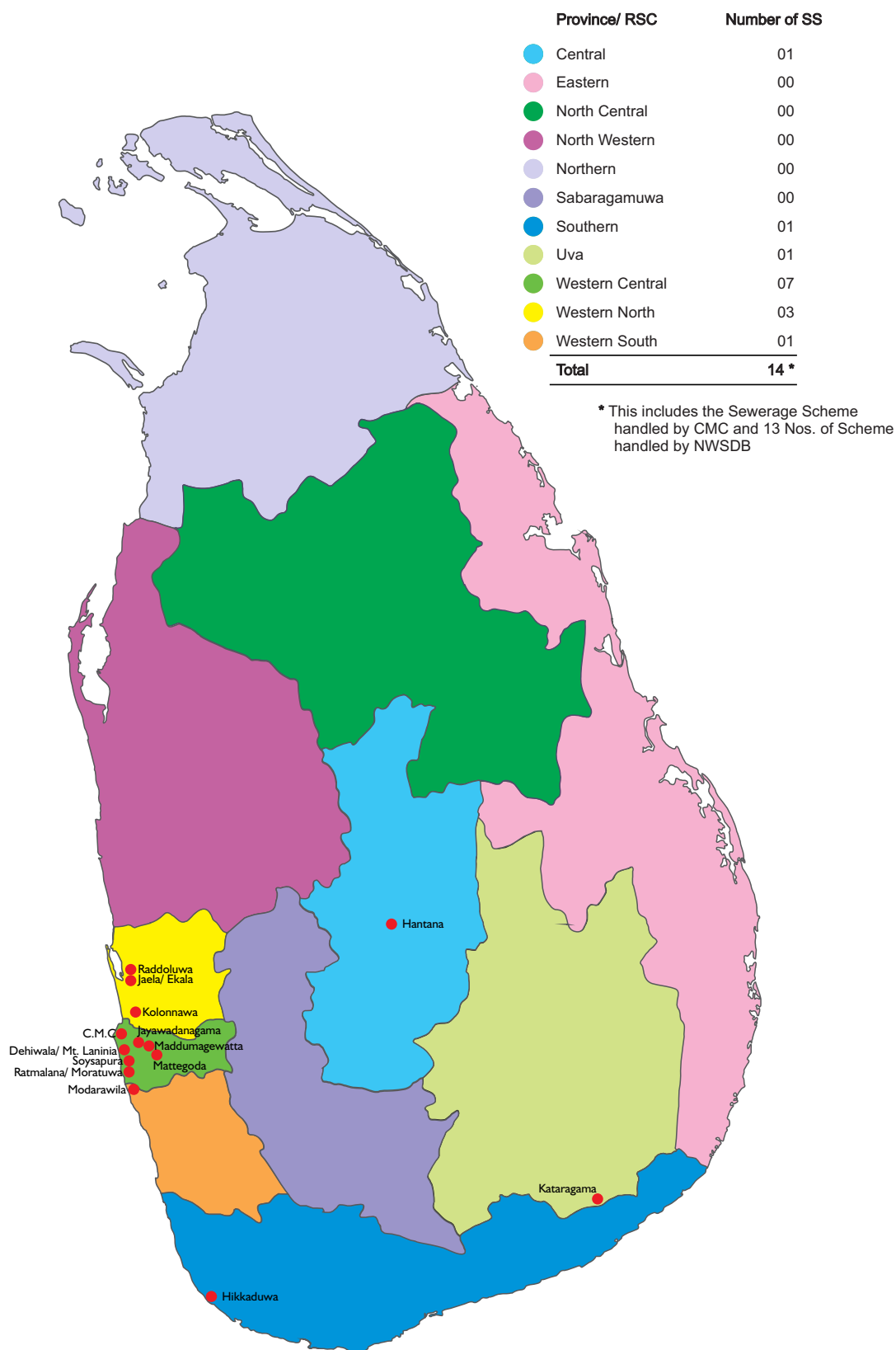
3.Quantity Surveying Sub Section

The Quantity Surveying work includes the preparation of BOQ of all the Design Works carried out by the P&D Section of Head office, Preparation of Engineer's Estimates, Rate Book for Water & Sewerage works, valuation of

variations, Water & Sewerage work studies to prepare work norms for pricing of work items and reviewing of Engineers Estimates prepared by Projects.

During year 2017 this Sub Section has prepared 146 BOQs, 16 nrs. of Engineers Estimates for local funded contracts and 02 nrs. of Engineers Estimate for Foreign Funded Water Supply, and Sanitation Project and cost proposals for 02 nrs. of Design & Build Projects for partially treated Water Supply Schemes, preparation of Annual Rate Book for Water Supply and Annual Rate Book for Sewerage for year 2018. Site visits were done for preparation of BOQs and Engineers Estimate for some projects. This section was also involved in price negotiations with contractors for some projects.

Existing Sewerage Schemes



Sewerage activities

With the expansion of sewerage services, the NWS&DB created a separate division for wastewater activities headed by an Additional General Manager in 2007. Sections coming under the new division are Greater Colombo Sewerage Operations Section, Planning & Designing Section and Sewerage Projects section.

Sewerage Section is taking maximum effort to fulfilling of all required sanitation facilities of the country through project formulation and implementation, providing sanitation solutions, operation and maintenance of facilities for satisfying and influencing of stake holders by guiding and sharing knowledge and experience with the fullest support of competent staff.

The existing sewerage systems having 16,000 connections in Ratmalana, Moratuwa, Jaela, Ekala, Dehiwala, Kolonnawa, Hikkaduwa, Kataragama areas and in few housing schemes such as Hantana, Raddoluwa, Mattegoda, Maddumagewatta and Jayawadanagama. In addition, the NWS&DB has been given the responsibility to maintain a number of BOI sewerage schemes such as Seethawaka, Biyagama and Koggala due to reliability of NWS&DB services and comprehensive technical know-how of its staff.

O&M Activities

The Greater Colombo Sewerage Section is responsible for the operation and maintenance of the sewerage systems of Dehiwala-Mt.Lavinia Municipal Council area, Moratuwa MC area, JaEla UC area, Kolonnawa Urban Council area and sewerage systems of some NHDA housing schemes and several government institutions in the Greater Colombo area.

There are about 17,429 sewer connections maintained by the NWSDB. Accordingly, Soysapura, Mattegoda, Jayawadanagama, Raddolugama, Maddumagewatta and Modarawila housing schemes and the government institutions like Presidential Secretariat, Speaker's Residence, Parliament (water and sewerage), Sethsiripaya (water and sewerage), Isurupaya (water and sewerage), Jayawardanapura Hospital etc. are maintained by the NWSDB.

In addition, sewerage systems of Kataragama, Hikkaduwa and Hantana housing scheme are also maintained by respective area managers under RSCs. Furthermore, maintenance services are provided on

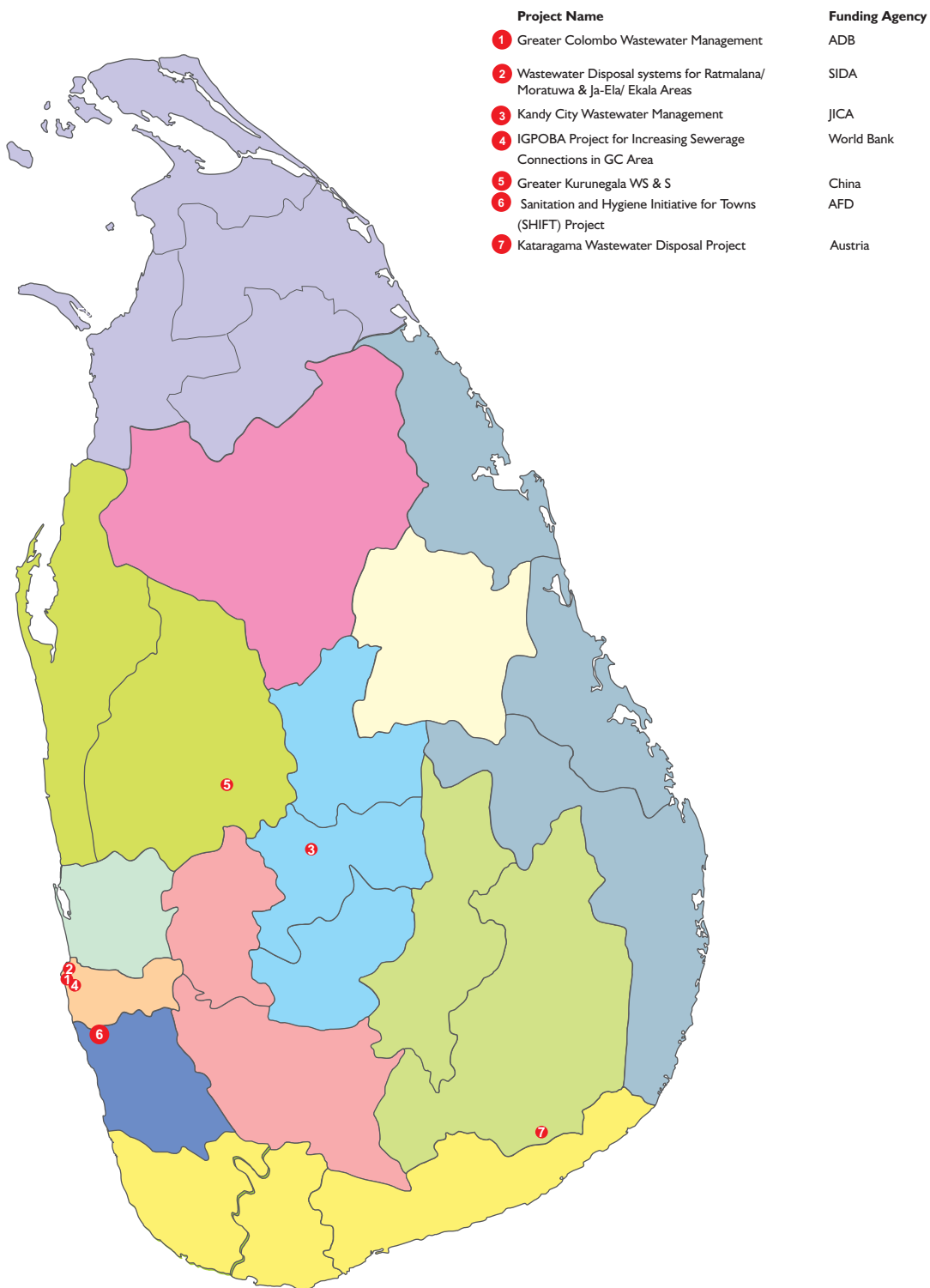
contracts basis to BOI owned industrial parks such as Koggala, Biyagama and Seethawaka.

Grater Colombo sewerage section has implemented project for rehabilitation of existing wastewater treatment system in National Youth Services Maharagama under rechargeable funds from National Youth Services Maharagama. Total project cost was Rs. 48.3million and Capacity of the treatment plant is 45cu.m per day.

Under the programme of legalization of illegal connections, 141 nos. of illegal connections had been legalized during the year. Length of 389m PVC pipes had been laid under Sewer extension programme. New pumps had been installed at Ethulkotte Pump house for the cost of Rs.10.3Million under Energy Saving Programme. Total cost of the projects completed under rehabilitation budget was Rs. 40million.

Ongoing Sewerage Projects

**Accomplishments of Major Sewerage Projects under the Ministry of City Planning & Water Supply,
Location Map of Foreign-funded Projects under Construction/ Augmentation during 2017**



Foreign Funded Sewerage Projects

Projects undertaken with Asian Development Bank Assistance

1.) Greater Colombo Wastewater Management Project

The scope of this project in brief is Rehabilitation/ Augmentation of 6 wastewater pump stations located within Dehiwala / Mt. Lavinia MC and Kolonnawa MC Areas. This project has been designed to improve the collective wastewater and sewage systems in Dehiwala / Mt. Lavinia and Kolonnawa-Meethotamulla areas, managed by the NWSDB. The project is funded by the Asian Development Bank through the Loan 2557- SRI (SF), signed in December, 2009.

The project scope has been prepared to carry out all the construction activities as a single contract which was awarded for a value of USD 7.795 million, following an ICB process. The total ADB fund allocation for the project (together with the reallocation received in 2016) is USD 9.43 million while the GOSL contribution is Rs. 364 million. The total estimated cost of the project is Rs. 1430 (as per Central Bank exchange rate, 1 USD = SLRs. 151.66 valid for 30th Dec. 2016)



KP - 2 Pump Station

The date of commencement of the project was established as 16th September, 2014 while the original completion date was 16th August 2016. An 'Extension of Time' was granted up to 31st March 2017 for the completion of the construction activities.

The project scope had been designed in such a way that all the construction activities are to be implemented while the live systems of each pump station are in place, without interruption.

All 6 pump stations have been handed over to the O&M Section and commissioned. All the 15 Main pumps have been installed and are in operation at 6 Pump Stations. Suction-pipe uprising and Structural Renovations and modifications have been completed for all the 6 pumping

stations. Risk of overflowing in the Pump stations are managed by efficient pumping and Interruption to the live system in place has been minimized. Electrical Panels and SCADA instrumentation are in operation.

All the project activities within the Original Scope are completed except Overflow for MLP-I and Rectification of identified defects at Pump Stations. As of end of December, 2017, 99% of physical progress from the original scope has been achieved in addition to some contract variations, while the financial progress remains at 82%.

The Emergency Overflow for MLP-I Pump Station need to be extended into the Sea to a distance beyond the currents to free the beach segment. Unfortunately, this work is to be terminated at this point due to shortage of funds.

NWSDB has been served Notice by the Police (Dehiwela Police Station) to implement an organized Gully Unloading System in order to minimize environmental hazard. A complete local design has been proposed by the Project Office to implement an organized Gully Unloading System with mechanized screening and grit removal and collection. Procurement is proposed through local contractors as ADB funding is limited. Only three devices, the Grit Pump, Grit Classifier Unit and Mechanically Raked Bar Screen is to be procured through ADB funding, depending on the availability.

Projects undertaken with Swedish Assistance

2.) Expansion of Pipe Borne Sewer Coverage to Moratuwa and Ekala Areas

Wastewater Disposal Systems (WWDS) for Ratmalana/Moratuwa and Ja-Ela/Ekala were constructed under SIDA funds and completed in June 2016 with a collection network of 20% target area.

The Expansion of Piped Sewer Coverage to Moratuwa and Ekala areas, project was planned to expand the existing collection networks in Ratmalana Moratuwa and Ja-Ela/Ekala WWDS to increase the present coverage up to 65% of the population in both Ratmalana / Moratuwa and Ja-Ela/Ekala Areas. Due to the availability of funds and other resources, the expansion is undertaken in two phases namely Stage I Phase II and Stage I Phase III.

For Stage I Phase II -Ratmalana / Moratuwa area, AFD funds have been identified to implement construction of 07 nrs. new pumping stations, laying of 110km collection

pipe network, 11,600 nrs. lateral connections and improvements in existing pumping stations and wastewater treatment plant.

The project cost has been estimated as Rs. 16,073 million and the no. of beneficiaries estimated as 56,429 in 2040.

Under stage I Phase II, the detail design of the collection network and the initial design of the pump stations for Ratmalana / Moratuwa area were carried out using NWSDB in-house resources. The preparation of Bidding Documents is also in progress. Cabinet approval is awaiting to sign the loan agreement and on granting agreement. Stage I Phase III - Ja-Ela/Ekala area, AFD has shown their willingness to fund for Ja-Ela/Ekala areas in year 2019. The project components are construction of 07 nrs. new pumping stations, laying of 75 km collection pipe network, 4,100 nrs. lateral connections and improvements in existing pumping stations and wastewater treatment plant. The project cost has been estimated as Rs. 8,105 million and the number of beneficiaries has been estimated as 19,945 in 2040.

Under Stage I Phase III, preliminary works including land acquisition work is in progress. Detail design and documentation for Ja-Ela /Ekala area will be commenced in 2018 using the same resources.

Projects undertaken with JICA Assistance

3.) Kandy City Wastewater Management Project



Inauguration Ceremony of Package 4

The indiscriminate disposal of wastewater in the Kandy City causes pollution of the Kandy Lake, Meda-Ela and Mahawali River, the main drinking water source to Kandy and Mathale Districts. In order to find a permanent solution to this problem, NWS&DB proposed to implement a wastewater disposal system for the Kandy City. The proposed project intends to collect wastewater in an area of 732 hectares in the City through a network of

92 km long pipelines and then divert to a treatment plant of capacity 14,000 cu.m/day.

This project will be completed in 2018. Around 55,000 residential population and 150,000 migrant population in Kandy will be benefitted from this project.

The Treatment Plant will ensure the disposal of treated wastewater back to the environment complying with the relevant Effluent Discharge standards as stipulated in the Central Environmental Authority guidelines.

The total cost estimate of the Project is Rs. 22,588 million. JICA loan amount is Japanese Yen 14,087 million. Government Consolidated Funds of Rs. 4,060 million is allocated for administration costs, taxes, duties and land acquisition costs etc.

There are 4 main packages in the project and contracts were awarded and being executed for all 4 packages.

Package 1 consists of design and construction of wastewater treatment plant, main pump station, treated effluent disposal system and sludge drying beds. Design activities of Package 1 were commenced on 03rd March 2015 and the construction activities were commenced on 19th February 2016. For the wastewater treatment plant, construction works of sedimentation tank, oxidation ditches, preliminary process building, sludge treatment building and administration building are ongoing. Construction works of main pumping station, permanent bridge and staff quarters are ongoing. Construction works of sludge drying beds has also been started.

Overall progress as at 31st December 2017 – 44.09%.

Package 2 includes design and construction of trunk sewers, branch sewers and service connections; manhole pump stations and supply of operation and maintenance equipment. Construction works of Package 2 was commenced in April 2015 and works are in progress. Sewer pipes of 103 km (trunk & branch – 47 km, service – 56 km) were laid including manhole installation (completed 1,811 out of 2,789), service lines, IC and necessary testing such as light and mirror, air testing for some stretches. Construction works of manhole pump station No.13-1 & 08-2 are ongoing. Micro-tunneling works are also ongoing. *Overall progress as at 31st December 2017 – 45.82%.*

Package 3 includes design & construction of property connections & testing and commissioning. This contract covers the 9,205 nrs. of property connections. Contract activities were commenced on 05th July 2016. Detail design for the selected properties and the construction works are in progress. Contractor has completed 458 nrs. of premises up to December 2017. *Overall progress as at 31st December 2017 is 18.42%*

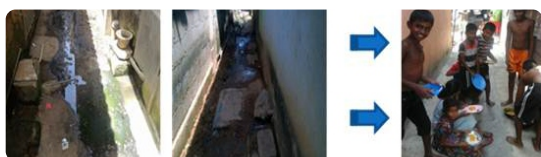
Package 4 includes construction of communal sanitation facilities in designated low-income areas & testing & commissioning. The contract included the construction and rehabilitation of 14 nrs. of toilet blocks which include 138 toilets and 02 nrs. of bathing places in Kandy Municipal Council area. Contract activities were commenced on 03rd February 2016. Construction of 11 nrs. of toilet blocks and 01 bathing place are completed and handed over to the community through Kandy Municipal Council. Another 02 nrs. of toilet blocks are under construction. Construction works of Kandy Municipal Council Sub Office is also ongoing. *Overall progress as at 31st December 2017 – 93.90%.*

Private Latrine Programme

512 nrs. of individual toilets are to be constructed under this programme. This work will be performed through Community Based Organizations (CBO). Three CBOs have been formed already and training programmes are being conducted to educate them in finance handling, operation and maintenance works. Construction works are started in Bogodawatte area (20 nrs. of houses out of 29 nrs.). *Overall progress as at 31st December 2017 – 21.0%.* C:\Users\hp\Desktop\Annual Report 2017\KCWMP.docx ISO 9001: 2015 Quality Management System Certificate was obtained for the project.

As general Issues faced, expected progress are not achieved due to hilly terrain, congested city and Archeological as well as the design changes due to development in Kandy city by other stakeholders.

4.) GPOBA (World Bank) Funded Project for Increasing Sewerage Connections in GC Area



Progress Photographs of Badovita simplified extension with pumping

The scope of this project in brief is, increasing household sewerage connections and off-network sanitary solutions in Greater Colombo Low income households.

Direct Connections to Households in Dehiwala / Mount Lavinia, Jaela / Ekala, Ratmalana / Moratuwa and Kolonnawa area sub project has been completed by giving 1234 sewerage connections including Somananda Mawatha within the premises 100 connections. DEWTS for Diyawarapura 64 number of fisheries houses was successfully commissioned and the defect liability period was also completed.

Three pumping stations were constructed and commissioned in Badovita simplified extension with

pumping, and 1500 sewerage connections have been delivered.

DEWATS for Ratmalana TSUNAMI Housing scheme sub project was completed by rehabilitation of existing treatment plant and 328 sewerage connections were delivered.

Construction of 12km of gravity sewer extension was completed in Sub project of Simplified and conventional extensions in Dehiwala/Mt.Lavinia, Moratuwa, Kolonnawa and Ja-Ela/Ekala area which will cover 1475 connections and physical progress is 98.5%.

Construction for On – Site sanitation improvements which will cover 3785 households is ongoing and physical progress of the project is 26.52%.

Decentralized Wastewater Treatment System for Lunawa Samudra Shakthi Housing Scheme which includes construction of 12 nos of filters, pumping station, sea outfall etc. benefitting to 160 families, is completed.

Awareness programs and meetings were conducted in project areas and poster campaigns and mobile announcing programs were conducted. Meetings were held at DS offices to aware GS and DO's. For productivity improvement, 5S system was used in the project.

Finding manpower for sewerage works has been difficult according to the contractors and some projects were delayed due to this.

5.) Greater Kurunegala Water Supply & Sewerage Project.

The Greater Kurunegala Water Supply & Sewerage Project is implemented with the assistance of Chinese Government loan funds (US\$ 77.3 million) and Sri Lankan Government funds (Rs. 3,200 million) that sum up to Rs. 13,250 million to provide entire solution to water scarcity and adequate sanitation facilities to Kurunegala city limit and immediate suburbs. This is the first project in Sri Lanka implementing water and sewerage components together in one project and the 01st mega sewerage project beyond the Colombo and its suburbs.

The major aim of this project is to improve the living standard of the people living in and around Kurunegala city by providing safe drinking water supply and adequate sanitary facilities. The project consists of two main components.

Water Supply Component

Since water supply facility is limited to Kurunegala Municipal Council area at present, it is going to be expanded up to some extent of Kurunegala Pradeshiya Sabha area. Total nr. of beneficiaries is about 71,000 people. Other than that, it is planned to provide an uninterrupted 24 hour water supply to Kurunegala Teaching Hospital and 35,000 existing water consumers living in the municipal area. Further the floating population of about one hundred thousand people will also be facilitated with safe drinking water.

The construction of a new intake pumping station, laying of new raw water transmission main (8.5 km – 500 mm DI), improvement of existing water treatment plant up to 9,000 cu.m/day, construction of new water treatment plant of capacity 5,000 cu.m/day is 100 % completed. The expansion of the water distribution system in to three zones (about 118 km) is 98% completed. 1500 cu.m capacity elevated tank has been 100% completed. Providing 6,500 new water connections, dedicated water supply main to the Kurunegala teaching hospital are also included in the project.

Sewerage Component

With reference to the city of Kurunegala, total Municipal Council area depends on the on-site sanitation, due to non-availability of any wastewater treatment. Some hotels located around the lake discharge their waste directly to the lake. This situation has created severe environmental degradation in the city. One sewerage scheme available within the area belongs to Kurunegala teaching hospital, and it is not functioning at all for more than 10 years.

Considering all the above facts, it was planned to construct a Sewerage system to cover 43,000 people living in the municipal limit including Kurunegala Teaching Hospital. This project will provide solutions for many environmental matters arising in the municipal limit.



The main components of sewerage project are at near completion. Construction of sewage treatment plant (capacity of 4,500 cu.m/day) and its pumping stations is

100% completed. The construction work of all the 6 pump stations of sewerage network has been 94% completed. Laying of 98.5 km out of 138 km of sewerage network is completed. Sewerage network of Kurunegala Teaching Hospital was also improved.

Overall physical and financial progress of the Project as at end 2017, were 98.02% and 73.75% respectively.

Obtaining ISO 9001:2015 quality standards on 03rd June 2017, the National Steering Committee meeting held on 28th March 2017 and the on-going trial operation of intake, raw water main and water treatment plant can be considered as the special events taken place in the project during 2017.

After implementation of the project, people living in and around Kurunegala Municipal Council area will be supplied with adequate, safe drinking water for 24 hrs. and proper sanitation facilities to all Households, Institutions, Hospitals, etc. and will improve the environmental conditions of the area.

This project is supposed to be a land mark for the city of Kurunegala to improve its water supply coverage and sanitation facilities while promoting of eco-friendly environment to ensure the healthy living conditions of the public.

6.) Sanitation and Hygiene Initiative for Towns (SHIFT) Project

The SHIFT Project aims to provide wastewater disposal infrastructure facilities to 200,000 people living in South and West coastal areas namely Negambo, Galle – Unawatuna and Kelaniya – Peliyagoda.

SHIFT I includes provision of wastewater infrastructure for Negambo city, Studies, detailed design and tender documentation for Galle - Unawatuna and Kelaniya – Peliyagoda areas, pro – poor fund to provide sanitation facilities for the low – income people in the project area.

In addition, it will provide a Technical Assistance (TA) programme to provide recommendation to enhance the water and sanitation sector institutional framework, ensure its sustainable financing and to implement a sewerage management skills development plan.

The loan agreement with Agence Française de Développement (AFD) was signed on June 2016 amounting to EUR 76 million and the grant agreement for the TA component was signed on March 2016 amounting to Euro 5.7 million which is funded by European Union through AFD. With the contribution of Government of Sri Lanka (GOSL) of EUR 26 million, the total project cost is EUR 107.7 million.

The procurement of consultancy contracts to select consultants for the design and supervision works and Policy and Institutional Enhancement consultancy are almost completed during 2017 and the consultants are supposed to be mobilized at site in March 2018. The Management Support Consultancy contract under TA was awarded and the consultant was mobilized in November 2017.

It is planned to complete the design and preparation of bidding documents for Negambo city in the year 2018 and complete construction in year 2022.

Detail design and documentation for Kelaniya/ Peliyagoda and Galle/ Unawatuna will also be commenced in March 2018 and completion in 2022.

7.) Katharagama Wastewater Disposal Project

The Kataragama Sacred City Wastewater Disposal Project has focused on provision of the pipe borne sewer facilities for pilgrim rests, hotels, shops, domestic units and offices etc. around the city limits to avoid further pollution of Manik Ganga and the surrounding environment. The main scope includes upgrading of the existing system by expanding the sewer network and improving the sewerage treatment plant. By installing mechanical aerators, the capacity of the existing treatment plant would be upgraded from 750 cu.m/day to 3000 cu.m/day in order to accommodate the huge floating population visiting Kataragama. Uni Credit Bank Austria AG is providing funding for implementation of this project. The total estimated cost is Rs.2,040 million.

The project work was commenced in August 2014. The Scope under foreign component is completed by December 2017. No. of beneficiaries will be 15,000. The project components are construction of 7 nrs. pumping station installation with pumps and necessary electrical items, 16.5 km length of sewer pipe network and 3,000cu.m/day capacity wastewater treatment plant with aerated lagoons with downstream maturation pond and sludge treatment system. All components are constructed and completed except sludge treatment system.

The project management unit was established in Year 2014. 80% of the land acquisition works were completed. The environmental impact assessments for the project were completed and approval to be obtained. The contractor has completed the main scope of the project and system is in operation except sludge treatment system. The sludge treatment system to be completed under local component and tender documents already prepared and contract to be called.



Completed Aerated Lagoon

GOSL Funded Small and Medium Scale Sewerage Projects

Western Province

Expansion of Pipe Borne Sewer Coverage in Moratuwa/ Ratmalana Area – Expansion of Pipe Line up to Raja Mawatha in Ratmalana.

Under the provision for urgent Water Supply & Sewerage Projects – 2016, a sum of Rs. 48.7 million has been allocated for implementation of the sewer extension of

Raja Mawatha, Ratmalana by Ministry of City Planning and Water Supply.

250 households in the catchment of phase II of Ratmalana/ Moratuwa Sewerage project are included to this project. The contract has been awarded in June 2017 & 60% of the construction work has been completed.

Projects in Pipeline (Sewerage)

Western Province

1.Sri Jayawardenapura Kotte Wastewater Collection & Disposal System

With the rapid development of Sri Jayawardenapura Kotte during the last two decades, most of the existing developed lands have been undergone sub divisions to meet the demand for housing and along the main roads for

commercial development. Due to reduction of the size of building plots and existence of shallow wells nearby lands, it has become very difficult to establish a proper septic tank in a given building plot.

Low lying areas have also been filled to meet the demand for lands. This has increased the water spread of marshland and waterways contributing to flooding. With the increase of groundwater table and due to the low

permeability of soil, large amount of wastewater from poorly functioning septic tanks and soakage pits collects to side drains and ultimately drained to nearby surface water courses finally contaminating the groundwater sources. Therefore, a centralized sewerage system is essential to cater for the rapid development that has taken place in Welikada - Rajagiriya area as well as the Sri Jayawardenapura Kotte urban council area and adjacent parts of Kaduwela D.S. Division and Maharagama UC area in order to provide proper wastewater disposal for these areas. The wastewater generated will be collected by gravity and pumping mains and will be treated in the treatment plant located in Koswatta Road, Battaramula and the treated effluent will be discharged to Diyawanna Oya. A feasibility study by JICA is in progress Environment Impact Assessment (EIA) study of Sri Jayawardenapura Kotte Wastewater Disposal Project is in progress.

2. Maharagama & Boralasgamuwa Wastewater Disposal System

There are important national institutions such as University of Sri Jayawardenepura, National Institute of Education, and National Cancer Institute are located in Maharagama area. A centralized sewerage system is essential to cater for the rapid development that has taken place in the Maharagama and Boralasgamuwa townships, and to prevent further deterioration of the environment.

Wastewater flow of Maharagama and Boralasgamuwa will be brought to the Rathmalana/Moratuwa treatment plant which was constructed under Ratmalana-Moratuwa Wastewater Disposal Project. It is expected to provide about 5000 sewer connections. The total estimated cost is Rs.5,125 million.

The contract was awarded to M/s CCOEC- GSE JV (China National Corporation for Overseas Economic Cooperation and Golden State Environment Corporation Joint Venture) on 05th November 2014 for the implementation of the project and the funding agency is Export Import Bank of China. The loan Agreement with Export Import Bank of China is to be signed.

The Initial Environmental Examination (IEE) study is in progress by M/s Uni Consultancy services. IEE Technical Evaluation committee (TEC) meeting was conducted on draft final report by Central Environment Authority (CEA). The lands acquisition is in progress for the pump houses.

3. Dehiwala/Mt. Lavinia Wastewater Disposal project

Dehiwala Mt. Lavinia is highly urbanized, residential and commercialized city since it is located adjoining to Colombo and Sri Jayawardenepura Kotte the commercial capital and administrative capital of Sri Lanka respectively. It is situated in Colombo District and consists of Dehiwala and Ratmalana Divisional Secretariat Divisions.

Currently there is a high demand for piped sewerage disposal system due to unavailability of proper wastewater disposal system in the unsewered area. Therefore, the unsewered area in Dehiwala and Mt. Lavinia together with adjacent three GN divisions of Kesbawa DSD are incorporated into the proposed project. The estimated total area covered under this project is approximately 919 ha. and the expected population to be served in the year 2040 is 138,230. The proposed project consists with 41.2 km gravity sewer mains, 4.1 km of gravity mains as deep tunnel, 39 km of rider & branch sewer pipes, 12 numbers of wet well pumping stations, 6.5 km of pumping mains and 1.7 km long sea outfall (1500mm dia.) etc. The total estimated cost of the project is Rs.28,523 millions.

Presently, the cabinet approval has been granted for awarding the contract to M/s Vinci Construction Grands Projects/LUDWIG PFEIFFER Hoch-u Tiefbau GmbH & Co. EIA study of the project is being carried out by M/s Uni Consultancy services and final report of EIA to be submitted to CEA for environmental clearance. Already pump house lands were identified by the P&D (Sewerage) division and it is in the process of acquisition.

4. Gampaha Wastewater Collection and Disposal Project

Gampaha act as a town of high accessibility as it connects with Colombo and Sri Jayawardenapura the commercial and administrative capital of Sri Lanka through the 'A' class road network of Colombo-Kandy Highway and Colombo-Kandy Railway. Due to high accessibility and being the main administrative centre in Gampaha district, Gampaha town attracts a floating population of about one hundred thousand daily while Yakkala and Miriswattha attracts estimated twenty thousand population. Apart from that Gampaha MC is highly urbanized and commercialized city as it is located in the western province and adjoining to Colombo the commercial capital of Sri Lanka.

The proposed project area covers 21 GN divisions in Gampaha Municipal Council including Gampaha town,

Yakkala and Miriswaththa. The anticipated domestic population, to be directly served in year 2045 is 33,601 in 21 GN divisions. In addition to permanent residence an estimated floating population of 172,175 will be benefitted by the proposed project. Total cost estimate of the project is Rs. 20,751 million.

Proposed wastewater disposal system comprises of a wastewater reticulation network including 30.4 km Gravity sewer pipes, 61km of Rider & Branch sewer pipes, 6.4km of force mains, 17 nos of Pumping Stations and 15,000 m³/day capacity wastewater treatment plant and the treated effluent is planned to be discharged to Attanagalu oya via 3.1 km length of river outfall.

Presently, the Project Appraisal Committee approval has been granted for the project.

North Western Province

1. Chilaw Wastewater Disposal System

Chilaw is situated 75km north of Colombo is a populous town and is famous for coconut, prawn and fishing industry. Due to flatness of the topography in Chilaw, there is no readily identifiable drainage pattern, but there are four main storm water drainage canals that discharge directly into the sea. Drainage is particularly challenging, due to faults in canal leveling, water from the lagoon backs up into the main drainage outlets in the urban area. Chilaw Urban council emptying this septage, which is collected from the pits and tanks directly on to the ground surface. Wastewater from the Base hospital is discharged directly into a pond situated between the rail line and sea through a pumping main.

Under the proposed scheme, a 1000 cu.m/day capacity treatment plant with 500m Short sea outfall is proposed. The total cost of the project is Rs. 3,776 million and 1050 houses will be connected to the scheme. The contract was awarded to M/s CCOEC- GSE JV (China National Corporation for Overseas Economic Corporation and Golden State Environment Corporation Joint Venture) on 05th November 2014 for the implementation of the project and the proposed Bank for funding is Export Import Bank of China. The loan Agreement with Export Import Bank of China and GOSL is to be signed. Environmental Impact Assessment (EIA) draft final report had been submitted to the Urban Development Authority for their comments. Stakeholder meeting was held and comments from relevant authorities to be submitted.

2. Puttalam Wastewater Disposal System

Puttalam is situated 125 km north of Colombo is a small but very populous town and is famous for salt and fishing

industry. Puttalam lagoon is one of the largest lagoons in Sri Lanka. Norochcholai Coal power Plant is located 12 km from Puttalam on the Kalpitiya peninsula.

Under the proposed scheme, a 1000 cum/day capacity treatment plant with 500m short sea outfall is proposed. The total cost of the project is Rs. 4,025 million and 1250 houses will be connected to the scheme.

The contract was awarded to M/s CCOEC- GSE JV (China National Corporation for Overseas Economic Corporation and Golden State Environment Corporation Joint Venture) on 05th November 2014 for the implementation of the project and the proposed Bank for funding is Export Import Bank of China. The loan Agreement with Export Import Bank of China and GOSL is to be signed. Environmental Impact Assessment (EIA) draft final report had been submitted to the Urban Development Authority for their comments. Stakeholder meeting was held and comments from relevant authorities to be submitted.

Southern Province

1. Hambantota Wastewater Disposal Project

Hambantota to be developed as an economic hub mainly interconnected to the natural harbour that has enormous potential to develop as an international Sea Port. Proposed infrastructure includes Oil Refinery, Industrial Zone, and Administrative Centre, International Convention Centre, Botanical Garden, International Sport Complex and International Airport. It is expected to provide about 9,034 sewer connections. The water supply and sewerage project is to be implemented in ports development area in Hambantota in order to cater for industries located within the port premises. The total estimated cost is Rs. 11,519 Million.

Hambantota wastewater project has been awarded to M/s China Textile Industrial Corporation for Foreign Economic and Technical Cooperation and the agreement also signed between two parties. The lands for the pump houses and treatment plant have been acquired already. Environmental clearance also has been obtained for the EIA study of the project.

Proposed wastewater disposal system comprises of a wastewater reticulation network including 42 km gravity sewers pipes, 72 km of rider & branch sewers, 14 km of force mains, 12 nrs. of pumping stations and 12,000 cu.m/day capacity wastewater treatment plant and the treated effluent is planned to be reused for irrigation purpose.

2. Matara Wastewater Collection, Treatment and Disposal System

Matara is a prominent city in the Matara District, in Southern Province of Sri Lanka. This city has been identified to be developed as a first order urban center under the Regional Structure Plan prepared by the National Physical Planning Department. Since the city is being developed to act as a first order city, it is important to tackle the wastewater generation of the city. A population of about 74,193 live in the Matara four Gravets and the MMC area includes 38 GNDs. Moreover, by the proposed project, 37 GNDs will be benefitted. It is proposed to cover a population of about 69,471 and design wet weather flow for this project is 11,000 cu.m/day. Approximately 80% of the population is covered by the proposed sewerage system. It is proposed to provide 15,312 sewer connections.

The total estimated cost of the above project would be Rs. 21,362 million. PAC and Board approvals have been obtained for the Matara Wastewater Project and the Project Concept Paper has been sent to NPD approval. Furthermore, the TEC was revised in 2017 and PAC and Board approval is obtained for the revised estimate. After the discussions held with Cabinet Committee on Economic Management, it was decided to grant approval to conduct a detailed feasibility study for the above mentioned project by M/s ISAN corporation Korea with the cooperation of NWSDb with the funds provided by Korea Environmental Industry and Technology Institute (KEITI) and M/s ISAN corporation of Korea.

Eastern Province

1. Kattankudy Wastewater Disposal Project

Kattankudy is a coastal town located 7.0 km South of Batticaloa Town in the Batticaloa District in the Eastern Province, consisting of 18 GN Divisions extends over a land area of 3.89 Sq.km. The treatment plant is proposed to locate within Kattankudy and the consent from the land owners have been obtained this year. It is expected to provide about 13,308 sewer connections. The total estimated cost is Rs. 11,407 million.

Kattankudy wastewater project has already been awarded to M/s Hunan Construction Engineering Group Corporation and subsequently the agreement also has been signed between the contractor and NWSDb. The loan agreement has to be signed shortly and the implementation of the project will be started in the year 2018. The Initial Environmental Examination (IEE) study has been completed by University of Peradeniya and the environmental clearance to be obtained for the study. The land acquisition is in

progress for the pump house and treatment plant lands.

2. Batticaloa Wastewater Collection, Treatment and Disposal Project

The Batticaloa town is to be developed as a fisheries and tourism related urban agglomeration, because of its high potential for tourism development and fisheries expansion. This town is to be developed as a second order service center by 2030, in the proposed hierarchy of urban centers. The area lies on the narrow belt of land between the sea and the lagoons. The groundwater table is very shallow and the population density is high making on-site sanitation not sustainable. Therefore, it has been identified that one of the greatest and most urgent needs is a suitable sewerage system to address the health and well-being of the Batticaloa population and to reduce the contaminated waters discharging directly to the lagoon, which is used for fisheries-related livelihoods. The tentative cost estimate for construction of above project would be Rs. 14,915 million.

PAC and Board approvals have been obtained for the Batticaloa Wastewater Project and the Project Concept Paper has been sent to NPD approval. A land of 50 acres has been obtained from the DS for the construction of Treatment Plant. Land acquisition for the pump houses is in progress. EIA study has to be carried out to the project in 2018.

3. Wastewater Collection, Treatment and Disposal System for Eravur

Eravur is to be developed as an economic related urban agglomeration, because of its high potential for economic development. The township is expected to achieve economic growth with agriculture investment and infrastructure development. The conservation of the lagoon in Eravur and protection from illegal activities will be a priority activity. These interventions would promote and facilitate economic and fisheries related activities.

The groundwater table is very shallow and the population density is high making on-site sanitation not sustainable. Therefore, it has been identified that one of the greatest and most urgent needs is a suitable sewerage system to address the health and well-being of the population of Eravur and to reduce the contaminated waters discharging directly to the ground which leads to contamination of the lagoon.

About 40,364 populations in 17 GN divisions (families of 8,073) will directly be benefitted by this project. The tentative cost estimate for construction of above project would be Rs. 12,127 million.

PAC and Board approvals have been obtained for the

Project and the Project Concept Paper has been sent to NPD approval. A land for the Treatment plant has been requested from the DS (Eravur). Lands for the pump houses have to be identified.

4. Wastewater Collection, Treatment and Disposal System for Kalmunai

Kalmunai town is expected to achieve economic growth with fisheries and agriculture investment and infrastructure development. These interventions would promote and facilitate economic and fisheries related activities. Kalmunai Municipality is a low lying coastal town located at the eastern coastal belt in Ampara District. The area is a strip of land along the coast line having an average of 1 km width and 10 km length.

The proposed area includes three divisional secretariat areas namely Kalmunai Tamil Division, Kalmunai DS Division and Sainthamaruthu DS Division. About 137,230 populations in 75 GN divisions (families of 34,307) will directly be benefitted by this project. The Design Wet Weather Flow for this proposed project is 21,731 cu.m/day.

The wastewater is collected by conveyance system covering about 200 km of pipelines and will be pumped to wastewater treatment plant located in Sea View Road, Kalmunai. The treatment process would lower the contaminants to the required effluent disposal quality. The tentative cost estimate for construction of above project is Rs. 34,667 million.

PAC approval has been obtained for the Project. The Board approval has to be obtained in 2018 and the Project Concept Paper has to be sent to NPD approval. Lands for the pump houses and wastewater treatment plant have to be identified.

Uva Province

1. Badulla Wastewater Collection and Disposal Project

Badulla Municipal council area is highly urbanized, residential and commercial area which is experienced considerably high volume of wastewater generation. Due to the absence of proper wastewater collection and disposal facility in Badulla city, there is a considerable environmental pollution is occurred specially in Baduluoya which is surrounded the city. The water quality of the Badulu Oya which is the main source of water of the people residing in downstream of the city is drastically decreased and giving rise the demand for establishment of piped sewerage system for Badulla municipality area.

The proposed project area covers Badulla urban area and suburb including highly residential Badulupitiya, Badulla East, Badulla Central GN Divisions. The anticipated population, to be directly served in year 2044 is 16,798 in 03 GN Divisions (3,732 households). In addition to permanent residence a floating population of 27,000 will be benefitted by the proposed project. Total cost estimate of the project is Rs. 7,473 million.

Proposed wastewater disposal system comprises of a wastewater reticulation system, wastewater treatment plant including 16.9 km of Gravity sewers, 10 km of Rider mains, 5.3 km of pumping mains, 11 number of pumping stations, 4,000 cu.m/day capacity wastewater treatment plant and finally the treated wastewater to be discharged to Badulu Oya.

Presently, the project proposal has been sent to National Planning Department for project approval.



Planning and Design (Sewerage)

• Planning work carried out during 2017

Planning & Designs (Sewerage) division is functioned under Addl. General Manager (Sewerage) office of National Water Supply and Drainage Board which has the primary functions of carrying out feasibility studies for proposed sewerage schemes, design review of ongoing wastewater disposal projects, carrying out detailed designs for rechargeable projects for different government and non-governmental institutions and coordinating, monitoring environmental studies (Environmental Impact Assessments) of proposed sewerage projects etc.

During year 2017, feasibility studies for providing piped

wastewater infrastructure facilities for Kalmunai, Eravur and Polonnaruwa urban areas were completed and all feasibility reports were forwarded for project appraisal committee approval. New feasibility studies were started for providing piped wastewater infrastructure for Kaluthara and Aluthgama urban areas including coastal belt.

Furthermore, a waste Stabilization Pond (WSP) system was designed for Monaragala septage treatment plant under Water and Sanitation Improvement Project (WaSSIP), funded by the World Bank.

In addition the detailed designs and tendering for sewer

reticulation system, sewerage pumping station for Raja Mawatha, Ratmalana were carried out under the instruction of Ministry of City Planning and Water Supply. For the ongoing Kataragama Sacred City area Sewerage Infrastructure Development Project, the P&D (Sewerage) section designed, prepared drawings, BOQ and estimate for proposed sludge drying beds, OIC quarters and supply and laying of sewer pipes.

The documentation, tendering and execution of EIA/IEE studies for the major sewerage projects in pipeline are carried out by P&D (Sewerage) section. Under this, Initial Environmental Examinations (IEE) for Kataragama and Hambantota wastewater disposal projects were completed and CEA clearances were obtained during 2017. Furthermore, IEE study for Kattankudy, Maharagama-Boralesgamuwa, Chilaw-Putlam wastewater disposal projects and EIA study for Dehiwala-Mt. Lavinia and Sri-Jayawardanapura Kotte wastewater disposal project are being carried out presently.

The land acquisition works were completed for Hambantota wastewater disposal project. Furthermore, land acquisition works are being done for Dehiwala-Mt. Lavinia, Sri-Jayawardanapura Kotte, Maharagama-Boralesgamuwa, Matara, Chilaw-Putlam, Badulla, Gampaha, Polonnaruwa, Kattankudy, Batticaloa, Kalmunai wastewater disposal projects for obtaining lands for wastewater treatment plants and pumping stations.

➡ Report of the Audit and Management Committee

“During the year under review, the Audit and Management Committee met 5 times ”



The Audit & Management Committee was formed as per PF/PE/3 circular dated 19th November 1999, obtaining concurrence of the Board of Directors of National Water Supply & Drainage Board via Board Decision No: 2965(b) of Board Meeting No. 590.

The purpose of Audit & Management Committee is to extend its assistance to Board of Directors as per the guidelines of PED 55 dated 14/12/2010.

The prescribed roles & responsibilities of the Committee have been cited as follows.

- The Audit & Management Committee is required to review the continuing impartiality of the Internal Auditors and their effectiveness.
- The Audit & Management Committee should assist the Board in the task of overseeing to ensure that Financial Reporting is done in compliance with relevant Sri Lanka Accounting Standards and other applicable legal requirements.
- The Audit & Management Committee should assist the Board to ensure that all relevant rules & regulations and circulars issued by the government are adhered to, with continuous reviewing and monitoring, also making recommendations to the Board on non-Compliance.
- The Audit & Management Committee should review the Internal/External Audit Reports, Management Letters and the recommendations of COPE, and help the Board to take remedial actions.
- The Audit & Management Committee should assist the Board to introduce and implement adequate Internal Control System.

In the year 2017 the Committee was consisted of the following members.

- | | | |
|-----------------------------|-----------------|-----------------------------|
| 1.Mr. J. M. U. P. Jayamaha | - Board Member | - Chairman of the Committee |
| 2.Mr. Shantha Rathnayaka | - Board Member | |
| 3.Ms. K. A. Subadra Walpola | - Board Member | |
| 4.Mr. G.A. Kumararathna | - } | General Manager |
| Mr. D.U. Sumanasekara | - } | |
| 5.Mr. D. Thotawatta | - Addl.GM (F) | |
| 6.Mr. G. K. Iddamalgoda | - Addl.GM (HRM) | |
| 7.Mr. W. B. G. Fernando | - Addl.GM (CS) | |
| 8.Mr. R. M. A. S. Weerasena | - DGM (IA) | |
| 9.Mr. M. Shafeek Rajabdeen | - Vice Chairman | |

10. Ms. D.N. Peiris - Audit Superintendent } Government
Mr. E.A.G. Ananda - Deputy Auditor General } Audit Unit

11. Ms. S. W. Gunawardene - Chief Internal
Auditor - Ministry of City Planning
& Water Supply

12. Ms. W. P. Sandamali de Silva - Secretary to the Board
- Secretary to the Committee

During the year under review, the Audit and Management
Committee met 5 times and the following were noted
important and regularly discussed agenda items.

i. Action Plan, Delegation of Authority, Procurement Plan
for year 2018.

ii. Internal Audit Plan 2017 & 2018.

iii. Budget 2018.

iv. Audit summaries of 3rd and 4th quarters of year 2016 and
Audit summaries of 1st, 2nd & 3rd quarters of year 2017.

v. Response to Government Audit queries.

vi. Financial Statements of the year ended 31.12.2016.

vii. Non-Revenue Water (NRW).

viii. Cash Flow Statement of NWSDB.

ix. Annual Report 2014/2015 & 2016.

x. Statutory Payments.

xi. Scheme of Recruitments (SOR).

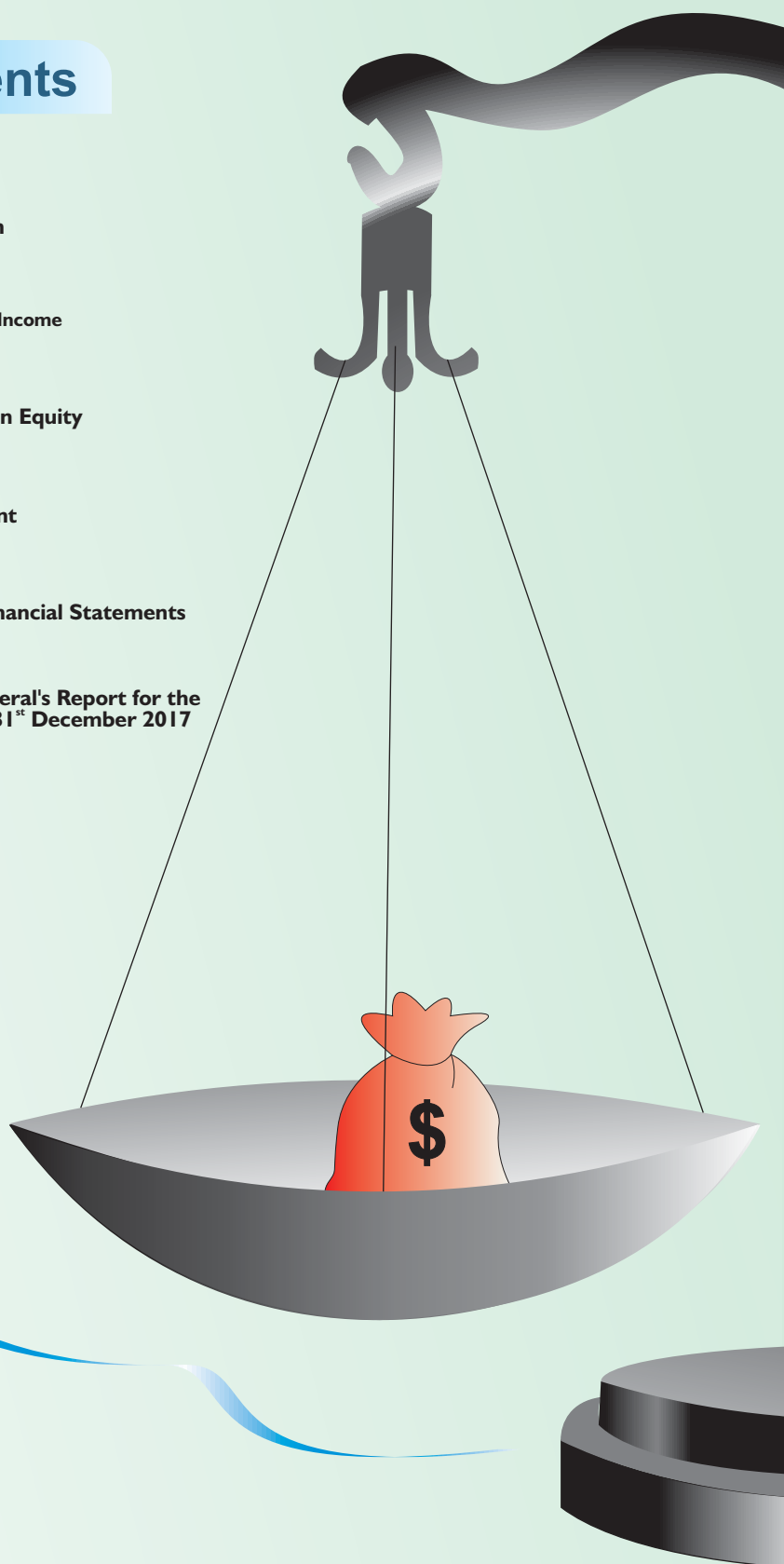
xii. Manuals of NWSDB.

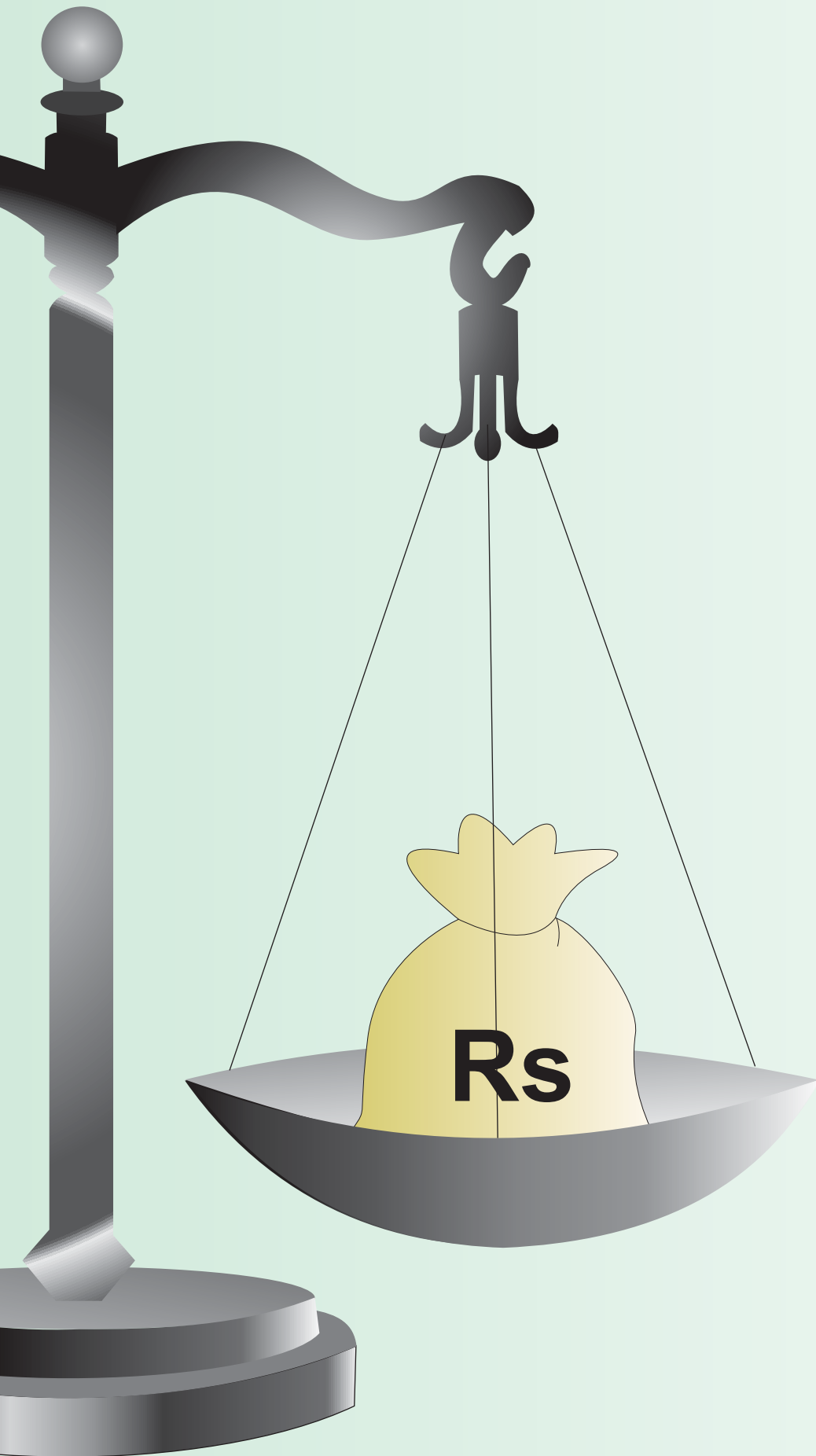
Every recommendation of the Audit and Management
Committee was forwarded to the Board and some
matters were discussed further at the Board meetings.



Financial Statements

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- 108** Cash Flow Statement
- 109** Notes to the Financial Statements
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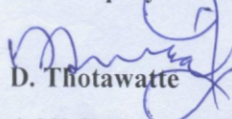


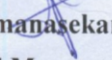
National Water Supply And Drainage Board

STATEMENT OF FINANCIAL POSITION

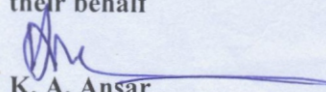
Year ended 31 December 2017

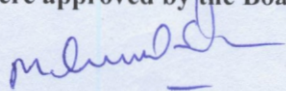
Assets		2017 Rs	2016 Rs.
Non- Current Assets	Notes		(Restated)
Property ,Plant & Equipment	15	172,574,439,103	162,321,652,152
Intangible Assets	16	6,485,383	7,310,270
Capital Work in Progress	17	194,543,873,679	158,512,035,894
Financial assets	18	8,230,469	11,023,063
Total Non Current Assets		367,133,028,633	320,852,021,379
Current Assets			
Inventories	19	7,374,367,615	6,643,472,555
Trade & Other Receivables	20	8,588,182,099	6,512,154,920
Deposits & Advances	21	42,124,651,650	26,830,599,011
Investments	22	12,240,208,742	10,265,721,944
Cash & Cash Equivalents	23	3,777,448,306	12,092,709,720
Total Current Assets		74,104,858,412	62,344,658,150
Total Assets		441,237,887,046	383,196,679,531
Equity and Liabilities			
Equity			
Assets taken over from Government Dept.	24	185,480,387	185,480,387
Government Equity	25	77,512,499,566	69,470,969,610
Staff Welfare Fund	26	22,527,125	17,228,139
Retained Earnings		(8,053,512,615)	(9,785,684,856)
Government Grant	27	94,838,588,669	92,742,583,734
Capital Grants	28	190,373,819,444	181,542,682,665
Total Equity		354,879,402,575	334,173,259,679
Non-Current Liabilities			
Loan Payable	29	64,327,755,750	34,441,527,519
Other Deferred Liabilities	30	4,110,746,151	4,125,023,486
Total Non Current Liabilities		68,438,501,901	38,566,551,005
Current Liabilities			
Trade & Other Payables	31	13,925,103,379	9,831,046,543
Loan Capital Payable (Note 29)		2,833,921,592	625,822,304
Loan Interest Payable		1,160,957,598	-
Total Current Liabilities		17,919,982,569	10,456,868,847
Total Equity and Liabilities		441,237,887,046	383,196,679,531


D. Thotawatte
 Addl.G.M.(Finance)
 D.THOTAWATTE
 Additional General Manager
 (Finance & Commerce)
 National Water Supply & Drainage Board
 Ratmalana


D.U.Sumanasekara
 General Manager

The Accounting policies on pages 08 to 15 and Notes on pages 16 to 30 form an integral part of these Financial Statements. The Board of Directors is responsible for the preparation and presentation of these Financial Statements. These Financial Statements were approved by the Board of Directors and signed on their behalf


K. A. Ansar
 Chairman
 Colombo


M.H.M. Salman
 Vice chairman

on 28th February 2018

Eng. K.A. Ansar
 Chairman

M.H.M.SALMAN
 Vice Chairman
 National Water Supply & Drainage Board

National Water Supply And Drainage Board

STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 December 2017

		Budget 2017 Rs.	Actual 2017 Rs.	(Restated) 2016 Rs.
Revenue	7	29,523,486,200	23,859,760,119	23,584,727,487
Cost of Sales	8	(15,807,092,652)	(14,196,350,460)	(13,485,727,343)
Gross Profit		13,716,393,548	9,663,409,658	10,099,000,145
Other Operating Income and Gains	9	1,126,924,800	1,724,463,148	1,477,546,705
Administrative Expenses	10	(10,712,479,348)	(9,935,315,824)	(9,136,910,599)
Other Operating Expenses	11	(550,000,000)	(714,465,635)	(680,664,041)
Operating Profit / (Loss)		3,580,839,000	738,091,347	1,758,972,209
Finance Income	12	600,000,000	1,157,359,094	1,236,278,724
Finance Cost	13	(8,198,000)	(12,994,621)	(3,281,535)
Profit / (Loss) Before Tax		4,172,641,000	1,882,455,821	2,991,969,398
Provision for Income Taxation	14	(100,000,000)	(65,683,426)	(63,287,387)
Profit / (Loss) for the Year		4,072,641,000	1,816,772,395	2,928,682,011

Accounting Policies & Notes from pages 8 to 30 form an integral part of these Financial Statements.

National Water Supply And Drainage Board

STATEMENT OF OTHER COMPREHENSIVE INCOME

Year ended 31 December 2017

	Budget 2017 Rs.	Actual 2017 Rs.	Restated 2016 Rs.
Profit / (Loss) for the Year	4,072,641,000	1,816,772,395	2,928,682,011
Other Comprehensive Income for the Year.			
Impairment Loss on Treasury Bond	-	(79,301,168)	(541,135,514)
	4,072,641,000	1,737,471,227	(541,135,514)
Total Comprehensive Income for the Year	4,072,641,000	1,737,471,227	2,387,546,497

Accounting Policies & Notes from pages 8 to 30 form an integral part of these Financial Statements.

National Water Supply And Drainage Board
STATEMENT OF CHANGES IN EQUITY

Year ended 31 December 2017

Note	Government Departments	Govt Grants	Government Equity	Capital Grants	Staff Welfare Fund	Accumulated Profit/Loss	Total
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Balance as at 1 January 2016	185,480,387	91,517,718,832	63,736,423,921	164,846,710,175	16,506,484	(11,847,217,278)	308,455,622,521
<i>Prior Year Correction -</i>							
Assets recognised and derecognised						22,447,765	22,447,765
Depreciation adju. for assets recognised and derecognised						19,932,321	19,932,321
Recognized/Derecognized long deposits & advances						(18,150,388)	(18,150,388)
Rehabilitation & Construction works						(185,399,524)	(185,399,524)
Recognized/Derecognized inventories						(27,921,254)	(27,921,254)
Recognized/Derecognized trade & other receivables						(137,739,576)	(137,739,576)
Correction of bank balance						(1,532,647)	(1,532,647)
Correction of trade & other payables						3,378,627	3,378,627
Restated Balance as at 1 January 2016	185,480,387	91,517,718,832	63,736,423,921	164,846,710,175	16,506,484	(12,172,201,953)	308,130,637,846
Net profit for the year						2,387,546,497	2,387,546,497
Recognized/Derecognized inventories						(14,984,026)	(14,984,026)
Depreciation adju. for assets recognised and derecognised						(2,377,620)	(2,377,620)
Recognized/Derecognized trade & other receivables						(2,716,099)	(2,716,099)
Correction of trade & other payables						19,770,000	19,770,000
Receipts / Transfers during the year		2,216,825,457					2,216,825,457
Loan to Equity conversion (Including adj. to opening balance)			5,734,545,689	15,962,447,745			21,696,993,434
Transfer to capital grant and other transfers		(991,960,556)		733,524,745			(258,435,811)
Transfers to Staff welfare fund					721,655	(721,655)	
Restated balance as at 31 December 2016	185,480,387	92,742,583,734	69,470,969,610	181,542,682,665	17,228,139	(9,785,684,856)	334,173,259,679
Net profit for the year						1,737,471,227	1,737,471,227
Receipts / Transfers during the year		2,096,004,935		8,831,136,779			10,927,141,714
Loans conversion to equity			8,041,529,956				8,041,529,956
Transfers to capital grants							
Transfers to staff welfare fund					5,298,986	(5,298,986)	
Balances as at 31 December 2017	185,480,387	94,838,588,669	77,512,499,566	190,373,819,444	22,527,125	(8,053,512,615)	354,879,402,576

Accounting Policies & Notes from pages 8 to 30 form an integral part of these Financial Statements.

National Water Supply And Drainage Board

STATEMENT OF CASH FLOW

Year ended 31 December 2017

For the year ended

	Notes	2017 Rs.	2016 Rs.
Cash Flows from/(used) in Operating Activities			
Net Profit/(Loss) before Tax		1,882,455,821	2,989,591,779
<i>Adjustments for</i>			
Interest Income	12	(1,157,359,094)	(1,236,278,724)
Profit on disposal of Fixed Assets		4,495,307	(13,600,051)
Depreciation	10.2	3,339,845,190	2,724,963,394
Retiring gratuity provision	30.1	488,661,467	394,618,174
Interest Expense	13	<u>12,994,621</u>	<u>3,281,535</u>
Operating Profit before Working Capital Changes		4,571,093,311	4,862,576,106
(Increase)/Decrease in Inventories		(730,895,060)	(280,100,515)
(Increase)/Decrease in Debtors, Receivables & Deposits		(17,491,801,822)	(14,799,143,670)
Increase/(Decrease) in Creditors & Provisions		<u>4,094,056,836</u>	<u>423,509,912</u>
Cash Generated from Operations		(9,557,546,735)	(9,793,158,167)
Tax Paid		(65,683,426)	(63,287,387)
Gratuity Paid	11	<u>(488,661,467)</u>	<u>(394,618,174)</u>
Net Cash from Operating Activities		<u>(10,111,891,628)</u>	<u>(10,251,063,729)</u>
Cash Flows from/(used) in Investing Activities			
Investments in Fixed Assets & Work-In-Progress		(44,539,798,926)	(33,718,679,086)
Financial assets		2,792,594	5,464,174
Sale proceeds for disposal assets		2,001,798	27,083,204
Investment Income Received		1,157,359,094	1,236,278,724
(Investment) / Withdrawal of Investments		<u>(8,783,171,959)</u>	<u>2,037,971,571</u>
Net Cash Flows used in Investing Activities		<u>(52,160,817,399)</u>	<u>(30,411,881,414)</u>
Cash Flows from/(used in) Financing Activities			
Government Grant during the Period		2,096,004,935	2,123,327,889
Capital Grant during the period		10,019,103,285	17,040,060,639
New Loans & Loans Receipts for the Equity Conversion		40,795,834,610	31,391,418,876
Loan Repayments		(659,977,136)	(896,230)
Interest Paid		(5,130,346,746)	(1,670,213,515)
Sales proceeds of treasury bond		<u>6,836,828,662</u>	<u>-</u>
		53,957,447,610	48,883,697,659
Net Increase in Cash & Cash Equivalents		(8,315,261,416)	8,220,752,516
Cash & Cash Equivalents at the beginning of the year		12,092,709,720	3,876,918,395
Cash & Cash Equivalents at the end of the period		<u>3,777,448,306</u>	<u>12,092,709,720</u>

The accounting policies and notes on Pages 8 to 30 Form an integral part of the financial statements.

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
NOTES TO THE FINANCIAL STATEMENTS

31 DECEMBER 2017

-7-

CORPORATE INFORMATION

1.1 General

National Water Supply & Drainage Board is a statutory board enacted by the Parliament under the National Water Supply & Drainage Board Law No. 2 of 1974. The registered office of the board is located at Galle Road, Ratmalana, and the principal place of business is situated at the same location.

National Water Supply & Drainage Board (NWS&DB) is an institution under the purview of Ministry of City Planning and Water Supply.

1.2 Principal activities

The principal activity of the Board is to produce and sell treated drinking water to the community.

The objectives of the National Water Supply & Drainage Board are to develop treated drinking water throughout the country and it's accessibility among the people of Sri Lanka.

2. BASIS OF PREPARATION

2.1 Statement of Compliance

The Financial Statements have been prepared in accordance with Sri Lanka Accounting Standards (SLFRS/LKAS) as issued by The Institute of Chartered Accountants of Sri Lanka.

For all periods up to and including the year ended 31st December 2011, the NWS&DB prepared its Financial Statements in accordance with Sri Lanka Accounting Standards (SLAS). From the financial year ending 31st December 2012 onward Financial Statements are being prepared in accordance with the new Sri Lanka Accounting Standards (SLFRS/LKAS).

2.2 Basis of Measurement

The Financial Statements have been prepared on the historical cost basis except for financial instruments and other financial assets and liabilities held for trading that have been measured at fair value and liabilities for defined benefit obligation is recognized as at the present value of the defined benefit obligation.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

3.1 Property Plant and Equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the property, plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. When significant parts of property, plant and equipment are required to be replaced at intervals, NWS&DB recognises such parts as individual assets with specific useful lives and depreciates them accordingly. Likewise, when a major inspection is performed, it's cost is recognised in the carrying amount of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognised in profit or loss as incurred.

The present value of the expected cost for the decommissioning of an asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

3.1.1 Depreciation

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

Plant Property and Equipment	Rate
Building & Structures	1.67% - 2%
Plant & equipment pumping treatment	5%
Service & Bulk water meter	10%
Transmission & Distribution: Equipments	1.67% 10%
Furniture & fittings	10%
Computers Peripherals & Mobile Phones	20% - 33.3%
Motor Vehicles	10% - 20%
Lease hold Vehicles	14.3%

3.1.2 Investment Property

When the use of a property changes from owner-occupied to another party is classified as Investment Property and the Investment Property is measured at cost less accumulated depreciation. As NWSDB is very remotely involving the activity in this nature owing to restricted context, such activity if any is disclosed as to comply the LKAS, whereas not to be adjusted in Financial Statements.

3.1.3 Capital Work In Progress

Capital expenses incurred during the year, which are not capitalized as at the reporting date are shown as capital work in progress, whilst the capital assets which have been capitalized during the year and put to use have been transferred to Property Plant & Equipment.

3.1.4 Leases

The determination of whether an arrangement is, or contains, a lease is based on the substance of the arrangement at the inception date, whether fulfillment of the arrangement is dependent on the use of a specific asset or the arrangement conveys a right to use the asset, even if that right is not explicitly specified in an arrangement.

3.1.5 Intangible Assets

Intangible assets acquired separately are measured on initial recognition at cost. Following initial recognition, intangible assets are carried at cost less accumulated amortization and accumulated impairment losses, if any. Internally generated intangible assets, excluding capitalized development costs, are not capitalized and expenditure is reflected in the income statement in the year in which the expenditure is incurred. Acquisition of computer software are recognized as intangible assets and amortized over the period of 7 years.

3.1.6 Research and development costs

Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset when NWS&DB can demonstrate:

- The technical feasibility of completing the intangible asset so that the asset will be available for use or sale
- Its intention to complete and its ability to use or sell the asset
- How the asset will generate future economic benefits

- The availability of resources to complete the asset
- The ability to measure reliably the expenditure during development

Following initial recognition of the development expenditure as an asset, the asset is carried at cost less any accumulated amortization and accumulated impairment losses. Amortization of the asset begins when development is completed and the asset is available for use. It is amortized over the period of expected future benefit. During the period of development, the asset is tested for impairment annually.

3.1.7 Impairment of Non-Financial Assets

The NWS&DB assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the NWS&DB estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating units (CGU) fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, an appropriate valuation model is used.

3.2.1 Inventories

Inventories are valued at cost or net realizable value whichever is lower after making due allowance for obsolete and slow moving items which are valued at 'First In First Out' basis. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

Measurement of inventories

3.2.2 Cost of Inventories

Raw Materials

Cost of purchases together with any incidental expenses.

Other Stocks

Cost is arrived at weighted average basis.

3.3. Cash and Cash Equivalents

Cash and cash equivalents comprise cash in hand and bank balances and short term investment, net of outstanding bank overdrafts if any

4. LIABILITIES, PROVISIONS AND EQUITY

4.1. Retirement Benefit Obligation

4.1.1 Retirement Benefit Obligations (LKAS 19)

a) Defined Benefit Plan – Gratuity

Provision has been made for retiring gratuity from the first year of service for all employees, in conformity with Sri Lanka Accounting Standard No. 19 (LKAS 19).

b) Retirement Benefit Cost

NWSDB operates a defined benefit pension plan. The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method. Actuarial gains and losses for the defined benefit plan are recognized in full in the period in which they occur in other comprehensive income. Such actuarial gains and losses are also immediately recognized in retained earnings and are not reclassified to profit or loss in subsequent periods.

Unvested past service costs are recognized as an expense on a straight line basis over the average period until the benefits become vested. Past service costs are recognized immediately if the benefits have already vested immediately following the introduction of, or changes to, a pension plan.

The defined benefit asset or liability comprises the present value of the defined benefit obligation (using a discount rate based on high quality corporate bonds), less unrecognized past service costs and less the fair value of plan assets out of which the obligations are to be settled.

Retirement benefit obligation is measured through the service of an actuarial valuer in every three years interval and maintains such liability over the period of three years in line with the salary revision. Hence, the gratuity liability occurred for the next two consecutive years are treated as expense immediately after the actuarial liability is identified in the first year.

Defined Contribution Plans- EPF & ETF

Employees are eligible for Employees' Provident Fund Contributions and Employees' Trust Fund Contributions in line with respective Statutes and Regulations. The Board contributes 12% and 3% of gross emoluments of employees to EPF and ETF respectively.

4.2 Provisions

General

Provisions are recognized when NWS&DB has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When NWS&DB expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the income statement net of any reimbursement.

4.3 Government Grants

Government grants are recognised where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognised as income on a systematic basis over the periods that the costs, which it is intended to compensate, are expensed. When the grant relates to an asset, it is recognised as income in equal amounts over the expected useful life of the related asset.

When NWS&DB receives non-monetary grants, the asset and the grant are recorded at nominal amounts and released to profit or loss over the expected useful life in a pattern of consumption of the benefit of the underlying asset by equal annual installments. When loans or similar assistance are provided by governments or related institutions, with an interest rate below the current applicable market rate, the effect of this favorable interest is regarded as a government grant.

5. INCOME STATEMENT

For the purpose of presentation of the Income Statement, the function of expenses method is adopted, as it represents fairly the elements of NWS&DB performance.

5.1.1 Revenue Recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the NWS&DB and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable taking into account contractually defined terms of payment.

The following specific recognition criteria must also be met before revenue is recognized.

Sale of goods

Revenue from the sale of goods is recognised when the significant risks and rewards of ownership of the goods have passed to the buyer, usually on delivery of the goods.

Sale of Water

Revenue from sale of water is recognised according to the number of consumed unit within 30 days of time by the consumer, when the meters are read and when bills are processed within the system.

Other Income

Other income is recognised on an accrual basis.

Interest income

For all financial instruments measured at amortized cost and interest bearing financial assets classified as available for sale, interest income or expense is recorded using the effective interest rate (EIR), which is the rate that exactly discounts the estimated future cash payments or receipts through the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset or liability. Interest income is included in finance income in the income statement.

Rechargeable Works

Revenue from fixed price construction contracts is recognized on the percentage of completion method, measured by the work done of the contract.

5.1.2 Expenses

All expenditures incurred in the running of the business have been charged to income in arriving at the profit for the year. Repairs and renewals are charged to profit and loss in the year in which the expenditure is incurred.

5.2 Deferred Tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date. Deferred tax liabilities are recognised for all taxable temporary differences, except:

When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

Deferred tax assets are recognised for all deductible temporary differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognised only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside profit or loss is recognised outside profit or loss. Deferred tax items are recognised in correlation to the underlying transaction either in other comprehensive income or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

The NWSDB is having massive deductible tax losses and other deductible expenses including interest against the tax liability. Hence, it is unlikely that arising of tax liability in foreseeable future period therefore, NWSDB does not adjust differed tax in Financial Statement by disclosing understand to the reader.

6. FINANCIAL INSTRUMENTS- INITIAL RECOGNITION AND SUBSEQUENT MEASUREMENT

6.1 Financial Asset

6.1.1 Initial recognition and measurement

Financial assets within the scope of LKAS 39 are classified as financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments and available-for-sale financial assets, as appropriate and determine the classification of its financial assets at initial recognition.

All financial assets are recognized initially at fair value plus, in the case of assets not at fair value through profit or loss, directly attributable transaction costs.

The financial assets of NWS&DB include cash and short term investment, trade and other receivables, staff loans and other receivables.

6.1.2 Subsequent measurement

The subsequent measurement of financial assets depends on their classification as follows

6.1.2.1 Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. NWS&DB did not have any financial assets at fair value through profit or loss during the years ended 31 December 2016 and 2017.

6.1.2.2 Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate method (EIR), less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the income statement.

6.1.2.3 Held-to-maturity investments

Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held to-maturity when the NWS&DB has the positive intention and ability to hold it to maturity. After initial measurement, held-to-maturity investments are measured at amortised cost using the effective interest method, less impairment. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the income statement. The losses arising from impairment are recognised as finance cost in the income statement in finance cost.

6.1.2.4 Available-for-sale financial investments

Available-for-sale financial investments include equity and debt securities. Equity investments classified as available for- sale are those, which are neither classified as held for trading nor designated at fair value through profit or loss. Debt securities in this category are those which are intended to be held for an indefinite period of time and which may be sold in response to needs for liquidity or in response to changes in the market conditions.

After initial measurement, available-for-sale financial investments are subsequently measured at fair value with unrealized gains or losses recognised as other comprehensive income in the available-for-sale reserve until the investment is derecognized.

6.1.2.5 Derecognition

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when,

- i) The rights to receive cash flows from the asset have expired
- ii) NWS&DB has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either
 - (a) NWS&DB has transferred substantially all the risks and rewards of the asset, or
 - (b) NWS&DB has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

6.1.2.6 Impairment of financial assets

The NWS&DB assesses at each reporting date whether there is any objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset and that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency, the probability that they will enter bankruptcy or other financial reorganization and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

6.1.2.7 Financial assets carried at amortized cost

For financial assets carried at amortized cost, the NWS&DB first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the NWS&DB determines that no objective evidence of impairment

exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognised are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured as the difference between the assets carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial asset's original effective interest rate.

The NWS&DB performed specific impairment for each debtor categories during the year 2017

6.2 Financial Liabilities

Initial Recognition and Measurement

Financial liabilities within the scope of LKAS 39 are classified as financial liabilities at fair value through profit or loss, at amortised cost, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. NWS&DB determines the classification of its financial liabilities at initial recognition.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings, carried at amortised cost. This includes directly attributable transaction costs. NWS&DB's financial liabilities include trade and other payables.

Subsequent Measurement

Subsequent measurement of financial liabilities is at amortised cost.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires.

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

	2017 Rs.	2016 Rs.
7. REVENUE		
Metered Sales	21,348,160,939	20,991,185,049
Bulk Sales	258,804,307	238,030,488
Bowser Supply	85,469,891	88,515,542
Income from main operations	7.1 <u>2,167,324,981</u>	<u>2,266,996,408</u>
	<u>23,859,760,119</u>	<u>23,584,727,487</u>
7.1 Income from main operations		
Income related to New connection and other main operations	2,477,538,710	2,628,868,117
Capital Recovery Charges	650,943,128	766,302,051
Expense related to New connection	<u>(961,156,857)</u>	<u>(1,128,173,760)</u>
	<u>2,167,324,981</u>	<u>2,266,996,408</u>
8. COST OF SALES		
Personnel Cost	6,352,852,297	6,215,488,662
Pumping Cost	4,064,774,139	3,833,788,962
Chemicals	818,014,323	692,354,529
Repairs & Maintenance	1,358,047,056	1,270,587,139
Establishment Expenses	510,408,988	473,717,459
Rent, Rates, Taxes, Security & Other Expenses	991,127,078	908,910,549
Rebates	<u>101,126,579</u>	<u>90,880,043</u>
	<u>14,196,350,460</u>	<u>13,485,727,343</u>
9. OTHER OPERATING INCOME		
Other Income	9.1 1,709,234,921	1,428,167,676
Staff loan benefit	<u>15,228,227</u>	<u>49,379,029</u>
	<u>1,724,463,148</u>	<u>1,477,546,705</u>
9.1 Other Income		
Sewerage and ground water income	272,787,008	280,748,461
Surcharge, penalties etc.	<u>1,436,447,913</u>	<u>1,147,419,215</u>
	<u>1,709,234,921</u>	<u>1,428,167,676</u>

National Water Supply And Drainage Board
NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

		2017 Rs	2016 Rs.
10. ADMINISTRATIVE EXPENSES			
Repairs & Maintenance		221,799,539	218,910,020
Establishment Expenses		698,631,095	635,852,111
Rent,Rates,Taxes, Security & Other Expenses		449,593,829	359,067,735
Staff Cost	10.1	5,222,246,171	5,197,383,263
Depriciation	10.2	3,339,845,190	2,722,585,774
Audit Fee-AGDSL including continuous audit		3,200,000	3,111,696
		<u>9,935,315,824</u>	<u>9,136,910,599</u>
10.1 Staff cost			
Staff Cost on Loan Granted		15,228,227	49,379,029
Personnel Cost		5,207,017,944	5,148,004,234
		<u>5,222,246,171</u>	<u>5,197,383,263</u>
10.2 Depreciation			
Building and structure		1,079,834,033	948,013,836
Plant & Machinery		2,804,805,713	1,193,277,323
Equipments		322,100,055	1,333,925,122
Furniture and Fittings		47,597,987	39,508,591
Computers & Periparels		62,692,861	53,487,044
Motor Vehicles		209,956,160	144,901,475
Total Depreciation		4,526,986,809	3,713,113,391
Less: Depn. for Grant funded Assets		(1,195,058,205)	(999,478,284)
Less: Depn. for Rechargable funded Assets		(8,326,397)	(7,292,317)
Add: Amortization of leased Assets (Restated)		15,949,142	15,949,142
Add: Amortization of Intangible Assets		293,841	293,841
Depreciation Cost	-	<u>3,339,845,190</u>	<u>2,722,585,774</u>
11. OTHER OPERATING EXPENSES			
Bad & Doubtful Debts		28,571,639	125,257,676
Provision for Irrecoverable Staff Loans		2,440,340	2,472,380
Provision for Obsolete Stock		63,131,636	22,459,422
Retiring Gratuity		488,661,467	394,618,174
Revenue grant		131,660,553	135,856,389
		<u>714,465,635</u>	<u>680,664,041</u>
12. FINANCE INCOME			
Investment Income		1,157,359,094	1,236,278,724
		<u>1,157,359,094</u>	<u>1,236,278,724</u>
13. FINANCE COST			
Interest On Loans		6,291,304,344	1,670,213,515
Less: Capitalised Interest on Construction Projects		(6,278,309,723)	(1,666,931,980)
		<u>12,994,621</u>	<u>3,281,535</u>
14. TAXATION			
Economic Service Charge		65,683,426	63,287,387
		<u>65,683,426</u>	<u>63,287,387</u>

National Water Supply And Drainage Board
NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

15. PROPERTY, PLANT AND EQUIPMENT

15.1 Gross Carrying Amounts	Restated Balance As at 01.01.2017	Additions after Adjustments	Transfers	Disposals	Balance As at 31.12.2017
Cost	Rs.	Rs.	Rs.	Rs.	Rs.
Land Freehold	8,358,310,005	39,209,590	(35,444,775)		8,362,074,820
Land Leasehold	589,540,351	37,526,206	(736,566)		626,329,991
Infrastructure	5,713,979,507	163,218,526	(555,209)		5,876,642,824
Building - Freehold	11,106,565,457	1,059,485,479	(47,971,473)		12,118,079,463
Structures	43,206,451,374	1,677,371,129	(203,202,552)	(6,657,415)	44,673,962,536
Plant & eq: pumping treatment	28,246,961,522	2,931,966,223	99,884,626		31,278,812,371
Service meter	19,439,577	-	-		19,439,577
Bulk water meter	519,178,126	17,939,284	2,158,318		539,275,728
Transmission & Distribution	76,709,107,252	8,028,388,128	242,305,722		84,979,801,103
Mobile Equipments	450,670,409	110,849,200	10,510,861		572,030,469
Survey Equipments	32,735,831	8,967,750	130,000		41,833,582
Laboratory Equipments	585,697,600	51,794,443	7,007,579		644,499,621
Other Equipment	2,060,775,152	122,090,504	(10,299,339)		2,172,566,317
Furniture & fittings-computer	473,476,783	65,883,736	(6,380,747)		532,979,772
Computers & Periparels	432,827,580	72,055,563	(11,307,114)		493,576,029
Motor vehicles cars	156,485,434	6,153,750	1,469,942	(500,000)	163,609,127
Van busses & jeeps	541,966,481	24,903,939	(23,075,723)	(600,000)	543,194,697
Lorries & trucks	2,008,337,825	176,077,837	(61,126,909)	-	2,123,288,754
Tractors & trailers	89,076,211	1,679,000	(15,125,000)	-	75,630,211
Water bowsers, Heavy veh:	1,111,523,133	381,564,571	(134,533,632)	(1,050,000)	1,357,504,072
Motor cycles	23,992,152	1,256,980	(1,775,000)	-	23,474,132
Three Weelers	4,787,620	700,000	1,619,256	-	7,106,876
Lease hold Vehicles	28,975,000	-	(5,795,000)	-	23,180,000
Total Value of Depreciable Assets	182,470,860,382	14,979,081,838	(192,242,736)	(8,807,415)	197,248,892,069

National Water Supply And Drainage Board
NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

15.2 Depreciation	Restated Balance As at 01.01.2017 Rs.	Charge for the Period Rs.	Adjustments Rs.	Disposal Rs.	Balance As at 31.12.2017 Rs.
Depreciation Freehold Assets					
Land Freehold					-
Land Leasehold					-
Infrastructure	575,941,027	115,537,536	51,371		691,529,934
Building - Freehold	1,155,403,606	232,391,381	(41,066)		1,387,753,922
Structures	3,686,898,046	731,905,116	(42,732)	(1,028,404)	4,417,732,025
Plant & eq: pumping treatment	5,670,610,943	1,393,011,703	-		7,063,622,646
Service meter	14,309,417	1,924,518	-		16,233,935
Bulk water meter	143,038,676	52,105,545	-		195,144,221
Transmission & Dist:	6,053,191,059	1,357,763,947	(128,075)		7,410,826,931
Mobile Equipments	174,437,893	47,151,084	261,250		221,850,227
Survey Equipments	7,357,504	3,479,854	-		10,837,358
Laboratory Equipments	265,594,813	60,425,520	(71,850)		325,948,484
Other Equipment	684,675,572	211,043,597	-		895,719,169
Furniture & fittings-computer	221,613,246	47,597,987	132,939		269,344,172
Computers & Peripherals	334,753,554	62,692,861	-		397,446,415
Motor vehicles cars	140,950,003	11,659,952	(9,700)	(475,000)	152,125,255
Van busses & jeeps	342,013,023	30,851,817	570,000	(570,000)	372,864,840
Lorries & trucks	401,042,903	96,013,974	(148,042)		496,908,836
Tractors & trailers	57,894,593	7,550,304	-		65,444,897
Water bowsers, Heavy veh:	204,495,606	57,448,872	(0)	(236,906)	261,707,572
Motor cycles	9,150,388	2,233,174	(5,858)		11,377,704
Three Wheelers	784,833	589,834	-	-	1,374,667
Lease hold Vehicles	5,051,526	3,608,233	-	-	8,659,758
	<u>20,149,208,230</u>	<u>4,526,986,809</u>	<u>568,238</u>	<u>(2,310,310)</u>	<u>24,674,452,967</u>

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

15. PROPERTY, PLANT AND EQUIPMENT (Contd...)

15.3 Net Book Values

	2017 Rs.	2016 Rs.
At Cost		
Land Freehold	8,362,074,820	8,358,310,005
Land Leasehold	626,329,991	589,540,351
Infrastructure	5,185,112,890	5,138,038,479
Building - Freehold	10,730,325,542	9,951,161,851
Structures	40,256,230,511	39,519,553,329
Plant & Eq: pumping treatment	24,215,189,724	22,576,350,580
Service meter	3,205,642	5,130,160
Bulk water meter	344,131,507	376,139,450
Transmission & Distribution	77,568,974,172	70,655,916,194
Mobile Equipments	350,180,242	276,232,515
Survey Equipments	30,996,224	25,378,327
Laboratory Equipments	318,551,138	320,102,787
Other Equipments	1,276,847,149	1,376,099,581
Furniture & fittings-computer	263,635,600	251,863,537
Computers & Periparels	96,129,613	98,074,025
Motor vehicles cars	11,483,872	15,535,432
Van busses & jeeps	170,329,857	199,953,458
Lorries & trucks	1,626,379,916	1,607,294,922
Tractors & trailers	10,185,314	31,181,618
Water bowsers, Heavy veh:	1,095,796,500	907,027,526
Motor cycles	12,096,428	14,841,764
Three Wheelers	5,732,209	4,002,787
Lease hold Vehicles	14,520,242	23,923,474
Total Carrying Amount of Property, Plant & Equipment	172,574,439,103	162,321,652,152

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

15. PROPERTY, PLANT AND EQUIPMENT

15.4 Investment Property

The Building constructed by the Board at Sunil Mawatha, Battaramulla currently occupied by the Ministry of City Planning and Water Supply is recognized as Investment Property according to the LKAS 40 - Investment Property.

This Investment Property is included under the Property, Plant & Equipment

	Land	Building	Total
Cost			
Balance as at 31.12.2016	138,500,000	238,053,034	376,553,034
Depreciation			
Balance as at 01.01.2017	-	24,488,110	24,488,110
Charge for the Period	-	4,761,061	4,761,061
Balance as at 31.12.2017	-	29,249,171	29,249,171
Net Book Value	138,500,000	208,803,863	347,303,863

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

		2017 Rs.	2016 Rs.
16. INTANGIBLE ASSETS			
Computer Software		<u>6,485,383</u>	<u>7,310,270</u>
		<u>6,485,383</u>	<u>7,310,270</u>
During the year Rs 1,335,128 has been provided for amortization for above software.			
17. CAPITAL WORK IN PROGRESS			
Construction Work	35.2	190,486,254,966	155,053,048,707
Rehabilitation	35.2	<u>4,057,618,713</u>	<u>3,458,987,188</u>
		<u>194,543,873,679</u>	<u>158,512,035,894</u>
18. FINANCIAL ASSETS			
HDFC Investment for Staff Housing Loans		6,968,542	9,810,535
Bank of Ceylon Saving - II		<u>1,261,927</u>	<u>1,212,528</u>
		<u>8,230,469</u>	<u>11,023,063</u>
19. INVENTORIES			
PVC Steel Pipe		3,596,506,695	3,793,823,910
Water Meter & Fitting & Brass Items	35.2	1,010,013,091	535,700,413
Chemical Material		132,869,718	122,602,755
Electricals	35.2	562,303,793	478,551,324
Building Material		34,335,045	31,037,997
Pump & Spare Parts		1,145,954,807	934,006,921
Vehicle Spare Parts		139,120,998	108,321,976
Stationary & Office Equipment		49,246,438	44,572,040
Other Items	35.2	786,994,194	496,747,679
Stock in Transit		352,151,303	443,569,646
Stock Adjustments		<u>2,505,677</u>	<u>2,555,749</u>
		<u>7,812,001,758</u>	<u>6,991,490,409</u>
Less- Major spares			
Property Plant and Equipment at Stores		(319,639,473)	(293,154,819)
Provision for Obsolete Stock		<u>(117,994,671)</u>	<u>(54,863,035)</u>
		<u>7,374,367,615</u>	<u>6,643,472,555</u>

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

		2017 Rs.	2016 Rs.
20. TRADE AND OTHER RECEIVABLES			
Trade Debtors		4,816,900,998	4,607,789,723
Other Debtors	35.2	300,715,065	314,319,532
Less : Debtors Impairment		(1,197,444,350)	(1,322,209,166)
Debtors Collection Control		735,476,738	591,158,421
VAT Receivable		1,239,703,052	331,450,527
WHT Receivable		114,867,966	46,931,199
Advances to Staff	35.2	12,818,410	14,391,333
Loans To Employees	35.2	2,468,034,087	1,696,045,045
Receivable on Interest & Others	35.2	97,110,133	232,278,306
		<u>8,588,182,099</u>	<u>6,512,154,920</u>
Over estimation of debtors impairment amounting to Rs.153,336,455 has been identified during the year and transferred to statement of income on the basis of estimation as per LKAS 8.			
21. DEPOSITS AND ADVANCES			
Rechargeable Project Work		-	114,010
Pre Payments		585,500	4,539,500
Mobilization and Other Advances	35.2	41,900,934,928	26,604,485,106
Deposits	35.2	223,131,222	221,460,394
		<u>42,124,651,650</u>	<u>26,830,599,011</u>
22. INVESTMENTS			
Available for Sale-Treasury Bond		-	6,808,685,161
Held to Maturity (Including cash belongs to rechargeable work and other investments)		<u>12,240,208,742</u>	<u>3,457,036,783</u>
		<u>12,240,208,742</u>	<u>10,265,721,944</u>
23. CASH AND CASH EQUIVALENTS			
Cash In Bank	35.2	994,458,651	1,864,867,005
Cash Received for a Capital Project			6,529,848,750
Cash Imprest Head Office		1,337,464	2,363,785
Cash Imprests Regions	35.2	8,955,594	3,844,753
Cash In Transit		316,176,266	344,259,084
Call Deposits		2,379,251,307	3,108,519,601
Savings Account		<u>77,269,025</u>	<u>239,006,742</u>
		<u>3,777,448,306</u>	<u>12,092,709,720</u>
24. ASSETS TAKEN OVER FROM GOVERNMENT			
Assets taken over from Government Dept.		<u>185,480,387</u>	<u>185,480,387</u>
		<u>185,480,387</u>	<u>185,480,387</u>
25. Government Equity			
Equity loan conversion	35.2	63,612,515,640	55,570,985,685
Government contribution (bond)		<u>13,899,983,925</u>	<u>13,899,983,925</u>
		<u>77,512,499,566</u>	<u>69,470,969,610</u>

Policy decision has been taken by government of Sri Lanka to convert foreign funded loans to government equity.

National Water Supply And Drainage Board
NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

		2017 Rs.	2016 Rs.
26. STAFF WELFARE FUND			
Opening Balance		17,228,139	16,506,484
Received during the year		5,298,986	721,655
		<u>22,527,125</u>	<u>17,228,139</u>
27. GOVERNMENT GRANT			
Tresuary Grant	35.2	94,838,588,669	92,742,583,734
		<u>94,838,588,669</u>	<u>92,742,583,734</u>
28. CAPITAL GRANTS			
Foreign Grants	35.2	189,307,749,625	180,564,263,033
Local Grants	35.2	1,066,069,820	978,419,632
		<u>190,373,819,444</u>	<u>181,542,682,665</u>
29. LOAN PAYABLE			
Foreign Loans	35.2	40,512,242,399	14,674,458,231
Local Loans		23,815,513,351	19,767,069,288
Long term portion of loan payable		64,327,755,750	34,441,527,519
Current portion loan payable		2,833,921,592	625,822,304
Loan Payable		<u>67,161,677,342</u>	<u>35,067,349,823</u>
Local Loans previously shown as amounting to Rs. 20,392,891,592 have been shown as net of current portion for the purpose of comparison.			
30. OTHER DEFERRED LIABILITIES			
Provision for defined benefit plan	30.1	4,076,428,515	4,076,428,515
Customer and Employee Security Deposits		34,317,636	48,594,971
		<u>4,110,746,151</u>	<u>4,125,023,486</u>
30.1 Movement of Retiring Gratuity Provision			
Balance at the Beginning of the Period		4,076,428,515	4,076,428,515
Add Provision for the Period		488,661,467	394,618,174
Less: Gratuity Payments during the Period		(488,661,467)	(394,618,174)
		<u>4,076,428,515</u>	<u>4,076,428,515</u>
31. TRADE AND OTHER PAYABLES			
Rechargeable Work - Customer Advances		6,634,430,544	4,039,297,939
Contractors Retention	35.2	5,042,274,861	3,669,249,055
Lease Hold Creditors		18,506,495	26,164,355
Less: Interest in Suspense		(2,214,055)	(4,382,302)
Creditors Control	35.2	833,652,597	1,221,394,974
Other Creditors		97,725,057	101,480,705
Accrued expenses		1,031,675,560	504,823,198
Deposits		74,663,873	72,954,077
VAT Payable		65,265	-
With Holding Tax		54,667	54,667
Salaries and Other Payables	35.2	191,068,515	182,844,259
Interest Payable on Lease		-	-
Audit fee AGDSL		3,200,000	17,165,616
		<u>13,925,103,379</u>	<u>9,831,046,543</u>

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

32. DEFERRED TAXATION

Deferred Tax Assets, Liabilities and Income Tax relates to the followings

	Balance Sheet		Income Statement	
	2017	2016	2017	2016
	Rs.	Rs.	Rs.	Rs.
Deferred Tax Liability				
Capital Allowances	4,493,724,551	10,232,612,468	3,339,845,190	2,103,018,287
Intangible assets	293,841	453,497	(1,335,127)	(14,376,428)
	<u>4,494,018,392</u>	<u>10,233,065,965</u>	<u>3,338,510,063</u>	<u>2,088,641,859</u>
Deferred Tax Assets				
Debtors Impairment	(124,764,816)	298,860,427	(34,934,148)	19,948,692
	<u>(124,764,816)</u>	<u>298,860,427</u>		
Deferred income tax charge/(reversal)			<u>3,303,575,915</u>	<u>2,108,590,551</u>
Net Deferred Tax Liability/ (Asset)	<u>4,618,783,208</u>	<u>9,934,205,538</u>		

The unused tax losses in the past years is a strong evidence that future taxable profit would not arise in the future. NWSDB has a cumulative tax loss of Rs 81,082,402,414 as at 31/12/2017. Therefore paying Income Tax by NWSDB is very unlikely. Therefore recognising a net deferred tax asset /liability does not arise.

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

33. RELATED PARTY TRANSACTIONS

Transactions with State and State Controlled Entities

In the normal course of its operations, the Board enters into transactions with related parties. Related parties include the Government of Sri Lanka (State: as the ultimate owner of the Board), various government departments, and State controlled entities. Particulars of transactions, and arrangements entered into by the Board with the State and State controlled entities which are individually significant and for other transactions that are collectively, but not individually significant.

34. EVENTS AFTER THE BALANCE SHEET DATE

All the material events after the balance sheet date have been considered and appropriate adjustment and disclosures have been made in to the financial statement, where necessary.

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

35. PRIOR YEAR ADJUSTMENTS

- 35.1 Board assets were revalued as at 31.12.2007 by obtaining the service of Department of Valuation. Revalued amount of assets were taken to the books during the year 2010 and those values are continuing as deemed cost of PPE at present. There were some duplications and omissions occurred in 2010 due to the immensity of the assets base and have been rectified as prior year adjustments with retrospective effect. Accordingly net effect of Rs. 22.4 million had been adjusted for carrying amount of PPE and Rs.19.9 million had been adjusted for depreciation as at 31.12.2016 as follows. In addition to this Rs 2.3 million depreciation have been adjusted in year 2016.

35.1.1 Gross Carrying Amounts

Cost	Balance As at 31.12.2016 Rs.	Prior Year Adjustments Rs.	Restated Balance As at 31.12.2016 Rs.
Freehold Assets			
Land Freehold	8,358,310,005	-	8,358,310,005
Land Leasehold	589,540,351	-	589,540,351
Infrastructure	5,713,979,507	-	5,713,979,507
Building - Freehold	11,106,565,457	-	11,106,565,457
Structures	43,206,451,374	-	43,206,451,374
Plant & eq: pumping treatment	28,246,961,522	-	28,246,961,522
Service meter	19,439,577	-	19,439,577
Bulk water meter	519,178,126	-	519,178,126
Transmission & Dist:	76,709,107,252	-	76,709,107,252
Mobile Eq:	450,670,409	-	450,670,409
Survey Eq:	32,735,831	-	32,735,831
Laboratory	585,697,600	-	585,697,600
Other Equipment	2,060,775,152	-	2,060,775,152
Furniture & fittings-computer	473,602,383	(125,600)	473,476,783
Computers & Peripherals	432,920,480	(92,900)	432,827,580
Motor vehicles cars	156,844,184	(358,750)	156,485,434
Van busses & jeeps	534,156,481	7,810,000	541,966,481
Lorries & trucks	1,979,047,810	29,290,015	2,008,337,825
Tractors & trailers	89,076,211	-	89,076,211
Water bowsters, Heavy veh:	1,126,163,133	(14,640,000)	1,111,523,133
Motor cycles	23,427,152	565,000	23,992,152
Three Wheelers	4,787,620	-	4,787,620
Lease hold Vehicles	28,975,000	-	28,975,000
Total Value of Depreciable Asset	182,448,412,617	22,447,765	182,470,860,382

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

35.1.2 Depreciation	Balance As at 31.12.2016 Rs.	Prior Year Adjustments Rs.	Restated Balance As at 31.12.2016 Rs.
Freehold Assets			
Land Freehold	-	-	-
Land Leasehold	-	-	-
Infrastructure	575,941,027	-	575,941,027
Building - Freehold	1,155,403,606	-	1,155,403,606
Structures	3,686,898,046	-	3,686,898,046
Plant & eq: pumping treatment	5,670,610,943	-	5,670,610,943
Service meter	14,309,417	-	14,309,417
Bulk water meter	143,038,676	-	143,038,676
Transmission & Dist:	6,053,440,346	(249,287)	6,053,191,059
Mobile Eq:	174,437,893	-	174,437,893
Survey Eq:	7,357,504	-	7,357,504
Laboratory	265,594,813	-	265,594,813
Other Equipment	684,675,572	-	684,675,572
Furniture & fittings-computer	221,466,931	146,315	221,613,246
Computers & Peripherals	334,753,554	-	334,753,554
Motor vehicles cars	141,037,303	(87,300)	140,950,003
Van busses & jeeps	342,763,523	(750,500)	342,013,023
Lorries & trucks	402,690,607	(1,647,704)	401,042,903
Tractors & trailers	57,851,386	43,207	57,894,593
Water bowsers, Heavy veh:	221,781,839	(17,286,233)	204,495,606
Motor cycles	9,251,206	(100,819)	9,150,388
Three Wheelers	784,833	-	784,833
Lease hold Vehicles	5,051,526	-	5,051,526
Total Value of Depreciation	<u>20,169,140,551</u>	<u>(19,932,321)</u>	<u>20,149,208,230</u>

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

35.2 In addition to the prior year adjustments for Property Plant & Equipments, the following items also have been adjusted retrospectively.

	Balance As at 31.12.2016 Rs.	Prior Year Adjustments Rs.	Adjustment For 2016 Rs.	Transfer Under TSAP Programme Rs.	Restated Balance As at 31.12.2016 Rs.
Capital Work In Progress (Note 17)					
Construction Work	155,229,972,659	(136,967,188)		(39,956,765)	155,053,048,707
Rehabilitation	3,666,192,550	(48,432,336)		(158,773,026)	3,458,987,188
Inventories (Note 19)					
Stock in transit					
Electricals	477,733,511	-	817,813		478,551,324
Water Meter & Fitting & Brass Items	568,961,667	(27,921,254)	(5,340,000)		535,700,413
Other Items	507,209,517	(10,461,839)			496,747,679
Trade and other receivable (Note 20)					
Loans To Employees	1,713,412,289	-		(17,367,244)	1,696,045,045
Receivable on Interest & Others	372,733,981	(137,739,576)	(2,716,099)		232,278,306
Other Debtors	302,907,898			11,411,634	314,319,532
Advances to Staff	15,624,539			(1,233,206)	14,391,333
Deposit and advance (Note 21)					
Mobilization and Other Advances	26,659,765,475	(18,150,388)		(37,129,981)	26,604,485,106
Deposits	234,531,755			(13,071,361)	221,460,394
Cash and Cash Equivalents (Note 23)					
Cash In Bank	1,869,822,259	(1,532,647)		(3,422,607)	1,864,867,005
Cash Imprests Regions	3,850,690			(5,937)	3,844,753
Capital grant (Note 27 & 28)					
Foreign Grants	180,809,157,920			(244,894,887)	180,564,263,033
Local Grants	983,667,752			(5,248,120)	978,419,632
Tresuary Grant	92,750,876,538			(8,292,804)	92,742,583,734
Trade and other payable (Note 31)					
Contractors Retention	3,666,057,746	-		3,191,309	3,669,249,055
Creditors Control	1,247,126,354	(3,378,627)	(19,770,000)	(2,582,753)	1,221,394,974
Salaries and Other Payables	184,565,497			(1,721,237)	182,844,259
Interest payable					
Loan Payable (Note 29)					
Foreign Loan	15,335,301,002		(660,842,771)		14,674,458,231
Government Equity (Note 25)	54,910,142,914		660,842,771		55,570,985,685

Transition of Streamlining the Accounting Process (TSAP) and Long Outstanding Balances (LOBs)

The "Long outstanding balance reconciliation programme" was extended during the year under the theme of TSAP and the Identified LOBs have been transferred to a separate account for further reconciliation in the future. Net effect of which was adjusted to other debtors to reflect fair presentation and comparatives were adjusted with respect to these balances as shown above.

National Water Supply And Drainage Board

NOTES TO THE FINANCIAL STATEMENTS

Year ended 31 December 2017

36. NWSDB Loan Commitments

	2017 Rs.	2016 Rs.
36.1 NWSDB has committed following loans.		
Local Bank Funded Project Loans	54,434,291,379	50,436,605,168
Foreign Funded Project Loans	<u>123,202,731,614</u>	<u>52,304,746,571</u>
Total	<u>177,637,022,993</u>	<u>102,741,351,739</u>
36.2 Loan Exposure Durring the period	Foreign Loans	Local Loans
Opening Balance as at 31.12.2016	15,335,301,002	20,392,891,592
Receipts	25,176,941,397	6,916,520,488
Payments	-	(659,977,137)
Closing Balance as at 31.12.2017	<u>40,512,242,399</u>	<u>26,649,434,943</u>
36.3 Interest Expenses	2017 Rs.	2016 Rs.
Interest Expenses	6,291,304,344	1,670,213,515



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தேசிய கணக்காய்வு அலுவலகம்

NATIONAL AUDIT OFFICE



මගේ අංකය
எனது இல.
My No.

WSS/A/NWSDB/01/2017

ඔබේ අංකය
உமது இல.
Your No.

දිනය
திகதி
Date

22 January 2019

The Chairman
National Water Supply and Drainage Board

Report of the Auditor General on the Financial Statements of the National Water Supply and Drainage Board for the year ended 31 December 2017 in terms of Section 14 (2) (c) of the Finance Act, No 38 of 1971.

The audit of financial statements of the National Water Supply and Drainage Board ("the Board") for the year ended 31 December 2017 comprising the statement of financial position as at 31 December 2017 and the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended and a summary of significant accounting policies and other explanatory information, was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No.38 of 1971. My comments and observations which I consider should be published with the annual report of the Board in terms of Section 14 (2) (c) of the Finance Act appear in this report.

1.2 Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements, whether due to fraud or error.

1.3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards consistent with International Standards of Supreme Audit Institutions (ISSAI 1000-1810). Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial

statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Board's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. Subsections (3) and (4) of Section 13 of the Finance Act, No 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

1.4 Basis for Qualified Opinion

My opinion is qualified based on the matters described in paragraph 2.2 of this report.

2. Financial Statements

2.1 Qualified Opinion

In my opinion, except for the effects of the matters described in paragraph 2.2 of this report, the financial statements give a true and fair view of the financial position of the National Water Supply and Drainage Board as at December 2017 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Accounting Standards.

2.2 Comments on Financial Statements

2.2.1 Adherent with Sri Lanka Accounting Standards (LKAS)

The following observations are made.

(a) LKAS 01 - Presentation of Financial Statements

In contrary to Section 32 of the Standard, the balances of other trade creditors aggregating Rs.5,347,682 outstanding for over 03 years had been transferred to other income during the year under review without identifying the possibility for future obligations.

(b) LKAS 16 – Property, Plant and Equipment

Fully depreciated assets approximately costing Rs. 526,264,886 are being continuously used by the Board without re-assessing the useful economic lifetime of those assets and accounted them accordingly as per the provisions in the Standard.

(c) **LKAS 19 -Employee Benefit**

Provision for retirement benefit obligation (Gratuity provision) had not been made in the financial statements for the year under review in terms of Sections 58 and 59 of the Standard.

(d) **LKAS 20 - Accounting for Government Grants and Disclosure of Government Assistance**

Balances of foreign grants aggregating Rs. 14,498 million relating to 33 Projects which remained unchanged over a period of 7 to 11 years had been continuously brought to the financial statements without being amortized. The impact to the financial statements due to non-amortization could not be ascertained in audit due to unavailability of required details with regard to those foreign grants.

(e) **LKAS 23 - Borrowing Cost**

Borrowing cost of four (04) completed contracts amounting to Rs.3,922,080 relating to projects lounged under local loans of Rs. 3.5 billion had been capitalized during the year 2016 and 2017 contrary to the provisions in the Standard.

(f) **LKAS 38 - Intangible Assets**

The Board had failed to review the period of amortization and method of amortization for intangible assets at least in each financial year as specified in Section 104 of the Standard.

(g) **LKAS 40 - Investment Property**

(i) Carrying value of investment property amounting to Rs. 347.30 million had not been separately shown in the statement of financial position as at 31 December 2017.

(ii) The Board had not made proper disclosures with regard to methods of depreciation, useful lives or rates of depreciation, the gross carrying amount and the accumulated depreciation at the beginning and end of the period and amount of impairment etc. as per Section 79 of the Standard.

(iii) Income from investment property had not been disclosed as per Section 75(f) (i) of the Standard.

2.2.2 Accounting Deficiencies

The following observations are made.

- (a) Balances aggregating Rs.167, 679,950 shown under work-in-progress in respect of 28 projects had remained unchanged over a period ranging three to nine years without being investigated and make necessary adjustments in the financial statements.
- (b) Cost of 40 completed and commissioned water supply projects totaling Rs.8,189,319,298 had remained in the work-in- progress as at 31 December 2017 without being capitalized.
- (c) A stock balance of Rs.2,421,893 shown in the book of accounts had remained at Kelaniya Region over three years without being utilized for intended purposes. Further, this stock had not been physically verified.
- (d) Although the physically verified balance of major spare parts at Trincomalee Region was Rs. 11,821,641, only the stocks worth Rs. 472,760 had been accounted.
- (e) As per physical verification reports of Jaffna Regional Office, it was observed that lease hold buildings capitalized at Rs. 5,202,608, a water tower (infrastructure) costing Rs 7,000,000 and six other assets valued at Rs.11,853 were not physically existed. However, without taking any actions, a provision of Rs. 780,532 had been made for depreciation during the year under review. Further, another water tower costing Rs.3,000,000 which was not in a usable condition had been brought to accounts and a provision for depreciation amounting to Rs. 140,000 had been made thereon without taking any action to dispose it.
- (f) It was observed that, as a practice the Board is continuously making significant adjustments to the retained profit/ (loss) by way of prior year adjustments in every year. As a result, the profit for the each year had been distorted by considerable amount. The net effect to the retained profit/ (loss) for the period from 2013 to 2016 as a result of such prior year adjustments was aggregating Rs. 631.70 million. In this ground, the possibility for making adjustments to the profit for the year under review in the forthcoming years had not been ruled out in audit. Hence, the

reliability and accuracy of the financial results for the year under review could not be satisfactorily accepted in audit. The details of such adjustments made in the year under review and the previous three years are given below.

Year	Amount Debited	Amount Credited	Net effect to the Accumulated Profit
-----	-----	-----	-----
	Rs.	Rs.	Rs.
2017	388,443,514	62,528,713	322,914,801
2016	454,847,390	336,150,543	118,696,847
2015	184,251,720	192,301,771	8,050,051
2014	88,633,609	269,544,864	180,911,255

- (g) Although ten vehicles had been disposed during the year under review only cost and accumulated depreciation of three vehicles had been taken into account in calculation of profit or loss on those disposals. The impact to the financial statements due to non-consideration of cost and accumulated depreciation of other assets could not be ascertained in audit as there were no details available relevant to those assets.
- (h) It was observed that provision for impairment had not been made for debtors aggregating Rs. 77,011,565 in the year under review.
- (i) Economic Service Charge (ESC) amounting to Rs. 65,683,426 paid during the year under review had been erroneously identified as income tax expenses of the year under review without being identified as receivable. Hence, the profit for the year under review and current assets as at 31 December 2017 had been understated by similar amount.
- (j) As per the calculations made by audit, total investment income on two fixed deposits was Rs. 5,328,915. However, a sum of Rs. 4,774,759 only had been recognized as investment income in the financial statements presented relating to above fixed deposits. Hence, the interest income on investment made in fixed deposits had been understated by Rs.554,156.

2.2.3 Suspense Account

Assets, liabilities and equity balances of the Board to the total net value of Rs.793,285,170 had been transferred to a suspense account in the years 2016 and 2017 without taking

actions to investigate such balances and those balances included the long outstanding loans and advances given to employees amounting to Rs.18,600,450, advances given to contractors amounting to Rs.37,129,982, deposits amounting to Rs.13,071,361 and balances in cash book amounting to Rs.3,428,544. Accordingly, the balance of suspense account as at the end of the year 2017 was Rs.116,455 and action had not been taken to clear this account even up to the end of February 2018.

2.2.4 Un-explained Differences

The following observations are made.

- (a) According to the books of accounts, a sum of Rs. 9,161,858 had been received from disposal of fixed assets during the year under review. However, only an amount of Rs. 2,001,798 had been shown in the statement of cash flows under cash flows from investing activities. The reasons for difference of Rs. 7,160,060 had not been explained to audit.
- (b) A difference of Rs.20,470,232 was observed between the balances of debtor shown in the financial statements for the year under review and the schedule of age analysis of trade debtors submitted by the Commercial Division of the Board.
- (c) Differences aggregating Rs.12,423,545 were observed between the value of sales income shown in the trail balance submitted by Regional Offices and the adjusted balances shown in the Commercial Division of the Board.
- (d) According to the financial statements presented by the Global Partnership on Output Based AID Project, the value of the foreign grant as at 31 December 2017 was Rs.312,791,129. However, as per the financial statements of the Board, it was shown as Rs.289,218,261. Hence, an unexplained difference of Rs.23,572,868 was observed between those two figures.
- (e) Differences of Rs.45,327,376 and Rs.3,480,567 were observed when comparing the value of Property, Plant and Equipment shown in the fixed assets registers received from four regions such as Ambathale, Panadura, Kaluthara and Gampaha, and the corresponding schedules furnished to audit with the corresponding value of such assets shown in the financial statements for the year under review.

- (f) An aggregate difference of Rs.54.22 million was observed with regard to restated opening balances of four (04) ledger accounts shown in the financial statements and as per the calculation made by audit. Details are shown below.

Description	Restated balance as per financial statements	Balance as per audit calculation	Difference
-----	-----	-----	-----
	Rs.	Rs.	Rs.
Other Debtors	314,319,532	287,223,783	27,095,749
Contractors Retention	3,669,249,055	3,662,866,437	6,382,618
Creditors Control	1,221,394,974	1,221,425,775	30,801
Local Loans	19,767,069,288	19,746,356,156	20,713,132

- (g) An un-reconciled difference of Rs.76.8 million was observed between the values of metered sales and bulk sales shown in the reports of Commercial Section and the financial statements.
- (h) Differences totaling to Rs. 130,712,618 were observed between the following items shown in the statement of cash flows for the year under review and the calculations made by audit. Details are shown below.

Item	As per calculations made by Audit	As per Financial Statements	Difference
-----	-----	-----	-----
	Rs.	Rs.	Rs.
Decrease in Debtors, Receivables and Deposits	17,370,079,818	17,491,801,822	121,722,004
Loss on Disposal of Fixed Assets	2,664,753	4,495,307	1,830,554
Sale Proceeds for Disposed Assets	2,001,798	9,161,858	7,160,060

- (i) A difference of Rs.13,856,197 was observed between the amount of advance granted to the contractor of Greater Colombo Water and Wastewater Management Improvement Investment Programme - Project 2 shown in the ledger and schedules furnished to audit.

2.2.5 Unidentified Balances

An unidentified work-in- progress balance aggregating of Rs. 655,561,757 remained in the ledger of Kaluthara Regional Support Centre since 2004 without being identified and capitalized.

2.2.6 Lack of Evidence for Audit

The evidence indicated against each items shown below had not been furnished to audit.

Item -----	Value ----- Rs.	Evidence not made available -----
(i) Work-in- Progress	92,429,112	Detailed Schedules of Regional Support Centers
(ii) Non-moving and slow-moving stocks	1,006,678,141	Age Analysis.
(iii) Other Debtors	294,984,707	Detailed Schedules
(iv) Trade Creditor	833,652,596	
(v) Other Creditors	97,725,057	
(vi) Land Acquisition Advance	161,712,636	
(vii) Special Bonus Advance to Employees	9,608,060	

2.2.7 Accounts Receivable and Payable

The following observations are made.

- The balances of trade debtors, sewerage debtors and other debtors aggregating Rs.1,111 million had remained in the accounts over two years without being recovered.
- Advance granted to suppliers aggregating to Rs. 268,846 had not been settled even though one year had been lapsed.

- (c) Although the lands had acquired, action had not been taken to recover the advances granted to acquisition of such lands amounting to Rs. 77,889,359 during the period of 2009 to 2014.
- (d) Out of total credit balances in the creditors control account, twenty six per cent of creditors are represented for more than one year.
- (e) Balance of other creditors amounting to Rs. 39,877,391 had remained outstanding for over 03 years without being settled. Since the Board had not maintained a database of other creditors, balances of them could not be verified in audit through confirmations.
- (f) A land was purchased by the Board to construct a Wastewater Treatment Plant under Galle Area Wastewater Disposal Project. The Department of Valuation valued this land as Rs. 71.5 million and 30 per cent of the value equal to Rs.21.25 million had been paid on April 2014 to the land owner as advance without obtaining the ownership of the land. The land already occupied some families and then owner had removed the soil from the land after receiving the advance. The advance so paid and the penalty thereon had not been recovered even up to 30 June 2018.
- (g) An unsettled balance of creditors control account in Kegalle Region amounting to Rs. 6,020,554 remained for over two years as at 31 December 2017.

2.3 Non – compliance with Laws, Rules, Regulations and Management Decisions

The following instances of non-compliance were observed in audit.

Reference to Laws, Rules and Regulations etc.	Non-compliance
(a) Financial Regulation 770 of the Financial Regulations of the Democratic Socialist Republic of Sri Lanka.	Obsolete stocks valued at Rs.13,082,076 had been included in the financial statements of the year 2017.
(b) Management Services Circular No. 30 of 22 September 2006	The approval of the Department of Management Services for the Scheme of Recruitments and Promotions of the Board had not been obtained.

(c) Economic Service Charge
(ESC) (Amended) Act, No. 07
of 2017

ESC paid during the year under review had
been charged to the profit of the year under
review without being brought forwarded.

Financial Review

1 Financial Results

According to the financial statements presented, the operations of the Board for the year ended 31 December 2017 had resulted in a pre-tax net profit of Rs. 1,882,455,821 as compared with the corresponding pre- tax net profit of Rs. 2,991,969,398 (re-stated) for the preceding year, thus indicating a deterioration of Rs. 1,109,513,577 in the financial results. The significant increase in cost of sales, administrative expenditure and finance costs were the main reasons attributed for this deterioration in the financial results.

However, the value addition of the Board for the year under review was Rs.19,789 million after taking into account the employee remuneration cost, tax expenditure and depreciation aggregating Rs.17,972 million for that year and it was Rs. 18,808 million in the previous year. Hence, the value addition of the Board had increased by Rs.981 million or 5.2 per cent as compared with the previous year.

2 Analytical Financial Review

2.1 Profitability

The following observations are made in this connection.

- (a) Although the gross profit of the year under review was decreased by 4.3 per cent, the administrative expenses had been increased by 8.74 per cent as compared with the preceding year. Hence, the operating profit of Rs.738,091,347 recorded in the year under review had declined by 58.04 per cent as compared with the preceding year.
- (b) The contribution and net profit of Rs.975,560 and Rs.289,023 respectively per employee recorded in the year 2016 had decreased to Rs. 936,538 and Rs. 182,084 or by 4 per cent and 37 per cent respectively in the year 2017.
- (c) The revenue of Rs.43.93 per unit of water consumed in the year 2016 had decreased by 3 per cent in the year 2017, while production cost of Rs 46.53 per unit of water consumed in the year 2016 had increased by 1.2 per cent in the year 2017.

3.2.2 Significant Accounting Ratios

Certain significant accounting ratios for the year under review and preceding 04 years are given below.

Year	2017	2016	2015	2014	2013
-----	-----	-----	-----	-----	-----
Gross Profit Margin	40.50	42.82	39.19	39.47	41.35
Net Profit Margin	7.61	12.68	5.53	7.62	5.87
Current Ratio	4.14	5.97	4.48	1.76	1.29
Liquidity Ratio	3.72	5.33	3.80	1.35	0.98
Total Asset Turnover (number of times)	0.05	0.06	0.06	0.07	0.07

According to the above information key financial ratios of the Board had shown an unfavorable condition as compared with past four years. The net profit margin for the year under review had drastically decreased by 5.07 per cent as compared with the previous year and Current Ratio and the Liquidity Ratio had been decreased by 1.83 and 1.61 per cent respectively due to increase of foreign loan payable in forthcoming financial year.

4 Operating Review

4.1 Performance

4.1.1 Planning and Review

The following observations are made in this regard.

- The weakness within the business and opportunities and threats in the external environment of business had not been properly evaluated before preparing the Corporate Plan for the period of 2016-2020.
- The annual budgeted estimates, annual procurement plan, human resources development plan, plan for loan repayment and internal audit plan had not been included in the Action Plan as per the Public Finance Circular No. 01/2014 of 17 February 2014.
- Seven large scale water supply projects and three large scale sewerage projects scheduled to be commenced during the year 2017 as per Action Plan, had not been commenced even up to 31 July 2018.

- (d) As per the Action Plan it was expected to increase total pipe water supply coverage and sewerage coverage up to 52.3 per cent and 2.4 respectively out of total population at the end of the year under review. However, the actual coverage was only 49.2 per cent and 2.07 per cent respectively as at the end of the year 2017.

4.1.2 Production and Distribution of Clean Water

Information relating to production of treated water and its cost and number of new connection given for the past few years are as follows.

Year -----	2017 -----	2016 -----	2015 -----	2014 -----
Production (cum) in Million.	678	649	600	575
Unit cost (Rs)	35.49	34.61	34.41	31.79
Number of new connections	2,219,172	2,092,471	1,947,473	1,825,837

The following observations are made in this connection.

- (a) The Board had produced Rs. 678 million cubic meters of treated water during the year 2017 as compared with the production of 649 million cubic meters in the year 2016, which indicated 4.5 per cent increase. Similarly unit cost of production in the year under review had been increased by 2.5 per cent as compared with 2016. The main reasons for this increase were significant increase in staff cost, energy cost, chemical cost and maintenance cost during the period from 2012 to 2017.
- (b) According to the target set out for the year under review it was expected to provide 2,323,669 connections as at the end of the year by providing 231,198 new connections (includes accumulated shortfall of connections from 2014 to 2017) during the year under review. However only 126,701 new connections had been provided during the year under review and it indicates a decrease of 8.71 per cent as compared with that of previous year.

4.1.3 Non – Revenue Water (NRW)

Details of non-revenue water of the year under review and previous six years are given below.

Description	2017	2016	2015	2014	2013	2012
Water Production (Cu. m.)	678.9	649	600.14	575.00	547.0	525.6
Water Consumption (Cu.m.)	507.5	483	436.27	410.92	381.6	368.5
Non-Revenue Water (Cu.m.)	171.3	166	163.87	137.07	165.4	157.1
NRW as a percentage of Water Production	25.23	25.58	27.30	28.53	30.24	29.89

The following observations are also made in this connection.

- (i) The value of NRW had been brought to the accounts as a normal cost instead of being separately accounted. Further, the average NRW was around 1/3 of the total Water Production during the period from 2012 to 2014 and it had been reduced to ¼ in the year under review. However, the NRW still makes a significant loss to the Board due to leakage, unlawful connections, free supply and administrative inefficiencies etc. The portion of the non-revenue water in the City of Colombo in 2017 was 43.14 per cent and no remarkable effort had been taken to reduce the NRW in City of Colombo.
- (ii) As there is a need for the modernization of main water distribution systems in the City of Colombo which is older than 75 years, special attention of the Board is drawn to the urgency for the preparation and implementation of plans for that purpose. Even though two major foreign funded Projects costing Rs.30,124 million are being implemented in this connection at present, an adequate reconstruction of water mains had not been achieved there from.
- (iii) Greater Colombo Water and Waste water Management Improvement Investment Programme-Project (01) which mainly focused on reduction of Non-Revenue Water in City of Colombo from 49 per cent to 20 per cent had been scheduled to be completed on 31 December 2016. However, it had not been completed even by 30 September 2018. Further, the physical progress as at 31 July 2018 was only 46.18 per cent.
- (iv) Greater Colombo Water and Waste water Management Improvement Investment Programme-Project (ii) was scheduled to be commenced on 03 September 2014 and completed on 30 June 2019. However, main contract activities had not been commenced even as at 31 December 2016 and only 5.61 per cent physical progress had been achieved as at 31 December 2017.

- (v) The water distribution mains that should be replaced in order to reduce the water leakages have not been specifically identified to date. Even though the proposals for implementation of several major projects have been made, their implementation is moving at a very slow pace.
- (vi) The attention of the Board for reducing the NRW in the areas other than the City of Colombo specially in Town East Colombo (TEC) North, Gampaha, Rathnapura, Hambanthotta and Bandarawela was also inadequate and hence it was observed that the targets included in the Corporate Plan were also not realistic.
- (vii) It was further observed that, the total cost of production could be reduced by Rs.240.46 million if the Board is able to reduce the amount of NRW by 1 per cent.
- (viii) Considerable deviations were observed between the actual and targets percentages of Non-Revenue Water in the Regional Support Centers (RSC). Details are shown below.

Non-Revenue Water 2017 (as a percentage)

Name of RSC	Target	Actual	Variance {favorable/(adverse)}
Western Central	34.5	33.8	0.7
Western South	26.4	20.6	5.8
Western North	23.0	19.3	3.7
Southern	26.0	22.7	3.3
Uva	20.3	25.9	5.6
Central	22.0	22.6	(0.6)
Sbaragamuwa	23.8	30.3	(6.5)
North Western	10.0	13.0	(3.0)
Eastern	13.3	22.8	(9.5)
North Central	15.2	16.9	(1.7)
Nothern	21.0	26.6	(5.6)
Island Wide	27.3	25.2	(2.1)

4.1.4 Sewerage System

The need for carrying out improvements to the infrastructure facilities for the disposal of sewerage in the cities has arisen due to urbanization taken place along with the economic development of the country. Even though the supply of such facilities is the responsibility of the Board, an adequate progress in this area was not shown in recent years.

4.2 Implementation of Foreign Funded Projects

A large number of water supply and sanitation (sewerage) projects by utilizing local and foreign funds were carried out during the year under review and in the previous years. The observations made with regard to implementations of those projects are described in following paragraphs.

4.2.1 Ambathale Energy Saving Project

The following observations are made.

- (i) The total project implementation period of this project was 63 months and out of that, 39 months had been elapsed as at 31 December 2017. However, the overall physical progress as at that date was only 7.7 per cent due to poor performance of the contractor.
- (ii) The main contract of replacing old pipe line for 9 kilometers with 1200mm diameters capacity of new pipes was scheduled to be completed on 04 May 2018. However, only 500 meters had been laid as at 04 May 2018.

4.2.2 Greater Colombo Water and Wastewater Management Investment Programme – Project 01

The following observations are made.

- (i) According to the progress reports of the Programme, the overall physical and financial progress as at the end of the year under review had remained at 37.41 per cent and 47.39 per cent respectively. The works under the main contracts of system rehabilitation for reduction of NRW in Northern and Eastern Regions of the City of Colombo had shown slow progress of 45 per cent and 27 per cent respectively as at 31 December 2017. The delays in adopting of procurement process, changing of trenchless method to open trench method for pipe laying work and poor performance of the contractors etc. had attributed to slow progress on implementation of the activities of the programme.
- (ii) According to the bid document of the System Rehabilitation for NRW reduction in North part of the city of Colombo was planned to be implemented through pipe relining and pipe bursting method (Trenchless method) instead of open trench method of pipe lying. However, after having awarded this contract, the contractor

had submitted the proposals to change the Trenchless method and approval was granted by the variation committee instead of being obtaining the prior approval from the Board as per Section 3.1 and 13.2 of the Bid documents. It was observed that the proper design had not been done by considering the actual site conditions and present situations of water supply network. As a result of changing the main scope of the contract, an opportunity was provided to the contractors who had not submitted bidding under the trenchless technology.

4.2.3 Greater Colombo Water and Wastewater Management Improvement Investment Programme - Project 2

The following observations are made.

- (i) This Project consisted 13 Components and as per the progress reports of the Project, the overall physical progress of the Components of the Project as at the end of the year under review was at 5.61 per cent due to delays in awarding contracts, poor performance of the contractors, delay in obtaining approval from Colombo Municipal Council and poor project management etc. Further, the contracts for construction of buildings for Area Engineer's Office at Pamankada, rehabilitation of plumbing systems in the government owned apartments and procurement of 02 lots of operational equipment for Regional Support Service Centre –Western Central had not been awarded even up to 31 December 2017.
- (ii) Further, the completion dates of contracts awarded by the Project under the Components of System Rehabilitation for Non-Revenue Water for the Western and Southern Region of City of Colombo and consultancy services for Community Mobilization Awareness and Behavior Changes had been determined beyond the date of completion of the Project on 30 June 2019.
- (iii) It was further observed that 504 days had been spent to complete the procurement process of contract for NRW reduction in the City of Colombo even though the contract had been approved by the Lending Agency as an advanced procurement. Further, the realistic estimates had not been prepared by the National Water Supply and Drainage Board at the initial stages based on a proper longitudinal surveys and as a result, the length of estimated pipe laying works of 99 kilometers under this Component had been significantly increased up to 194.5 kilometers

- (iv) According to the bid document of the contract, the product conformity certificates on the use of materials and details of key persons involving for evaluation purposes required to be submitted by the selected bidder as at the closing date of the submission of bids. However, the contract under the Component of the System Rehabilitation for Non-Revenue Water Reduction in Western Region of the City of Colombo had been awarded to a bidder who had not submitted respective Certificates even up to the date of the contract agreement signed on 01 December 2016. Further the activities under the contract had shown slow progress of 9.57 per cent as at 31 December 2017. In addition to that, the works under said contract for Hydraulic Modeling and detailed design of 18 District Metering Areas and 02 Feeder Mains had not been completed even up to 30 March 2018.
- (v) The works under the Hydraulic Modeling for Feeder Mains System and detailed design of 09 District Metering Areas under the contract for System Rehabilitation for Non-Revenue Water Reduction in Southern region of the City of Colombo awarded on 10 January 2017 had also not been completed even up to 30 March 2018. Further, 15,894 houses subjected had been surveyed as at 31 December 2017, out of the target of 35,000 houses to be surveyed. As a result, out of 155 kilometers of works expected to be completed before 31 December 2019, only 02 kilometers of pipe laying works have been completed.
- (vi) It was observed that the progress reports prepared on public awareness programs for water users consisted only with number of such programs conducted during the year under review. The details of such programs conducted under each package as at 31 December 2017, recommendations and solutions for identified issues etc. had not been included therein. Hence, there is no proper mechanism was in placed to evaluate the changes on the pattern of water usage after attending the awareness programs.
- (vii) The land owned to the Urban Development Authority acquired by the Project on 02 September 2015 on lease basis for the use of the Area Engineer's Office at Pamankada had been transferred to the Colombo Municipal Council during the August 2017 without taking action to recover the advance amount of Rs. 10 million paid thereof. In addition to that, another advance of Rs. 2.11 million paid during the

year under review on architectural designs of the office building had become fruitless, due to transferred the respective land.

- (viii) The Executing Agency of the Project had appointed the Project Director for the post of Deputy General Manager (Eastern Province) of the National Water Supply and Drainage Board on acting basis, contrary to the requirements in Section 2.3.2 of the Circular No.01/2016 of 24 March 2016 issued by the Department of Management Services.

4.2.4 Global Partnership on Output-based Aid Project

The following observations are made.

- (i) Out of total agreed grant of US\$ 5.08 million equivalent to Rs.583.66 million, only a sum of US\$ 2.31 million equivalent to Rs.340.76 million or 45.47 per cent had been utilized as at 31 December 2017 after lapse of 06 years from the commencement of the activities of the project. Therefore, the possibility of utilization of the balance amount of allocation within the remaining period of the project is in doubt due to the poor performance of the contractor.
- (ii) According to the project document, the project consisted with 7 components and out of that, component for On-site Sanitation Improvements had shown a slow progress of 26.52 per cent as at 31 December 2017 due to delay in awarding contract and poor performance of the contractor. Further, as per the progress report of the project, the overall physical progress of the components of the project as at the end of the year under review remained at 91.6 per cent, even though 100 per cent of physical progress was expected to be achieved as at 31 December 2017.
- (iii) The contract for component of on-site sanitation improvements was awarded on 16 May 2016 and planned to supply and install 3,785 Treatment units and Construct 1135 toilets at Dehiwala, Moratuwa, Kolonnawa and Ja-Ela areas by 31 August 2017. However, only 556 Installation of Treatment units or 15 per cent and 205 Toilets or 18 per cent respectively out of planned had been completed as at 31 December 2017, due to delay in awarding the contract, shortage of adequate labour force in production site situated at Kuliypitiya and poor performance of the manual fabrication works of Treatment units etc. Subsequently, it was decided to re-award the same contract to four (04) other contractors on 15 May 2018, in order to expedite the contract works. However, the main contractor had also failed to supply the

treatment units of daily requirements of the new contractors by 17 July 2018 even after taking over the part of the installation.

- (iv) The Project had also planned to provide 950 On-site Sanitation Facilities and Construct 285 Toilets in Kolonnawa Divisional Secretary area. Accordingly, the project had incurred a sum of Rs. 2,135,939 for bond guaranties, insurance, maintenance of furniture etc. as at 31 December 2017. However, it was revealed that the project had failed to provide any benefits to the beneficiaries.
- (v) The installation part taken over in part (iii) of the above had been awarded to four (04) contractors at a total contract value of Rs.153.30 million. However, engineers' estimate of the above installation contracts was Rs.117.92 million. As a result, the new contracts had been awarded by incurring Rs.35.38 million exceeding the original estimate. Further, it was observed that the additional expenses will have to incur by Government and NWS&DB since it will not be able to reimburse from the donor agencies.

4.2.5 Kandy North - Pathadumbara Integrated Water Supply Scheme

The following observations are made.

- (i) The contract had been awarded on 16 June 2015. However, the loan agreement had been signed on 22 December 2017 after delay of 2 1/2 years.
- (ii) The contract value of this project after reducing the scope (excluding provisions and price variations) was Rs.24,790.24 million and it had exceeded by 53 per cent of the engineer estimate of Rs.16,169.35 million (before reducing scope) of the Board.
- (iii) As per the Engineer Estimate of the Board, the amount estimated to be incurred on foreign exchange was USD 26,388,500. However, the amount included in the contract value of foreign contractor was USD 192,336,418. Hence, the amount planned to be incurred on foreign exchange had been exceeded by 629 per cent.
- (iv) As per Section 5.3.9 (b) of Procurement Guidelines, the bidders are required to submit justifications to be eligible for foreign currency payments. However, the following items had been included in the foreign currency estimates prepared by the Board without obtain such justifications.

Item -----	Amount provided in Estimate ----- USD	Amount provided as Custom Duty ----- Rs.
Breaking & Removal of Granite	1,470,033	12,905,856
Cutting 27 Trees	229,608	2,003,499
Removal of Roots of 135 Trees	73,080	637,425

- (v) Further, an amount of Rs.31.92 million had been included in the estimate to construct two (2) houses with an extent of 483 square meters per house for the use resettlement families.

4.2.6 Grater Kandy Water Supply Project

The following observations are made.

- In contrary to the objectives of the project, the contractor had remitted a sum of Rs.18,600,000 to the Head Office on 18 March 2016 on the request made by the Board for purchase of a jeep for the use of the Chairman of the Board. However, this fund was not used for the purchase of vehicle. Hence, the contractor had charged a sum of Rs.980,000 as attendance fee.
- In order to reduce Non revenue Water, a Water Fittings Testing Laboratory, Water Meter Testing Laboratory and a Wet Well Testing Unit had been constructed and handed over to the Board on 29 February 2016. However, these Units had not been utilized for the intended purposes even up to 31 July 2018.

4.2.7 Jaffna Killinochchi Water Supply and Sanitation Project

A sum of Rs. 3.45 million had been paid on 11 June 2014 to the National Housing Development Authority to acquire lands to the construction of Nawathkuliya Water Tower and Office Building. However, the ownership of the lands acquired had not been transferred to the National Water Supply and Drainage Board even as at 31 December 2017.

4.2.8 Dry Zone Urban Water and Sanitation Project

The following observations are made.

- (i) As per the paragraph 18 of Schedule 05 of the Loan Agreement, respective local authorities are responsible to conduct regular monitoring of the quality and quantity of treated effluent, the quality of the water in to which the effluent discharged and the bacteriological quality of dried sewerage sludge. However, no evidence had been made available to prove the implementation of monitoring mechanism by the local authorities in the areas which the activities of the Project implemented on effluent management effectively.
- (ii) As per the Cabinet of Ministers decision dated 05 April 2005, action should be taken jointly by the Ministry of City Planning and Water Supply and National Water Supply and Drainage Board to implement a suitable mechanism to monitor the activities of the Project closely. However, suitable mechanism had not been implemented by both parties even as at 31 December 2017.
- (iii) The National Water Supply and Drainage Board had signed a Memorandum of Understanding in 2014 to renovate 03 irrigation tanks and revamping of lands in Pathiyakulam and Katkulam for paddy cultivation with the Assistant Commissioner of the Department of Agrarian Development in Vauniya without obtaining the concurrence of the Department of Agrarian Development. However, the Assistant Commissioner had not worked accordingly and therefore the work had been delayed. As a result, the Project had to pay additional sum of Rs.21.8 million as compensation and other infrastructure facility in the previous years, out of the contribution received from the Government of Sri Lanka.
- (iv) The Project had taken action on 19 May 2017 to procure 02 motor vehicles at a cost of Rs.16.95 million under the approval of the Lending Agency for the use of Regional Supporting Centers in the Northern and North Western Provinces. However, respective motor vehicles had been assigned to the offices of the Southern Region of the National Water Supply and Drainage Board which are not involved to implement the activities of the project.

4.2.9 Monaragala, Buttala Water Supply Project.

In line with the Memorandum of Understanding entered into between the National Water Supply & Drainage Board and the Contractor on 30 November 2015, works valued at Euro 500,000 had been undertaken by the Board to carry out as a sub-contract and out of that provision, only Euro 400,000 (Rs.62.81 million) had been remitted to the Board and the balance of Euro 100,000 (Rs.15.70 million) had been treated as profit margin and overhead by the contractor without actively mediating in the activities.

4.2.10 Greater Dambulla Water Supply Project

The following observations are made.

- (i) Although the it was initially scheduled to complete the above project within 30 months, that is by 05 September 2014 having inaugurated the same on 06 March 2012, the contractor had failed to complete the project by that date and as such, an extension for an additional period of 43 months had been granted in 05 instances from 06 September 2014 to 31 March 2018. Nevertheless, due to the poor performance of the contractor, contract had not been completed even by 30 June 2018. However, two other contracts of Polgahawela, Pothuhera and Allawwa Integrated Water Supply Project and Pannala, Makandura & Kuliyaipitiya Water Supply Project worth USD 199.36 million had been awarded to the same contractor on 26 November 2015 and 02 December 2016 respectively.
- (ii) Further, a sum of Rs.1,964.32 million and Rs.677 million had been incurred as loan installments and interests as at 31 December 2017 relating to loan obtained by the Government for this project and an expenditure of Rs.151 million as the staff and overhead cost relating to the maintenance of the project office during the delayed period had to be additionally incurred as at 31 December 2017.

4.3 Delayed Projects

A considerable delay had been observed with respect to seven foreign funded projects due to delay in land clearance, environmental and resettlement issues, delay in contract awarding, low quality of PE pipes supplied by the contractor etc. Details are as follows.

Project	Estimated Amount	Date of Commencement	Date to be Completed	Period of Extension	Number of days Delayed
-----	-----	-----	-----	-----	-----
Rs. Million					
Global Partnership on Output Based AID Project	1,559	27/12/2011	31/12/2015	31/12/2017-31/12/2018	1095
Greater Dambulla Water Supply Scheme Stage – 01	9,593	06/03/2012	05/09/2014	06/09/2014 - 31/03/2018	1302
Greater Rathnapura Water Supply Project	4,493.66	24/07/2013	24/07/2015	24/07/2015 - 29/02/2016	220
Greater Kandy Water Supply Project	7,148	30/03/2007	30/09/2012	30/09/2007 - 20/07/2017	1753
Greater Colombo Waste Water Management Project	13.410	18/12/2009	31/12/2014	31/12/2014 - 31/12/2017	1095
Dry Zone Water Supply and Sanitation Project	19,165	13/11/2009	30/06/2013	30/06/2013 - 31/12/2018	2009
Greater Colombo Water Rehabilitation Project	4,785	27/11/2007	31/01/2012	31/01/2012 - 20/06/2017	1965
Eastern Province Water Supply & Development Project	7,702.25	20/03/2010	20/12/2013	20/12/2013 – 31/12/2015	741
Kandy city Waste Water Management Project	17,278	03/02/2010	10/10/2017	Not extended	385

4.4 Local Bank Loan Water Supply Projects

4.4.1 Matara District Water Supply Connection Enhancement Project

The following observations are made.

- The project had been commenced in order to provide 1,300 water supply connections in Matara District.
- The contract for supplying UPVC pipes, fittings and accessories had been completed on 14 March 2015 and UPVC pipes and fittings amounting to Rs.70,766,819 had been supplied thereon. However, the contract for laying UPVC fittings and

accessories had been awarded for the period from 19 December 2014 to 01 July 2015, had not been commenced even as at 31 August 2018.

- (c) Pipes and fitting purchased had been utilized for the activities not related to the objectives of the project.

4.4.2 Pipe Laying under Kandy North Water Project – Phase 01

Two contracts valued at Rs.77,705,705 and Rs.94,032,235 for pipe laying had been awarded to a contractor during the month of September 2014 and December 2014 respectively and the scheduled date to be completed were August 2015 and July 2015 respectively. However, these projects had not been completed even after elapsed of 02 years even though the advances aggregating Rs.33,677,822 was paid to the contractor on 15 September 2015.

4.5 Management Activities

The following observations are made.

- (a) An allocation amounted to Rs.235 million had been provided for the small and medium size water supply and drainage Projects Matara and Bandarawela Districts. Out of that only Rs.15.8 million or 7 per cent had been utilized as at 31 December 2017.
- (b) Although an allocation of Rs.500 million was provided for emerging small township (small & medium) water supply projects, only Rs.271.40 million or 54.3 per cent had been utilized as at 31 December 2017.
- (c) Further, a sum of Rs. 250 million had been provided for augmentation of Trincomalee in the year under review. However, no expenditure had been incurred thereof.
- (d) Due to insufficient space in warehouses in Mawanella, goods had been stored in and outside the warehouse premises without any security. Further, water meters in the warehouse were damaged by termites.
- (e) According to audit test check carried out in Kegalle and Kaluthara Regions, a slow progress was observed in relation to handling of consumer complaints.

4.6 Operating Inefficiencies

Due to poor debt servicing capacity of the Board, value of outstanding balance of loans amounting to Rs. 63,612,471,380 which obtained for the projects commenced after the year 2014 had been transferred to government equity account from the year 2015 to year 2017.

4.7 Idle and Underutilized Assets

The following observations are made.

- (a) According to audit test check, slow-moving stocks balance totaling Rs. 304,192,322 in respect of 26 warehouses had remained for a longer period of time which represents 40 per cent of the total stock balances of those warehouses.
- (b) It was observed that non-moving stocks valued at Rs.539,183,367 and slow moving stocks valued at Rs.467,494,774 had remained in stocks as at 31 December 2017, and it represent 7 per cent and 6 per cent respectively of the total stocks value of the Board.
- (a) After spending of Rs.166,993,899 on construction of laboratories for Greater Kandy Water Supply Project, the project had been abandoned due to failure in recruitments.
- (b) Greater Galle Water Supply Project had acquired a land by incurring Rs.16 million for the construction of Hapugala Water Refinery Plant in 2012, and the land was not utilized for the intended purpose to date due to large rock was found after the acquisition of the land.

4.8 Matters of Contentious Nature

The following observations are made.

- (a) Out of stocks in transit worth Rs.352,151,303 as at 31 December 2017, the stocks valued at Rs.35,713,013 had been shown as stocks in transit over a period of two years without being investigated.
- (b) Although stocks received and issued should be adjusted to the stock balance before stock verification, the net debit balances totaling Rs.521,015,622 and net credit balances totaling Rs. 284,249,255 had been adjusted to the stocks balance after the stocks verification.

- (c) According to the information provided by the Board, 11 vehicles had been released to the Ministry City Planning and Water Supply at the end of the year under review. However, Secretary to the Ministry of City Panning and Water Supply had informed me that 3 vehicles bearing numbers, PA-8942, PE-5461 and PC-5865 had only received to the Ministry.
- (d) An aggregate debit balances of Rs.1,244,968,958 were observed in debtors collection control account as at 31 December 2017.

1.9 Resources of the Institution given to other Government Institutions

The following observations are made.

- (a) In contrary to the provisions in Section 8.3.9 of the Public Enterprises Circular No. PED/12 of 02 June 2003, 71 employees had been released to the line Ministry by 31 December 2017 and the Board had paid Rs 87,840,261 as salaries on behalf of those employees from December 2015 up to 31 December 2017. Nevertheless, only 28 of the above employees had actively contributed to the duties of the Ministry. Further salaries for those employees paid by the Board had not been reimbursed by the Ministry.
- (b) Out of the above employees, 40 employees had been recruited on contract basis as Coordinators. However, the post of Coordinator is not in the approved cadre of the Board.
- (c) Further, 11 motor vehicles were also released to the line Ministry during the period of January to December 2017 and a sum of Rs.1,093,567 had been incurred for repairs and licenses of those vehicles.

1.7 Staff Administration

The following observations are made.

- (a) The Board had not taken actions to fill 817 vacancies remained at the main operational level posts such as the Managers / Engineer (Mechanical), Engineer (Electrical), Engineer (Civil), Middle Level Technical (ML- T) Clerical and Allied Categories, Other Skilled Grade etc. even up to the end of the year under review.

- (b) Action had not been taken to obtain the approval for Scheme of Recruitments and Promotions from the Department of Management Services, as specified in the Management Services Department's Circular No. 30 of 22 September 2006.
- (c) According to the information furnished by the Board, the Board had released 140 various categories staff to the foreign funded water supply and sewerage projects from the year 2000 to 2016. Salaries and other allowances paid by the Board had been reimbursed by those Projects to the Board. 02 Deputy General Managers, 18 Assistant General Managers, 28 Chief Engineers 41 Engineers, 40 Engineering assistant 3 Sociologist were among them.
- (d) 223 employees had been recruited on contract basis at the end of the year under review and its included a civil engineer and a quantity surveyor.
- (e) 508 employees had been recruited as multiple skilled trainees in the year 2015 without the approval of Secretary to the Treasury and Department of Management Services and 491 employees of them had been confirmed in the service during the year 2016. Further, a sum of Rs.563.5 million had been paid as salaries for them for the year 2016 to 2018.
- (f) Apart from the number of employees recruited as stated above, 1,628 employees had been deployed on service contract agreements in the Board and a sum of Rs.449 million had been paid for them for the year 2017.
- (g) Total cost per employees for the past five years are as follows.

4.8 Apparent Irregularities

The following observations are made.

- (a) A cash fraud of Rs.246.66 million committed at Trincomalee, Kelaniya and Ampara Regions during the period of 1999 to 2006 had not been recovered from the persons responsible even up to 31 December 2016.
- (b) A fraud of Rs.1,145,235 committed at Kaluthara Region by a meter reader during 2017 had not been recovered from the persons responsible up to 31 August 2018.

5. Achievement of Sustainable Development Goals

Upon being aware of the Agenda - 2030 on Sustainable Development Goals of the United Nations, the Board had identified the sustainable development goals such as achieve universal and equitable access to safe and affordable drinking water for all and achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situation in 2030. However, no action had been taken to identify the other goals, targets, and milestones coming under the scope of the Board. Further, no internal circulars or guidelines had been issued by the Board in order to implement the Sustainable Development Goals.

6. Accountability and Good Governance

6.1 Internal Auditing

The following observations are made.

- (a) 16 vacancies are existed in the Internal Audit Section including an Assistant General Manager, 5 Chief Internal Auditors, three Internal Auditors and an Engineer.
- (b) Even though a large number of water supply and sanitation services projects using local and foreign funds are carrying out by the Board, adequate number of staff had not attached to the technical audit section of the Board.
- (c) Adequate internal audit had not been conducted with regard to several project activities for the year under review

6.2 Procurement and Contract Process

6.2.1 Procurements

The following observations are made.

- (a) As per Section 4.2.1 (a) of the Government Procurement Guidelines a Master Procurement Plan had not been prepared by the Board.
- (b) 370 computers valued at Rs.39 million purchased during the year under review had not been included in the Procurement Plan prepared for the year 2017.
- (c) Approval of the Board of Directors had not been obtained for the detailed Procurement Plan prepared for the year 2017.

- (d) Procurement Plan had not been reviewed and updated periodically.
- (e) As per the test check done by audit it was observed that in some instances liquidated damages had not been charged from the supplier in terms of the provisions in the letters of offering.

6. Budgetary Control

Significant variances ranging from 11 per cent to 57 per cent was observed between the budgeted and actual income and expenditure of the Board for the year under review, that indicating that the budget had not been made use as an effective instrument of management control.

7. Systems and Controls

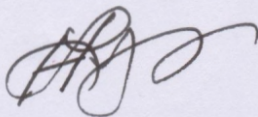
Weaknesses in systems and controls observed during the course of audit were brought to the notice of the Chairman of the Board from time to time. Special attention is needed in respect of following areas of control.

Control Area

Observation

- | | |
|-----------------------|---|
| (a) Accounting | Failure to reconcile the control accounts, work-in-progress balances and accounting data with inter-departmental data. |
| (b) Assets Management | <p>(i) Duplication of same fixed assets in different Regions.</p> <p>(ii) Not reviewing and reinstating the value of fixed and intangible assets.</p> <p>(iii) Not capitalizing the fixed assets even though the projects had been completed.</p> <p>(iv) Failure to investigate about the work in progress balances remained unchanged for a long period of time.</p> <p>(v) Failure to complete board of survey on time.</p> <p>(vi) Releasing of own vehicles to other institutions.</p> <p>(vii) Failure to acquire land prior to commencement of project activities.</p> |
| (c) Inventory Control | (i) Un-reconciled the physically verified balances together with ledger balances. |

- | | |
|---|---|
| (d) Project Administration and Performance Review | <ul style="list-style-type: none"> (ii) Prevailing long outstanding stocks in transits and unmoving and slow moving stocks in the stores (iii) Failure to maintain integrated stock control system. (iv) Procuring material excessively. (v) Store materials in warehouses with no safety and adequate space. |
| (e) Accounting of Rechargeable Scheme | <ul style="list-style-type: none"> (i) Failure to complete the projects in expected time period and extending the time period of most projects without valid reasons. (ii) Unable to properly carry out the feasibility studies. (iii) Non-compliance with Government Procurement Guidelines (iv) Cost had highly escalated due to time extension and weaknesses in fund utilization. (v) Awarding contracts with contract amount highly deviated from engineer estimates. <p>Advance received for the rechargeable schemes remained in the custody for long a period without being set off relevant expenditure incurred.</p> |
| (g) Personnel Management | <ul style="list-style-type: none"> (i) Releasing of human resources to other institutions without required authority. (ii) Recruitment of employees without obtaining approvals from General Treasury. (iii) Promoting employees, based on forged certificates. (iv) Delays in taking disciplinary actions against employees. |



H. M. Gamini Wijesinghe
Auditor General

Abbreviations

AAT	- Association of Accounting Technicians	DIG	- Deputy Inspector General
AAS	- Atomic Absorption Spectrometer	DS	- Divisional Secretariat
ADB	- Asian Development Bank	DSD	- Divisional Secretariat Division
AE	- Area Engineer	EA	- Engineering Assistance
AFD	- Agency of French Development	EBARA	- Ebara Corporation
AGM	- Assistant General Manager	EDC	- Export Development Canada
AIT	- Asian Institute of Technology	EDCF	- Economic Development Cooperation Fund
AT	- Appropriate Technology	EIA	- Environmental Impact Assessment
BMICH	- Bandaranayaka Memorial International Conference Hall	FIDIC	- International Federation of Consulting Engineers
BOD	- Biochemical Oxygen Demand	GCWWMIP	- Greater Colombo Water and Wastewater Management Improvement Investment Programme
BOQ	- Bill of Quantity	GCWRP	- Greater Colombo Water Rehabilitation Project
BOI	- Board of Investment	GI	- Galvanised Iron
CAS	- Chinese Academy of Science	GIS	- Geographic Information System
CBO	- Community Based Organization	GM	- General Manager
CCN	- Colombo City North	GN	- Grama Niladari
CCOEC	- China National Corporation for Overseas Economic Cooperation	GND	- Grama Niladari Division
CCS	- Colombo City South	GOSL	- Government of Sri Lanka
CCTV	- Closed Circuit Television	GPOBA	- Global Partnership on Output-Based Aid
CD	- Compact Disc	GS	- Grama Sewa
CEA	- Central Environment Authority	GW	- Ground Water
CEB	- Ceylon Electricity Board	HDPE	- High Density Poly Ethelene
CFL	- Compact Florescent Lamps	HNDE	- High National Diploma in Technology
CI	- Cast Iron	HRM	- Human Resource Management
CKDu	- Chronic Kidney Disease of Unknown Etiology	ICP	- Inductively Coupled Plasma
CMC	- Colombo Municipal Council	ICT	- Information and Communication Technology
COD	- Chemical Oxygen Demand	ICTA	- Information & Communication Technology Agency
CP	- Corporate Planning	ICTAD	- Institute for Construction Training & Development
CSI	- Customer Satisfaction Index	ICWG	- Inter Country Working Group
Cu.m	- Cubic meter	IDU	- Illegal Detection Unit
CWSSIP	- Colombo Water Supply Service Improvement Project	IWSP	- Internal Water Supply Project
DEWATS	- Decentralized Wastewater Treatment and Disposal System	IEE	- Initial Environmental Examination
DFCC	- Development Finance Corporation of Ceylon		
DGM	- Deputy General Manager		
DI	- Ductile Iron		

IESL	- Institution of Engineers Sri Lanka	NDT	- National Diploma Technology
IMS	-Inventory Management System	NHDA	- National Housing Development Authority
IoT	-Internet of Things	NIBM	- National Institute of Business Management
ISAN	-International Standard Audiovisual Number	NPD	- National Planning Department
ISO	-International Organization for Standardization	NRW	- Non-Revenue Water
ISMM	-Institute of Supplies of Material Management	NWSDB	- National Water Supply & Drainage Board
IT	-Information Technology	NTU	- Nephelometric Turbidity Unit
ITEC	-Indian Technical Economic Cooperation	O&M	- Operation & Maintenance
JICA	-Japan International Cooperation Agency	OIC	- Officer in Charge
JPY	-Japanese Yen	P&D	- Planning & Designs
JKWSSP	-Jaffna Kilinochchi Water Supply and Sanitation Project	PAC	- Project Appraisal Committee
KEITI	- Korea Environmental Industry and Technology Institute	PD	- Project Director
km	- kilo meter	PDMRC	- Planning & Design Manual Review Committee
KOICA	-Korea International Cooperation Agency	PR	- Public Relation
KGC	-Kolon Global Corporation	PRDA	- Provincial Road Development Authority
KVA	- Kilo Volt Ampere	PWD	- Public Works Department
LA	- Local Authorities	PWTP	-Package Water Treatment Plant
LED	- Light Emitting Diode	R&D	- Research & Development
LKR	-Sri Lankan Rupee	RDA	- Road Development Authority
MASL	-Mahaweli Authority Sri Lanka	RFP	- Request for Proposal
M&E	- Mechanical & Electrical	RM	-Regional Manager
MC	-Municipal Council	RO	- Reverse Osmosis
MCB	- Mahaweli Consultancy Bureau	RSC	- Regional Support Centre
MCM	- Million Cubic Meters	RSC(WN)	- Regional Support Centre (Western North)
MCPWS	-Ministry of City Planning and Water Supply	RSC(W)	- Regional Support Centre (Western South)
MD&T	- Manpower Development & Training	RSC(NC)	- Regional Support Centre (North Central)
MIS	- Management Information System	RSC(S)	- Regional Support Centre (Southern)
MOU	- Memorandum of Understanding	RSC(E)	- Regional Support Centre (East)
MOH	- Medical Officer	RSC(WC)	- Regional Support Centre (Western Central)
MSD	-Management Services Department	RSC(N)	- Regional Support Centre (North)
MS	- Micro Soft	RWS	- Rural Water Supply
NAITA	- National Apprentices & Industrial Training Authority		
NC	-North Central		
NDB	- National Development Bank		

SCADA	- Supervisory Control and Data Acquisition
SACOSAN	- South Asian Conference on Sanitation
SCAPC	- Standing Cabinet Appointed Procurement Committee
SHIFT	- Sanitation and Hygiene Initiative for Towns
SIA	- Social Impact Assessment
SIDA	- Swedish International Development Agency
SLSI	- Standards Institute
SMS	- Short Message Service
SSR	- Social Screening Reports
TCE	- Total Cost Estimate
TEC	- Total Estimated.Cost/ Technical Evaluation Committee
TSS	- Total Suspended Solids
UNICEF	- United Nations International Children's Education Fund
UoP	- University of Peradeniya
UPVC	- Unplasticised Poly Vinyl Chloride
USD	- United States Dollar
VAT	- Value Added Tax
VPN	- Virtual Private Network
VSD	- Variable Speed Drive
WASSIP	- Water Supply & Sanitation Improvement Project
WHO	- World Health Organization
WS	- Water Supply
WSP	- Water Supply Project/Water Safety Plan
WSDP	- Water Supply Development Project
WTP	- Water Treatment Plant
WWDS	- WasteWater Disposal System
WWTP	- WasteWater Treatment Plant

Corporate Information

Name of the Organization

National Water Supply & Drainage Board (NWSDB)

Legal Form

Government Owned Statutory Board

Date of Establishment

1974.03.01 by Act of Parliament

NWSDB Law, No. 2 of 1974

1992.03.11 the Act was amended

NWSDB (Amendment) Act, No. 13 of 1992

Tax Identification No.

4090 31820

VAT Registration No.

4090 31820 7000

Contact, Head Office

Galle Road, Ratmalana, Sri Lanka

Tel: +94 11 2638999 (hunting),

+94 11 2637194, +94 11 2611589

Fax: +94 11 2636449

Email: gm@waterboard.lk

Web: www.waterboard.lk

Line Ministry

Ministry of City Planning and Water Supply

Call Centre

1939 (24 hours)

Customer Care Unit, Head Office

+94 11 2623623 (During office hours)

Banker

Bank of Ceylon

Auditors

Deputy General Manager (Internal Audit)

Government Audit Unit

Board of Directors

Eng. K. A. Ansar - Chairman, NWSDB (Since 05.02.2015)

Mr. M. Shafeek Rajabdeen - Vice Chairman, NWSDB (Since 10.03.2015)

Mr. P. I. T. Mahilal Silva - Working Director, NWSDB (Since 05.02.2015)

Dr. P. G. Maheepala - Director General of Health Services
Ministry of Health, Board Member, NWSDB (Up to 02.01.2017)

Dr. T. B. Ananda Jayalal - Director Youth, Elderly and Disabled
Persons, Ministry of Health Nutrition & Indigenous Medicine
Board Member, NWSDB (Since 20.01.2017)

Mr. J. M. U. P. Jayamaha - Additional Director General
Department of Public Enterprises, Board Member, NWSDB
(Since 02.04.2015)

Mr. Shantha Rathnayake - Board Member, NWSDB
(Since 12.02.2015)

Mrs. K. A. Subadra Walpola - Senior Assistant Secretary
Ministry of Local Government & Provincial Councils, Board Member,
NWSDB (Since 13.02.2015)

Secretary to the Board

Mrs. W. P. Sandamali De Silva

Senior Management

Eng. D. U. Sumanasekara - General Manager

Eng. W. B. G. Fernando - Addl. GM (Corporate Services)

Eng. J.R.B. Nedurana - Addl. GM (Sewerage)

Eng. R. H. Ruvinis - Addl. GM (Water Supply Projects)

Eng. S. G. J. Rajkumar - Addl. GM (Northern/ Central)

Eng. B.S. Wijemanna - Addl. GM (Western)

Eng. N.H.R. Kulanatha - Addl. GM (Southern/ Eastern)

Eng. Wijethunga - Addl. GM (Policy and Planning)

Mr. D. Thotawatte - Addl. GM (Finance)

Mr. G.K. Iddamalgoda - Addl. GM (Human Resource
Management)

Deputy General Managers of Divisions

Eng. U. Ratnapala (Project Co-ordination)

Eng. S. G. Jayawardena (Sewerage)

Eng. K. W. Premasiri (Planning & Design)

Eng. K. P. R. S. Samarasinghe (Development)

Eng. S. Sumanaweera (Production - Western)

Eng. K. D. P. F. Siriwardana (Corporate Planning)

Eng. S.G.G. Rajkumar (Commercial)

Eng. Duleep Goonawardene (RWS)

Eng. Jaliya Lalith Seekkuge (ADB Projects)

Eng. B. L. Goonaratne (M&E)

Eng. J. Chandradasa (Information Technology)

Ms. M. M. S. Peiris (Finance)

Ms. A. P. S. De Silva (Costing)

Mr. R. M. A. S. Weerasena (Internal Audit)

Mrs. N. Y. S. Abeygunawardena (Industrial Relations)

Mr. R. M. A. Bandara (Supplies)

Deputy General Managers of Provinces/ RSCs

Eng. T. W. S. Perera (Western - Central)

Eng. C. C. H. S. Fernando (Western - South)

Eng. S.A. Rasheed (East)

Eng. R. A. B. S. Mendis (Western - North)

Eng. M.K.D.J.H. Meegoda (Central)

Eng. R. S. Liyanage (Uva)

Eng. G. V. Wijerathne (North Central)

Eng. Mrs. I. M. W. K. Illangasinghe (North Western)

Eng. M.M. Uma Lebbe (North)

Eng. W. W. Liyanage (Sabaragamuwa)

Eng. J.K.S. Pathirana (Southern)

Addl.GMS/ Deputy General Managers working as Project Directors

Eng. R. Kulanatha - Wastewater disposal for

Rathmalana Moratuwa & Ja-Ela/ Ekala Area

Eng. B. S. Wijemanna - Greater Colombo Rehabilitation Project

Eng. K. J. V. A. Perera - Gampaha Attanagalla Water Supply Project)

Eng. R. A. B. S. Mendis - ADB 5th Project

Eng. K.P.R.S. Samarasinghe - Labugama Kalatuwawa WSP and Kolonna
Balangoda WSP

Eng. S.A. Rasheed - Colombo Water Supply Service Improvement Project

Eng. P. P. Kahaduwa - Ruhunupura WSP

Eng. R.S. Liyanage - Mahiyanganaya WSP and Badulla Haliela WSP

Eng. R. A. A. Ranawaka - SHIFT WSP

Eng. I. V. W. Ediriweera - Ambatale / Orugodawatta Pipe Laying Project

