

வார்டிக வார்டி - 2016
வருடாந்திர அறிக்கை - 2016
ANNUAL REPORT - 2016



வார்டிக னா ஈர ஈதீபந் கலமனாகர்னா அமாதபாண்ட
நீர்ப்பாசன, நீர்வள முகாமைத்துவ அமைச்சு
MINISTRY OF IRRIGATION & WATER RESOURCES MANAGEMENT

ஈர ஈதீபந் மதுகல
நீர் வளச் சபை
WATER RESOURCES BOARD

ANNUAL REPORT

2016



Water Resources Board

No. 2A, Hector Kobbakaduwa Mawatha

Colombo - 07

www.wrb.gov.lk

Annual Report - 2016

Water Resources Board

1. Introduction

The Water Resources Board was established in 1966 under the Act No. 29 of 1964, as an advisory body to the Minister on all matters concerning the control and utilization of the Water Resources in Sri Lanka.

In 1978, Groundwater Division of the Irrigation Department was transferred to the Water Resources Board and functions of the Board were expanded and commenced the implementation activities.

The Water Resources Board Act was amended and passed by the Parliament in 1999 to enable the Water Resources Board to pay more emphasis on matters pertaining to Groundwater Resources in Sri Lanka.

2. Vision

Adequate access to clean and safe water for all

3. Mission

To advise the government and the people on assessing, conserving, harnessing, developing and frugally utilizing particularly the finite groundwater resources in the country working in close collaboration with the rural society, relevant central and local government departments/ divisions/ authorities/ institutions, national and international organizations, and scientific communities here and abroad.

4. Objectives

- i. Carry out research on groundwater resources of the country.
- ii. Collection of data on groundwater resources and maintain a groundwater data base.
- iii. Carry out hydrogeological surveys
- iv. Awareness creation on the groundwater related issues.
- v. Assessment of groundwater resources.
- vi. Implementation of the activities of the board with the coordination of other institutions
- vii. Groundwater development and management.

5. Functions

- i. Carry out research on groundwater resources of Sri Lanka
- ii. Interpretation of data on groundwater resources development
- iii. Carry out hydrogeological surveys to detect groundwater resources
- iv. Identification of groundwater potential zones
- v. Identification of groundwater sources by using geo scientific methods
- vi. Carry out studies for groundwater resources development
- vii. Analysis of water samples, chemically, bacteriologically and for heavy metals
- viii. Collect and maintain groundwater data and preparation of hydrogeological maps

6. Director Board

i Mr. A.C.M.Zulfikar	-	Chairman
ii Mr. S.P.Wikkramaarachchi	-	Working Director
iii M.S.Sathish Kumar	-	Director
iv Mrs.J.K.N.Samanmalee	-	Treasury Representative
v Mr.R.M.C.Ratnayake	-	Director
vi Mr.T.H.Ashoka De Mel	-	Director

Board Meetings

Five (05) Board meetings were held in the year under review.

6.1. Audit and Management Committee

i Mrs.J.K.N.Samanmalee	- Chairman	- Treasury Representative
ii Mr. S.P.Wikkramaarachchi	- Member	- Working Direct
iii Mr.T.W.M.P.I.Indika Bandara	- Member	- Director
iv Mr.R.M.C.Ratnayake	- Member	- Director
v Mr.T.H.Ashoka De Mel	- Member	- Director
vi Mr. R.S. Wijesekera	- Secretary	- General Manager

6.1.1. Audit and Management Committee Meetings

Four (04) audit and management committee meetings were held during the year 2016.

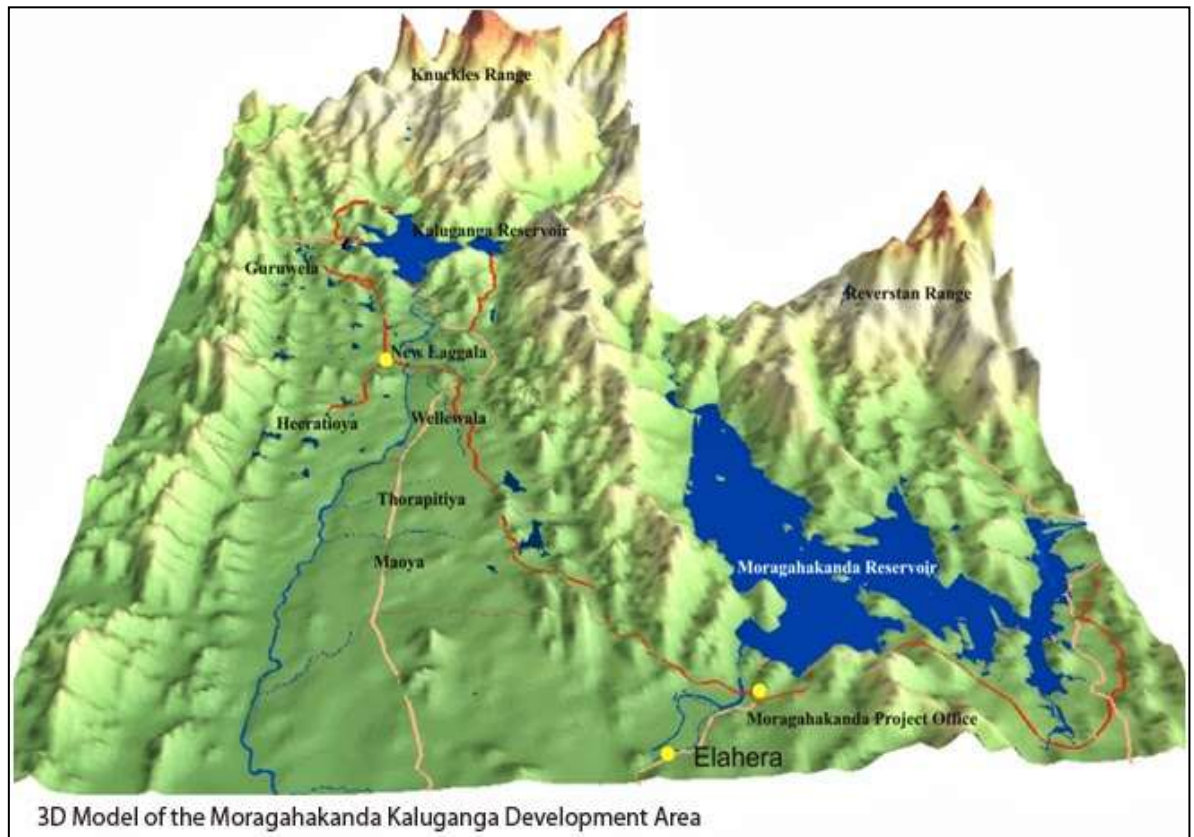
6.2. Senior Executive Officers – year 2016

i. Mr. R.S.Wijesekera	- General Manager
ii. Mr. G.R.R. Karunaratne	- D.G.M (Research & Development)
iii. Mr P.P.S.R.K. Pathirana	- D.G.M (Operation)
iv. Mr. A.B.M. Chandrasiri	- Assistant General Manager (Finance)
v. Mr. M.A. Pushpakumara	- Assistant General Manager (Administration)
vi. Mr. M.J. Deshapriya	- Assistant General Manager (Engineering)
vii.Mr.R.M.S.Rathnayaka	- Assistant General Manager (Hydrogeology)

7. Operational Activities Performed in the year 2016

PROGRESS REPORT OF MORAGAHAKANDE KALUGANGA DEVELOPMENT PROJECT 2016

The Moragahakanda Kaluganga Development Project which is a major component of Mahaweli Master Plan has been progressing steadily and is to improve irrigation facilities to existing water scarce farmlands (82,000ha) and most importantly open up new land (5000ha) for agriculture development in Northern, North Central, Eastern and North Western provinces. The Project will generate 25MW hydro-power to the national grid. Increasing inland fish production, provision of *potable and industrial water requirements*, Eco tourism and effective flood control are the other targets of the project.



As per the request of Project Director of Moragahakanda Development Project, the agro well tube well program and Hand Pump Tube Well Program were started to identify and construction of deep tube wells to the areas of Hamlet 1, 2, & 3 in Thorapitiya and Ma Oya, Lel Oya, etc. where the families were resettled. The purpose of these wells was to utilize groundwater for these families for their cultivation until the irrigation water received from Moragahakanda Development Project, once it is completed.

The plan was to establish tube wells for each allocated spaces given for these families by Mahaweli Authority. These lands are located in the peripheral area of their living places.

In this context, the detailed hydrogeological and geophysical investigations were carried out to identify the most potential groundwater bearing zones for the selection of most suitable locations for the construction of production agro tube wells within these land blocks to overcome the water demand for their cultivation practices.

The estimation of groundwater that could be extracted within these locations are to be assessed through the analysis of safe well yield test (test pumping) once the tube wells were constructed.

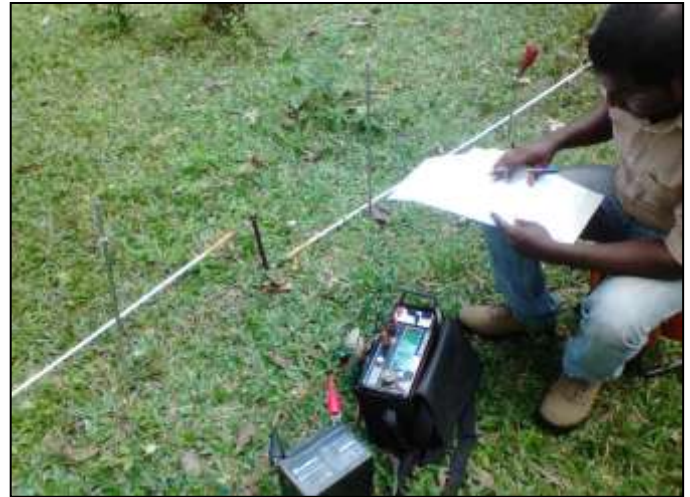
7.1 Resistivity Survey Method

The resistivity method is one of the most important survey techniques on the ground water exploration activities that have been applied to carry out the geophysical survey. The aim of the geophysical survey was to determine the sub surface conditions including structural weak zones,

thickness of soil overburden, weathered rock and to observe changes in the quality of groundwater with depths. The instrument called “ABEM-1000” is used to obtain the apparent resistivity values of the sub surface formation according to “Schlumberger” electronic configuration.



Conducting 1D Resistivity surveys



Tube Well Drilling



Conducting 24 hours pumping test

7.2 Physical Progress

Number of Geo physical investigations and Tube well constructions were completed for both Agro Tube Well and Hand Pump Tube Well program. Further, Installation of Hand pumps and Iron Removal Plants on Hand Pump Tube Wells also were completed parallel to other activities. Total physical progress of 2016 is as follows.

Agro Tube Well Program

- I. Geo Physical Investigations : 20
- II. Tube Well Constructions : 13

Hand Pump Tube Well Program

- I. Geo Physical Investigations : 26
- II. Tube Well Constructions : 26
- III. Hand Pump Installations : 30
- IV. Iron Removal Plant Installations : 11

7.3 Financial Progress

Completed work under Moragahakande Kaluganga Development Project was invoiced under each file number. Details of all invoiced work are as follows.

Total Financial Progress of Moragahakande Kaluganga Development Project in 2016 is **13,735,077.19** rupees only.

8. Western Province

YEAR 2016 PROGRESS OF COMMERCIAL WORKS FOR THE WESTERN PROVINCE

TYPE OF JOB	NOS OF COMPLETED JOBS
Hydrogeological Investigations	72
Construction of Tube Wells	8
Pumping Tests	23
Cleaning of Tube Wells	18
Chemical Analysis of Water Sample	77
Microbiological Analysis of Water Sample	19

9. Northern Province

There is a project under the treasury grant funds.

9.1 Jaffna well monitoring project

9.2 Transfer of WRB North Regional Office

The WRB North province office was operated in a privately owned building on rent at 699, Point Pedro road, Nallur, Jaffna from April 2005. This office and provincial Laboratory was transferred to

the old Divisional Secretariat Building located at Main Street, Jaffna on 19th of May 2016. This was ceremonially opened by Hon. Minister Gamini Vijith Vijayamuni Soyza, Ministry of Irrigation & Water Resources Management.



Fig 1: Opening ceremony of new office building at Old Divisional Secretariat Building at Main Street of Jaffna

9.3 Projects in Progress

a.) Dam Safety and Water Resources Planning Project (DSWRPP-AF)

The groundwater resources in Sri Lanka have been under threat over the past three decades with the increased industrial development and extensive application of fertilizer in agricultural activities together with high extractions resulting rapid groundwater depletion, saline intrusion and groundwater pollution. The early identification of these issues and implementation of remedial measures are of vital importance since the groundwater contamination is irreversible if significant damages have already occurred.

The spatio-temporal assessment of hydrogeological setup and present water chemistry of the groundwater resources of the country is of prime importance before the establishment of systematic long term groundwater monitoring network which is essential before the implementation of any remedial plans.

In this respect, It was identified 07 Pilot areas as an initiative to identify threats, impact on these groundwater resources through comprehensive studies under component-2 of DSWRPP and subsequently the establishment of operational groundwater monitoring network. The identified pilot areas are selective DSD's of Jaffna, A'pura, Mathale, Puttalam, Gampaha, Ampara and Badulla Districts.

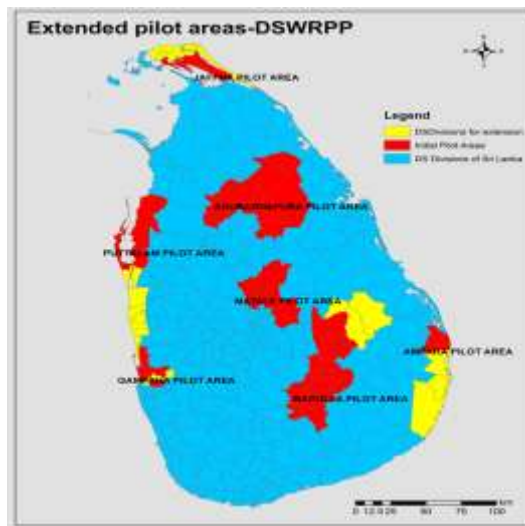
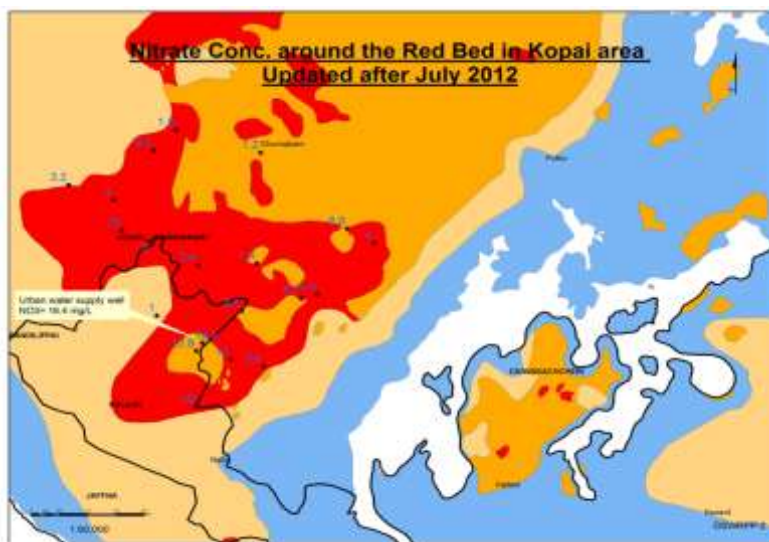


Fig2: Pilot areas of groundwater monitoring program

Elevated levels of NO_3 could also be detected at the areas of Kopai, Thirunalveli, Nallur, Kaithadi in the region. This is an alarming threat and continuous monitoring and mitigatory measures are required since these hazardous zones may be rapidly spread out to the entire Jaffna and Nallur areas as well due to karstic nature of the limestone.

The high mineral enrichment is encountered in the areas towards the lagoonal boundaries possibly a threat indicating of saline water intrusion especially along the Karaveddi-Chavakachcheri DSD boundary.



which is started from 2013. The quality variation of groundwater is assessed for future planning and water resources management of the Peninsula. The summary of the work done in year 2016 is as follows and the rest of the activities are to be conducted as in the work scheduled under DSWRPP-AF.

SN	Activity	Progress (Nos)	Remark
1	Water Quality monitoring in established points in the Peninsula	102	Dry period; preparation spatio-temporal water quality maps to identify the variation
2		102	Wet period; preparation spatio-temporal water quality maps to identify the variation
3	Test pumping	05	Aquifer property assessment
4	Well leveling	32	Assessment of groundwater flow pattern



Fig4: Established monitoring locations in the peninsula for long term quality variation assessment

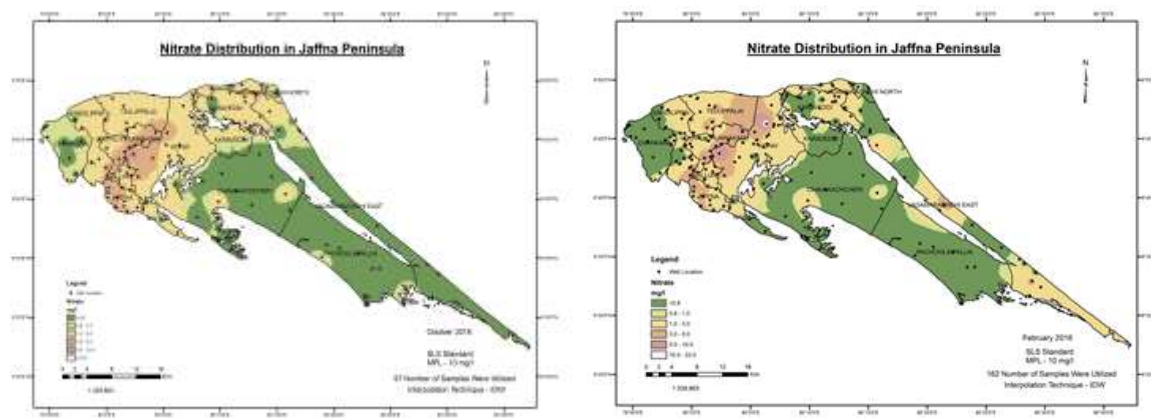


Fig5: Nitrate variation in groundwater during pre monsoon and post monsoon of the year 2016

b.) Treasury and Ministry Funded Projects

During the year 2016, there were two main projects carried out focusing to assess the hydrogeology and water chemistry of the groundwater in north region which is in progress for the year 2017 as well under treasury funds.

1. Jaffna well monitoring project
2. Hydro geological study in Kilinochchi District (Vavuniya-Kilinochchi Project)

In addition, the Hydro geological study on the assessment of groundwater contamination in Chunnakam area is in progress with financial support from the Ministry of Irrigation and Water Resources Management.

9.4.1 Jaffna Well Monitoring Project

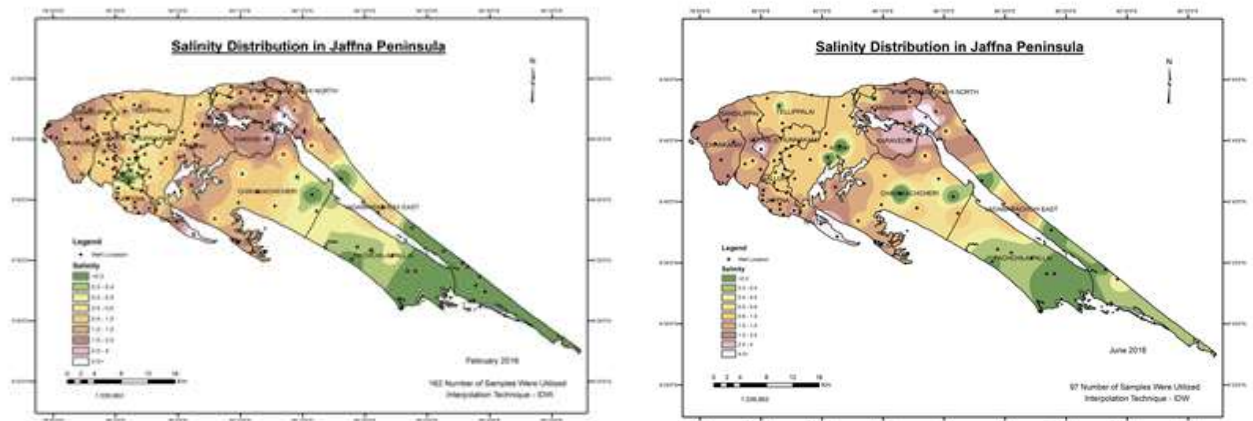
The Main objective is to identify the status of groundwater in the peninsula and establishment of long term groundwater monitoring network to identify spatio-temporal variation for groundwater resources management through corrective planning and remediation.

In addition to the main objective, an identification of the availability of fresh groundwater areas through quality assessment and identification of the influence of agricultural practices, bacteriological pollution and other factors to the groundwater of the Peninsula and furthermore, to interpret the hydro-chemical evolution of groundwater from the limestone aquifer by determining the chemical characteristics and the most relevant controls on the groundwater composition.

This was implemented in year 2016 and the main scope of the project was well surveys with quality assessment for identify the monitoring location for the network of peninsula and geophysical investigations, test borehole drilling with subsequent test pumping to determine the groundwater potential and aquifer properties. The spatio-temporal maps of water quality were utilized to assess the quality variation over time and space in the peninsula.

The water quality monitoring on the established network was performed quarterly basis including post and pre monsoon periods for year 2016 and it is continued for year 2017 as well.

SN	Activity	Progress (Nos)	Remark
1	Water Quality monitoring in established points in the Peninsula on quarterly basis	162	Pre monsoon
2		162	Post monsoon
3		162	June
4		162	March
5	Geophysical investigations	20	Hydrogeological assessment on aquifers
6	Test borehole drilling	16	Hydrogeological assessment on aquifers
6	Test pumping	15	Determine of aquifer properties
7	Well leveling	12	Assessment of groundwater flow pattern



The rest of the activities are in progress for the year 2017.

9.4.2 Hydro geological study in Kilinochchi District (Vavuniya-Kilinochchi Project)

This is a part of Vavuniya-Kilinochchi Project and was on going in 2016. Sampling and Chemical analysis has been done in dry & wet season 2016. 2 terms sample collected in the year and 25 samples collected for each term.

10 Hydrogeological study on the assessment of groundwater contamination in Chunnakum

The primary objective of this hydrogeological study is to protect the Chunnakum aquifer from any possible contamination in future and assessment of present condition. The specific objectives were to identify the source of contaminants and type of contaminants, the assessment of present extent of pollution level into the Chunnakum aquifer, identify the possible preventive measures to minimize or arrest further pollution of groundwater in the area.

The following field activities were carried out during the last quarter of the year 2016 to assess the contamination of the area under this Chunnakum study.



Fig7: In-situ chemical testing of groundwater and well leveling for assessment groundwater flow pattern of the area

The final detailed report is in progress which outlined the all-containing data, findings, results and recommendations for possible preventive measures to arrest the Chunnakum aquifer pollution at the focused location.

SN	Activity	Progress (Nos)	Remark
1	Water Quality monitoring through well survey in Chunnakum area	235	Chemical Parameters analysis
2	Geophysical investigations (1D & 2D)	35 and 10	Aquifer assessment
3	Test pumping	15	Aquifer property assessment
4	Well leveling	60	Assessment of groundwater flow
5	Oil & Grease anlysis	100	Identify contamination path ways
6	Heavy metal analysis	100	In progress
7	Report preparation		In progress

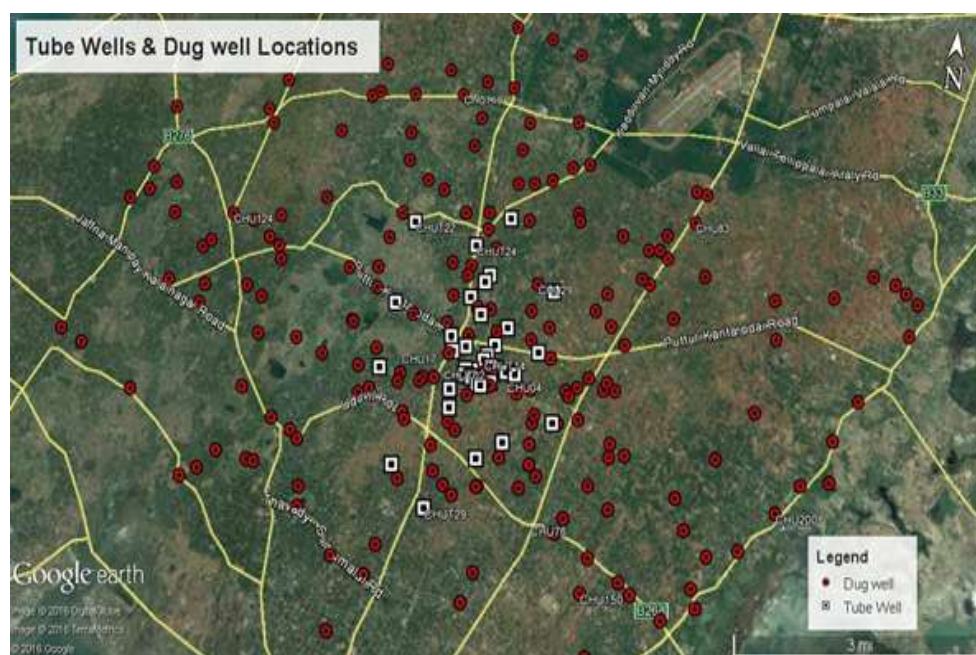


Fig8: The constructed tube well and dug well locations utilized for the water quality assessment

a.) Commercial work

1.) Consultancy Services for Ponds Rehabilitation in Jaffna City Region

Entire peninsular of Jaffna is relatively flat land and the ponds located within the peninsular are either natural formations or man-made. These ponds may have a direct link with the ground water levels and in some instances may be acting as ground water re-charging points. The ponds are connected with man-made canals, waterways & road side drains and act as a part of the storm water disposal system. Ponds also have a direct influence over rain water floods in Jaffna because they act as water retention

points during heavy monsoon rains. This process has led to possible accumulation of silt inside the ponds.

This study includes all 43 ponds within JMC limits and focal objective of this assignment is conduct site investigations to check on the thickness of accumulated silt and to conduct investigations of soil strata underneath to determine whether it is safe to remove the accumulated silt, and decide on the safe depth of de-silting.

Scope of the work

The methodology includes of geotechnical investigations through auguring to determine the silt depth level and recommendations of desiltation depth levels of each pond based on the silt information result from auguring. The construction monitoring boreholes adjoin to each pond is utilized for baseline water quality survey and subsequent water quality monitoring to identify the quality changes after desiltation process is completed. Further, all elevation and location is assessed by the DGPS leveling techniques which gives the elevation in MSL. Under this project following works were performed by Jaffna provincial office.

SN	Activity	Progress (Nos)	Remark
1	Water Quality monitoring on constructed monitoring boreholes	35	Chemical Parameters analysis
2	Geophysical investigations (1D & 2D)	35	Aquifer assessment to identify the location for monitoring borehole construction
3	Test pumping	10	Aquifer property assessment
4	Well leveling	26	Assessment of all elevation with respect to MSL and assessing the groundwater flow pattern
5	Geotechnical investigations through auguring by NBRO	40	Assessment of silt depth level and recommending the desilt levels
6	Report preparation		Silt depth brief report for first 22 ponds is in progress

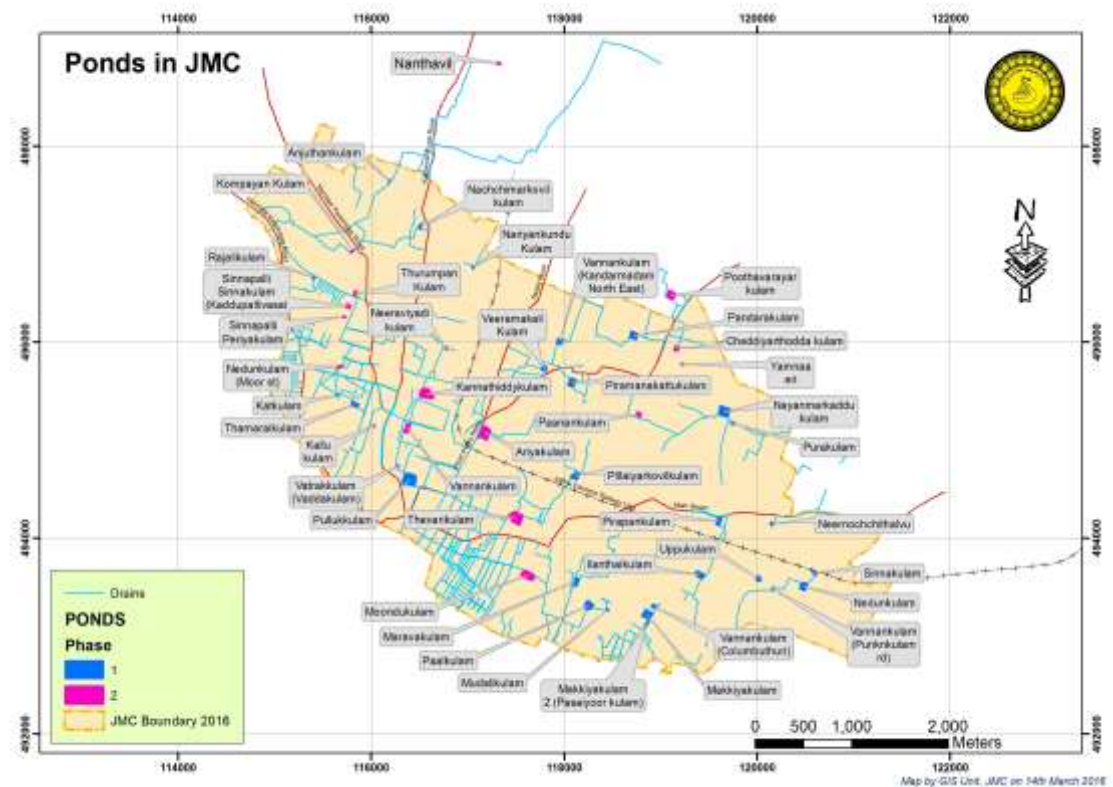


Fig 10: Pond distribution map of within JMC area which is focused on desilting process

The total consultancy service for this work is 12.4 Mn and the geotechnical investigations on the 43 ponds are carried out by the National Building & Research Organization (NBRO).

Commercial Activities

After the new establishment of the provincial office, the projects and commercial activities were completely handled by the staff of the North provincial office. Previously the staff was employed from other provinces to cover up the work. There were two main commercial activities were performed at Keeramalei and Karathivu areas where these activities could be regarded as new development processes after the conflict ended in 2009. One is the establishment of new saltern project at Karathivu and the other work is to establishing of a systematic waste disposal site at Keeramalei which is handled by CEA. The following table shows the summery of total annual income from each commercial activity.

Serial no	Description of the work	Client	Amount	Remarks
1	Bacteriological & Chemical Analysis	159 Clients	326,197.98	Work completed
2	Thirunalvely pumping test	Thirunalvely Property Developers (PVT) LTD	437,850.00	Work completed
3	Jinna road, Jaffna Pumping test	A. Thewarajah	74,865.00	Work completed
4	Keerimalai, 2D Investigation,	Central Environmental Authority	609,787.50	Work completed
5	Karatheevu, Saltern Establishment project	P. A .Roshan peris	463,286.25	Work completed
6	Pond Rehabilitation Jaffna Municipal area	Ministry of mega polis & western Development	12,400,000.00	Work on process
TOTAL			14,311,986.73	

Human resources and equipment capacity build up of the provincial office - North

The main difficulty of coordinating and management of the activities of commercial or either project work was the lack of the required staff with the necessary capacities. However recently, two new hydrogeologist were assigned for the North to carry out the work from North office itself to increase the efficiency of the work and reducing the cost while expanding the work as well with new projects and commercial works. In addition, it was recruited the other staff to carry out the administrative work and supporting work for the field activities such as geophysical surveys, leveling, test pumping, well monitoring and other maintenance and operational work related to execute within the province whenever required.

With the development work after the end of conflict in North, Water Resources Board has increased the capacity build up at the North Provincial Office with respect to human resources and equipment capacity immensely. New geophysical equipment is further required for the regular activities to step up the work. The new laboratory was established in 2013 and the required equipment has fulfilled for chemical analysis and bacteriological analysis. Still it is in need to develop the laboratory facilities and equipment capacity to carry out the heavy metal analysis work considering the activities engaged at present.

Establishment of new sub offices at the northern Province

With the increasing activities of commercial and research projects, the Water Resources Board has strengthen the administrative and other logistic arrangement for the operation of these said projects more efficiently. Recently after the negotiations with the District Secretary of Jaffna and other local provincial officers in the region, it was succeeded to obtain the lands at Omanthai, Pallai and Jaffna city area for the establishment main provincial office at Jaffna land while others as sub offices to support the activities which operated from main office at Jaffna.



Fig 11: The initial construction stage of the proposed sub office for the North Provincial office at Pallai Land

11. North Central Province

11.1 TREASURY GRANT PROJECTS

Water Resources Board has initiated the research projects on Water quality and quantity of different aquifer systems in Anuradhapura, Vavuniya, Kilinochchi, Polonnaruwa and Trincomalee districts under treasury grants. The details of projects conducted in year 2015 are as follows.

11.1.2. Long term groundwater monitoring of Anuradhapura District & conducting training programme on awareness creation about Water Born Health Hazards and conducting water clinics (RS Project)

With the idea of controlling the Chronic Kidney Disease (CKDu) and other water borne diseases that are widespread in Anuradhapura district, water clinics were organized by the Water Resources

Research & Training Center in order to make the rural people aware on the water quality and related issues and the monitoring of the established network was continued in year 2015. The study was commenced under treasury grant in year 2011 to identify the water quality distribution in surface water, shallow and deep aquifers in different drainage basins in Anuradhapura district and to make specific recommendations for further studies on water quality distribution including long-term monitoring. From January to December, following activities were completed under this project.

Table 02: Activities carried out during the year 2015 under RS Project.

No.	Activity/Description	No. of items
01	Groundwater monitoring & water Sampling	200
02	Chemical analysis of water samples	200
03	Conducting of awareness programme and water clinics	7
04	Data interpretation & recording	

Seven (07) Water clinics were conducted with distribution of leaflets, presentations, water analysis and distribution of fluoride reducing filters.

Table 03: The details of Water clinics conducted during the year 2015

No	D.S.Division	Location/Village	No of participants Attended	No of water Sample analyzed	No of fluoride filters distributed
01	Rajanganaya	Common Building (Funeral Arrangement Society), Yaya 15, Rajanganaya	106	89	-
02	Kekirawa	Ganewalpola-Hinukkiriya Temple	137	174	-
03	Palagala	Pradeshiya Sabha, Palagala	27	56	03
04	Kebathigollawa	Kebathigollawa- Kahatagollewa Common Building	87	101	05
05	Mahawilachchiya	Sri Sudarshanaramaya temple, Bogaha Junction, Mahawilachchiya	36	38	
06	Kahatagasdigiliya	Kahatagasdigiliya- Ambagaswewa temple	60	105	
07	Thalawa	Police Junction, Ihala-Siyabalewa, Eppawala	111	161	
Total			564	724	08

11.1.3. Hydrogeological study in Vavuniya and Kilinochchi districts

The research was initiated in year 2013 under Treasury grant. The project objective is to identify groundwater potential of the area and to see the possibility of developing groundwater sources for future drinking water and small scale irrigated agricultural projects.

The specific objectives of the study is to identify aquifer parameters, it is extensions and demarcates the groundwater potential areas within Vavuniya and Kilinochchi districts. It is expected to identify the groundwater sources for small scale irrigated agriculture and for drinking purposes of the people in the district with the intention of up grading the living standards of the people.

From January 2015 to December 2015 following activities were completed under this project.

Table 04: Activities carried out during the year 2015 under Vavuniya-Kilinochchi Project.

No.	Activity/Description	No. of items
01	Carry out Hydrogeological Survey	20
02	Construction of test bore holes	20
03	Conducting pumping tests	10
04	Levelling of monitoring well points	16
05	Water sampling & well monitoring	122
06	Chemical analysis of water samples	122
07	Data interpretation, recording and report	

Table 05: Test wells drilled and pumping test carried out in Vavuniya and Kilinochchi districts during the year 2015

Test Bore hole No.	DS Division	Location	Pump Test Performed
R13/15/TW 13	Vavuniya North	IlammaradankulamCharch, Omanthai	yes
R13/15/TW 14	Vavuniya South	PuranaGallenRajamahaViharaya, Mahakachchakodiya	-
R21/15/TW08	Vavuniya North	PutthorKovil, Putthor	-
R21/15/TW09	Vavuniya South	Divisional Hospital, Pawakkulama	-
R17/15/TW30	Vavuniya North	V/KuchchukkulamBandaravannianVidyalaya, Mankulam	-
R17/15/TW41	Vavuniya North	WRB Land, Omanthai	-
R17/15/TW38	Poonakary	Mr. Kantharupam'sLanda, Veravil, , Kilinochchi	-
R17/15/TW26	Karachchi	LumbiniViharaya, Kilinochchi	yes
R17/15/TW28	Karachchi	Kn/Tharumapuram G.T.M. School, Tharumapuram, Kilinochchi	-
R17/15/TW27	Karachchi	Kn/ThiruvaiaruMahaVidyalaya , Iranamadu, Kilinochchi	yes
R17/15/TW33	Karachchi	7SLNS Army Camp, Akkarayankulam, Kilinochchi	-
R17/15/TW34	Karachchi	Kn/VannerikkulamMahaVidyalaya, Kilinochchi	-

R17/15/TW37	Karachchi	Konavil G.T.M. School, Kilinochchi	-
R17/15/TW29	Tunukkai	Kokavil Tower Land, Kokavil	yes
R17/15/TW31	Karachchi	573 Brigade Camp, 3 km post, Paranthan	-
R17/15/TW39	Karachchi	Ramanathapuram west G.T.M. School, Vattakachchi	yes
R17/15/TW35	Poonakary	Mukkomban G.T.M. School, Nallur, Poonaryn	-
R17/15/TW32	Karachchi	Primary Health Care Center, Kandavalai, Kilinochchi	-
R17/15/TW36	Poonakary	Kn/JayapuramMahaVidyalaya, Jayapuram	yes
R17/15/TW40	Karachchi	Kilinochchi Mosque, Kilinochchi	yes



A) Leveling of test wells at Vavuniya



B) Geophysical Investigation at Vavuniya
C) Tube Well Drilling at Kilinochchi

11.1.4 TREASURY GRANT PROJECTS

Water Resources Board has initiated the



research projects on Water quality and quantity of different aquifer systems in Anuradhapura, Polonnaruwa and Trincomalee districts under treasury grants. The details of projects conducted in year 2016 are as follows.

11.1.5 Long term groundwater monitoring of Anuradhapura District & conducting training programme on awareness creation about Water Born Health Hazards and conducting water clinics (RS Project)

With the idea of controlling the Chronic Kidney Disease (CKDu) and other water borne diseases that are widespread in Anuradhapura district, water clinics were organized by the Water Resources Research & Training Center in order to make the rural people aware on the water quality and related issues and the monitoring of the established network was continued since the year 2015. The study was commenced under treasury grant in year 2011 to identify the water quality distribution in surface water, shallow and deep aquifers in different drainage basins in Anuradhapura district and to make specific recommendations for further studies on water quality distribution including long-term monitoring. From January to December, following activities were completed under this project.

Table 02: Activities carried out during the year 2016 under RS Project

No.	Activity/Description	No. of items
01	Groundwater monitoring & water Sampling	200
02	Chemical analysis of water samples	200
03	Conducting of awareness programmes and water clinics	5
04	Data interpretation & recording	

Five (05) numbers of Water clinics were conducted with distribution of leaflets, presentations, water analysis and distribution of fluoride reducing filters.

No	D.S.Division	Location/Village	No of participants Attended	No of water Sample analyzed
01	Kahatagasdigiliya	MahaHalmillewa Temple	47	84
02	Rambewa	PrajaShalawa,Kokatiyagollewa, Pihimbiyagollewa	80	132
03	Padaviya	PrajaShalawa,Kumbukwewa,Konketiyawa	43	43
04	Horowpothana	Indrarathanaramaya,ElapathwewaJunction, Horowpothana.	90	101
05	Medawachchiya	PrajaShalawa,Lindawewa,Medawachchiya.	41	57
Total			301	417

Table 03: The details of Water clinics conducted during the year 2016

11.1.6. Water quality study in CKD prevailing areas in Polonnaruwa & Trincomalee district

This study was commenced in year 2014 in Trincomalee and Polonnaruwa Districts under Treasury grant. The main objective of this study is to identify the water quality distribution in CKDu affected areas in Polonnaruwa and Trincomalee.

In 2016,hydrogeological investigations were carried out in Elahera, Lankapura, Welikanda, Dimbulagala & Hingurakgoda DS divisions in Polonnaruwa district and five (05) test wells were constructed in Elahera, Lankapura, Welikanda, Dimbulagala& Hingurakgoda DS divisions in Polonnaruwa district out of which three (03) are hand pump fitted.

Table 04: Activities carried out during the year 2016 under CKD Project at Polonnaruwa&Trincomalee districts

No.	Activity/Description	No. of items
01	Carryout Hydrogeological Investigations	06
02	Construction of Test Wells	05
03	Hand Pump Installation	03
04	Conducting of awareness programme and water clinics	04
05	Data interpretation & recording	

12 DAM SAFETY & WATER RESOURCES PLANNING PROJECT (ANURADHAPURA & MATALE PILOT AREAS)

It is an ongoing project at the Water Resources Research and Training Center at Korakahawewa, Anuradhapura. The project was started in 2011 covering Nuwaragampaltha Central, Rambewa, Medawachchiya, Horowpothana, Kahatagasdigiliya, Kebithigollewa, Padaviya & Galenbindunuwewa DS Divisions in Anuradhapura district and Dambulla, Galewela, Pallepola, Naula and Laggala-Pallegama DS Divisions in Matale district. Monitoring Networks were established on the basis of test results of the initial studies in 2014 in which the longterm monitoring is carried out since then. The study areas were extended to Thirappane, Mahawilachchiya & Padavi-Sripura DS Divisions in Anuradhapura pilot area and Matale, Wilgamuwa, and Yatawatta DS Divisions in Matale District since 2015 where the initial sampling has been completed. Summary report of activities from January 2016 to December 2016 is as follows.

No.	Activity/Description	No. of items
01	Collection of water samples in the established monitoring network	68
02	Analysis of water samples Full Chemical Analysis	68
03	Carryout Hydrogeological Investigations	04
04	Construction of Test Wells	02
05	Data interpretation & recording	

No.	Activity/Description	No. of items
01	Water level Monitoring in the established monitoring network (Monthly)	40
02	Carryout Hydrogeological Investigations	07
03	Construction of Test Wells	02
04	Data interpretation & recording	

Table 05: Activities carried out during the year 2016 under Dam Safety & Water Resources Planning Project in Anuradhapura Pilot area

Table 06: Activities carried out during the year 2016 under Dam Safety & Water Resources Planning Project in Matale Pilot area

12.1 OTHER ACTIVITIES



Other than the commercial activities and project activities some other activities such as the commencement of the construction of new laboratory for the Provincial Office (NC/C) under DSWRPP funds, repairing the circuit bungalow in Anuradhapura and initiating the construction of a new building for Vavuniya Workshop premises in which the activities are still going on.

Photo 04: Newly constructing laboratory building at Provincial office (NC / C)



Photo 05: Repaired Circuit Bungalow at Anuradhapura

13. North Western Province

The details of the activities commenced during the year of 2016 as given below

1. Carried out detail hydrogeological surveys, Tube wells drilling and water quality analysis for **Community Base Organization (Funded by National Development projects, and themselves)** and miner water supply schemes at Puttalam, Anamaduwa, Pallama, Mundalama, Dankotuwa, Arachchikattuwa, Madampe, and Nawagaththegama DS divisions. Furthermore above activities carried out in Government Institutes such as Sri Lanka Cashew Corporation, Civil Security

Department, and CRI involved with other individual programs conducted in Puttalam and Kurunegala districts. **(The income: Rs 3,218,264.82)**

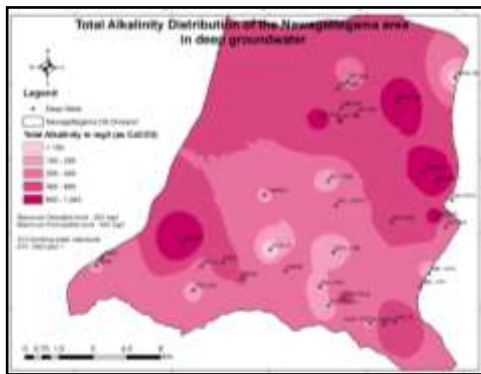
2. Detail hydrogeological surveys (including 1D, 2D surveys), six Tube wells Constructions and water quality analysis were successfully completed for the proposed Cement Manufacturing Plant, Tokyo Cement (Lanka) PLC in Veeravil-Ponnaveli in Kilinochchi. **(The income: Rs 2,133,406.75)**



3. Carried out detail hydrogeological surveys, Tube well constructions, well cleaning, Pumping tests and water quality analysis for the **Privet party** in Puttalam, and Kurunegala districts. **(The income: Rs. 3,263,659.38)**

4. Detail hydrogeological surveys, Tube well Constructions, Pumping tests and water quality analysis were done for **World Vision lanka Pvt. Ltd** to fulfill drinking water needs in Rideegama and Mundalama DS Divisions.

5. The groundwater study at Nawagattagama which was started in 2015, under the world Vision Lanka funds to identify ground water issues in the DS Division were completed in 2016 with the water quality analysis and preparation of groundwater quality maps and report.



10. Under Hydrogeological study on **Limestone Aquifer system in Mannar** district funded by treasury grant, 15 Hydrogeological Investigations, 15 Test Well Drilling were completed and 20 Pumping tests were performed. 164 water sample analyzed in full chemically and 127 water samples analyzed in partially out 200 collected water samples. Well monitoring programs were carried out in five times throughout the year (2016) in existing shallow groundwater network.

(Total Expenditure: Rs 4,000,000.00)



11 Under the treasury grant projects, **Identify suitable areas for Groundwater Recharge in Sri Lanka (Phase I- Puttalam District)** in Mundalama, Puttalam and Kalpitiya DS Divisions 56 water samples analyzed out of 112 water samples collected. Well monitoring programs were carried out in four times throughout the year (2016) in existing shallow groundwater network.

(Total Expenditure: Rs 220,352.30)



12 Under the project, Water quality study in Chronic Kidney Diseases (CKD) prevailing

areas of Kurunegala district funded by treasury grant, Galgamuwa, Ambanpola, Ehetuwewa and Maho DS Divisions were selected for the studies in 2016. The 120 water samples were collected from dug wells and tube wells in Galgamuwa Pradesiya Sabha area and the 120 water samples were collected from dug wells and tube wells in Maho Pradesiya Sabha are and 100 water samples analyzed in full chemically. The four awareness programmes were successfully conducted at Galgamuwa, Ehetuwewa, Maho and Ambanpola divisional secretariat with more than 100 participant including government and villages.



13. Sharmadana Campaigns were carried out to cleanup and keep the office premises in decent way with the actively participation of officers and other staff attached to provincial office.

Including government and private party hydrogeological activities carried out in the year 2016 (From January to December) as follows; 79 total numbers of groundwater investigations, 17 tube well constructions, 17 pumping tests were, 8 nos of well cleaning 379 sample analysis and a Groundwater study were carried out.

The total income of Provincial office Puttalam of the year 2016 from January to December is Rs. **16,440,349.95** (Not including Treasury Grant Project activities).

14. Water Quality Study in CKD prevailing areas in Kurunegala District

14.1 Background

Chronic Kidney Disease (CKD) was initially reported in some parts of Anuradhapura district and recently reported in other areas in the districts of Ampara, Kurunegala, Trincomalee, Hambantota, Polonnaruwa and Badulla. It is believed that the application of agrochemicals and fertilizer in excess amounts would be one of the reasons for the CKD. The hardness and the presence of fluorides in groundwater also considered as some other reasons for CKD. Therefore the water quality monitoring of CKD prevailing areas are very much important at this stage.

This study was started in 2014 and was continued in 2015 in Monaragala district.

14.2 Study Area

Monaragala District

Monaragala is a [district](#) in [Uva Province, Sri Lanka](#). The entire land area of the Monaragala district is 5,959 km² and total population is 448,210. The district is bounded by the districts of Ampara on the North and East, by Hambantota districts on the South and by Rathnapura and Badulla on the West. Mainly the economy of the district is based on [agricultural farming](#) and [livestock](#).

Monaragala district has intermediate and dry climatic conditions scattered in the entire area of the Monaragala district. The annual average rainfall in the Monaragala district ranges from 1250 mm to 2622 mm. The Divisional Secretariats of Badulla district, 11 in number, and further divided in to 319 Gramaladhari divisions, directly fall under the purview of the District Secretary.



14.3 Methodology

The following methodology was used to achieve the objectives of the study.

Data collection

The preliminary data and information of the area were collected from various organizations and studied for the selection of monitoring point. The sampling was performed on these selected points for the chemical analysis work to obtain the water chemistry spatially as well as temporally. Base maps of Landuse, Geology and DEM maps were prepared with the use of ArcGIS 10 software.

14.4 Desk Study

A detailed study on the available data such as geology, geomorphology, soil types, land use and drainage basins was carried out using topographic, geology and structural maps as well as aerial and satellite photographs. Available rainfall and temperature data were collected from the department of meteorology for the awareness on the prevailing climatic conditions of the study area.

14.5 Field Study

Different types of water bodies such as tube wells, dug wells, streams, tanks, and irrigation channels were identified and information on those water bodies such as the technical data of wells, rock type, morphology and soil type at each location and the pollutants were collected during field survey in Monaragala districts.

Water samples were collected for chemical analysis and heavy metal analysis in which the preservatives were used for the samples collected for the heavy metal analysis. Collection of samples was carried out during dry period of the year in a grid system in which all the surface, shallow and deep water bodies were included in each grid.

14.6 Chemical Analysis

Water samples were collected in 500 ml plastic bottles with preservatives as per the guide lines for collection of water samples at well heads. The samples collected were sent to the laboratory for analysis of major cations and anions and for some heavy metals such as Cadmium (Cd), Zinc (Zn), Arsenic (As).

14.7 Geophysical Investigations

Hydrogeological Investigations were carried out in several parts of Monaragala District to identify underlain geology including major shear zones, fracture zones, fracture intensity, and favorable lithological units. Resistivity method of geophysical techniques which is one of the most prominent survey techniques on the groundwater development activities was employed to carry out the investigations to determine the subsurface conditions. "ABEM SAS 1000 Terrameter" was used to obtain the apparent resistivity values of the subsurface formations according to the 'Slumberger' electrode configurations. The obtained results were manually analysed to identify different layers present in the subsurface.

14.8 Test Bore hole Drilling

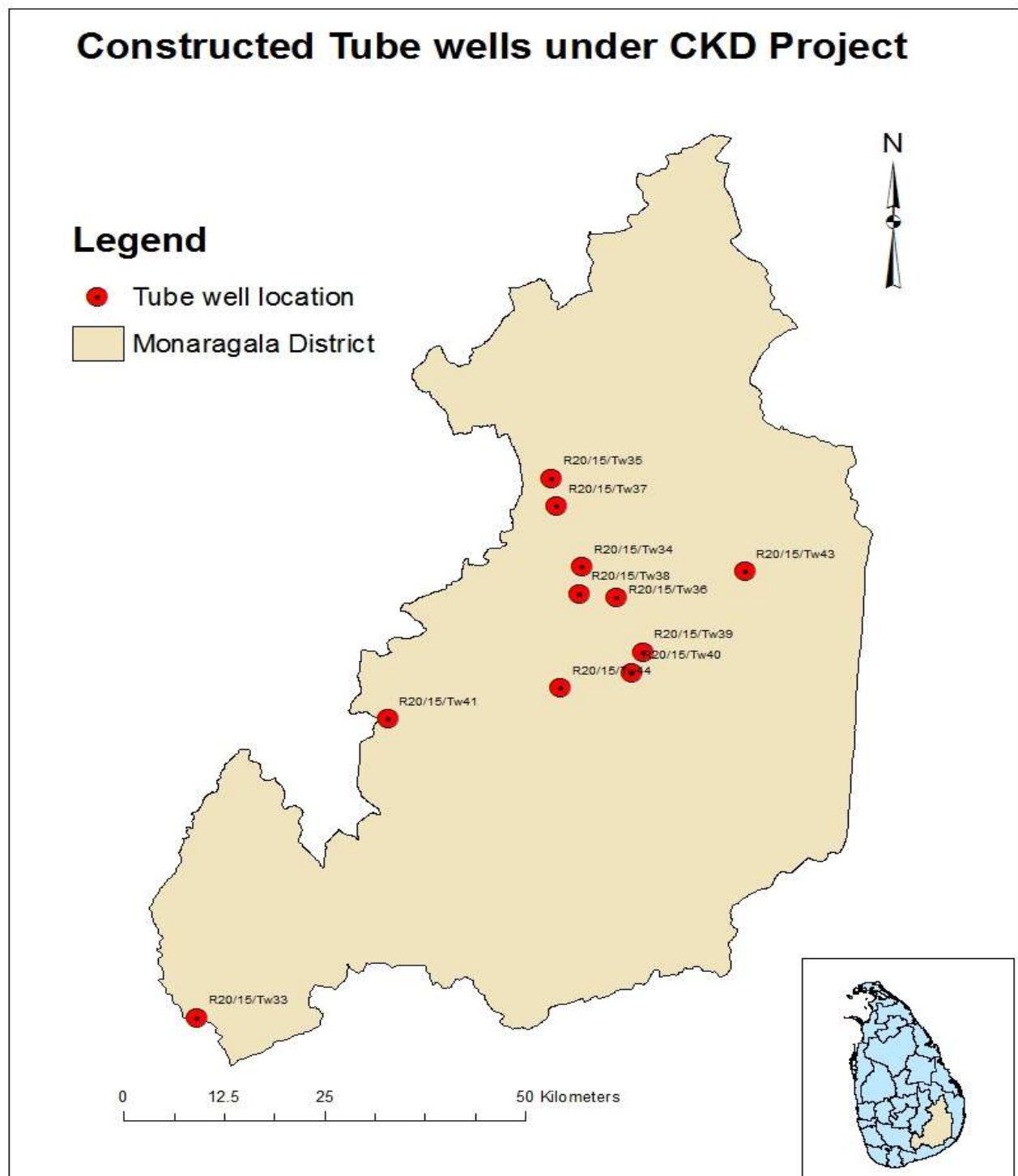
The sites for test borehole drilling were selected in order to fill the gaps in the existing tube well data of Monaragala district. Test bore holes were drilled at selected sites as per the results of the investigation. Water samples from the overburden and underneath rock of the test bore holes were analyzed for chemical and physical parameters.

Results

According to the resistivity data, eleven tube wells are drilled and hand pump installations were completed in Monaragala District.(Annexture 01)

	Job number	order	Coordinate		DS	Village	Yield(LPM)
1	PM/MON/CKD/06		80.8798	6.3552	Sewanagala	Muthuminigama	80
2	PM/MON/CKD/08		81.3111	6.9187	Monaragala	Kotigalhala	20
3	PM/MON/CKD/12		81.3495	6.88	Monaragala	Sirigala	80
4	PM/MON/CKD/14		81.2829	6.9941	Madagama	Bakinigahawela Thimbiyagasara	5
5	PM/MON/CKD/16		80.7129	7.2171	Madagama	11thmilepost, madagama	4
6	PM/MON/CKD/15		81.3092	6.8848	Monaragala	Hindikiwla, Nakkala	dry
7	PM/MON/CKD/17		81.3666	6.7867	Monaragala	Tisapura - Hulandawa	150
8	PM/MON/CKD/18		81.3794	6.8119	Monaragala	Marawa	3
9	PM/MON/CKD/19		81.0939	6.7287	Monaragala	Wallawaya	0
10	PM/MON/CKD/09		81.7105	7.138	Manthottama	Manthottama	5
11	PM/MON/CKD/20		81.4936	6.9126	Monaragala	Gurugammanaya	70
12	PM/MON/CKD/21		81.2877	6.7668	Buttala	Gageyaya	70

Figure 5: Location map of the Constructed tube wells



Recommendations and Future Plans

- Ground water investigation and tube well drilling in the in the CKD prevailing areas in Monaragala district is to be carried out within year 2016.
- Collection of water samples in the CKD prevailing areas in Monaragala district is to be carried out within the dry and wet periods of year 2016.

15. Development in KirindiOya Basing Area

Phase 01:- Thissamaharama, ThanamalvilaLunugamvehera AGA Division Areas

(Under Treasury Grand Funds)

a) INTRODUCTION

Detailed hydrogeological studies of the underground water development in Krindioya basin area Thissamaharama, Thanamalvila and Lunugamvehera AGA division areas have been commenced in 2015. The main aim of the Ground water Development and Assessment in Krindioyastudy is to establish groundwater monitoring network with dedicated monitoring test boreholes in order to collect temporal data on groundwater quality changes and water table fluctuation. The people around the Kirindioya river basin area of Sri Lanka is mainly depend on hand pump tube wells and production tube wells to meet their water requirements for Agriculture and drinking water purposes. The absence of a proper plan for monitoring of these wells, the expected benefit would not be reached to the people in those areas due to scarcity of water by over extraction for agriculture purposes. Therefore, it is necessary to allocate a fund to ground water monitoring programme in above areas.

1. The studies were included following components that should be essentially followed up in order to ach Desk Studies; Collection and analysis of available hydrogeological data.
2. Baseline field studies including well monitoring, random water sampling, water quality analysis and preparation of basic water quality distribution maps.
3. Geo-electrical resistivity surveys and selection of test well sites.
4. Awareness programs to convince public and stakeholders about importance of the study.
5. Selection of final test well sites, drilling test boreholes, preparation of well data records, well logs etc.
6. Leveling of test wells for elevation heights, preparation of location maps, groundwater contour maps, maps showing aquifer geometry, cross sections etc.
7. Pump testing and Groundwater potential assessment.

8. Groundwater sample collection and hydro chemical analysis
9. Finally, establish a systematic groundwater database and seasonally update and keep readily available for the requirements relating to groundwater resources management.

According to the annual work plans set out to the study, above mentioned project activities were carried out and this report present the all findings, results of the work done in 2015 with the recommendations and the discussion.

b) PROJECT OBJECTIVES

The project objectives are to identify, develop, manage, allocate and converse the shallow sandy aquifer as to achieve the maximum benefits without harming the environment.

Specific Objectives

- (1) Identification of aquifer basin geometry, groundwater potentials and water quality in adequate detail.
- (2) Quantification of recharge to the aquifers and to set limits of extraction from the sand aquifer within the study area.
- (3) Design of groundwater monitoring program to asses:
 - a. Environmental impacts due to groundwater extraction.
 - b. The impacts of activities upon the quality of water and its suitability for required use.
- (4) Examination of potential for introducing regulatory mechanism as well as using other instruments for optimum use of groundwater.
- (5) Development of comprehensive data base on groundwater setting out guidelines, norms and criteria for future groundwater development.
- (6) Identification of locations suitable for artificial recharge to groundwater system.

c) METHODOLOGY

The following methodology was used to achieve the objectives and outcomes of the project.

- a) Collect and review all available data and information relevant to groundwater resources of the study area and identify the shortcomings to assess groundwater resources potential.
- b) Assess the extent of shallow and deep groundwater utilization and potential.
- c) Identify the regions susceptible to adverse effect on brackish sea water intrusion and also any regions where over exploitation of groundwater resources prevail.
- d) Identify the activities that effect the recharge of the aquifer and suggest methods to improve recharge mechanism.
- e) Identify the activities that effect the recharge of the aquifer and suggest methods to improve recharge mechanism.

15.1 STUDY AREA



Initially study area was selected using the land use maps, geology maps, other literature as well as the field experiences. Sandy aquifer margin was selected using the geology map.

Figure 2.1 Initial study area

15.2 LAND USE

Study area is located in the Southern coastal side of the country. There's a marshy area covering from Lunugamvehera area to Thissamaharama area.

Study area is very populated and the most prominent cultivation is paddy, vegetables, banana, anion, papaya, etc. Lunugamvehera and Thissamaharama areas are the paddy cultivated areas.

15.3 GEOLOGY

The major basement rock types of the area include hornblende biotite gneiss, charnokite gneiss, migmatite, granitic gneiss, garnet sillimanite gneiss, quartzite and undifferentiated metasediments. The recent formations found in the basin are alluvium, silica sands, clays and recent soils.

15.4 Alluvium

Alluvial deposits are found in the flood plains of all tributaries of the pilot area. Major streams draining the study area (Kirindioya) have its flood plains covered with alternating layers of sand and clays. Alluvium in the broadest sense is the detrital clay, silt and sand brought down by streams and rivers and deposited on their flood plains and deltas. Alluvial deposits thus covering the large part of the basin, where the streams flow sluggishly or even dry up in the dry season but overflow their banks during the period of flood. Kirindioya has several tributaries, spread its alluvium over several square kilometers. The clays, sands and mixture of clay and sand of the river valleys are economically important in several reasons. They are rich agricultural soils and they carry large quantities of groundwater. The alluvial in the basin area may be quite thick and it may vary from 6 – 8 meters.

15.5 Sands

Unconsolidated sands occur extensively along the coast. Well-developed moderately deep sand formations are found in the Thanamalvila area. These sands are very important as they carry pockets of fresh water and as placer deposits of economically valuable mineral sand along the coast

15.6 Metasediments

Quartzites and quartz schists, garnet-sillimanite gneisses, and quartz-feldspar granulites are all found throughout the South-eastern region. Of these, quartzites and quartz schist appear most frequently, especially in Thissamaharama area.

15.7 Laterite

Laterite, locally known as Kabbok, is the most extensive of the secondary formations, and is a product of the weathering of the rocks underlie it. This formation is very common in Hambanthota district and also found in coastal belt of dry zone of Sri Lanka. The most important physical property of laterite is that the freshly dug material is soft enough to be cut into blocks but upon exposure to air it rapidly becomes as hard as brick and highly resistant to the action of air and water. Laterite can thus be defined as a highly weathered, clayey rock material rich in secondary iron or aluminum oxides but poor in silica, and either massive or vesicular in structure; it is usually reddish purplish, brownish or yellowish in color and very few recognizable minerals are present in it. Laterite is best developed in the south east of Sri Lanka within a belt extending six or seven miles inland from the coast and up to about 30 m above mean sea level.

15.8 Unconsolidated Sand

Perhaps the most extensive of the Quaternary deposits of Sri Lanka are the large stretches of unconsolidated sands that cover the coastal tracts of the island and which have originated in many ways. Apart from the present beach sands, many of those are old beach deposits now raised above the sea level, others are dune sands which have been transported by wind from the beaches, and still others are river sands belonging to the existing and to previous systems of drainage. These unconsolidated sands are economically important as carriers of fresh water and as placer deposits of economically valuable mineral sands along the coast.

15.2.1. HYDROGEOLOGY

a) Major Aquifer Types in the Basin

The major aquifer types identified in the KirindiOya basin are

- (a) Alluvial aquifer
- (b) Coastal Sand aquifer
- (c) Lateritic aquifer
- (d) Fractured crystalline basement aquifer.

b) CLIMATE

The pilot area belongs to the low country dry zone which has a rainfall distribution pattern. The mean annual rainfall of between 1100-1600 mm is well distributed from October through to January, and is followed by a distinct dry periods from June to late September.

This area belongs to Up Country Intermediate zone 01 Agro Ecological Zone (DL1- C.R.Panabokke, 1996) having 75% rainfall probability around 1400mm per year and figure 02 shows the 75% of monthly rainfall probability.

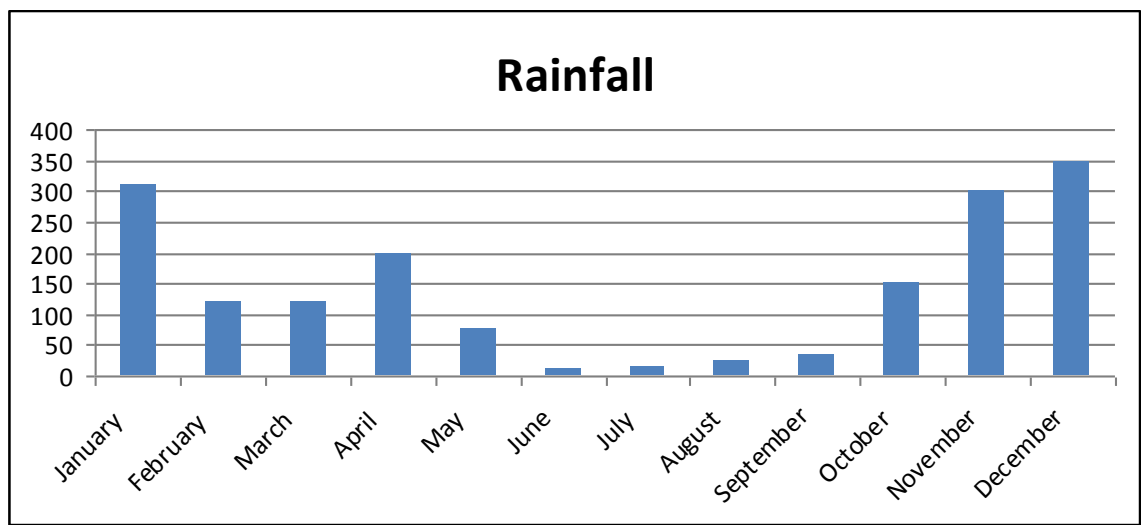


Figure 2.2: 75% of monthly rainfall probability of the study area.

Pilot area receives rain from both the south – west and north – east monsoons. The average annual temperature varies from 29°C to 35°C. The relative humidity average is 76% during the day and 89% during the night.

15.2.2 HYDROGEOLOGICAL INVESTIGATIONS AND CONSTRUCTION OF WELLS

a) HYDROGEOLOGICAL INVESTIGATIONS

Hydro geological investigations were carried out in several locations to select locations for test well drilling. Resistivity method is one of the most prominent survey techniques on the groundwater exploration activities was applied to carry out the geophysical investigations to determine the

subsurface conditions. The instrument called as Terrameter was used to obtain the apparent resistivity values of the subsurface formations according to the Slumberger electrode configurations. In this context, a series of deep vertical geo-electrical resistivity soundings & profiling method were carried out at the project area.

All the results gathered from the survey were analyzed by using groundwater related softwares.



Figure3.1 Resistivity surveys of the study area

Locations for resistivity surveys were selected from the results of initial water sampling process. In the initial water sampling, 3 water samples were collected from each dug well which was in randomly selected locations. 3 samples. Were collected to check normal chemical parameters, nitrates and phosphates and heavy metals. By the results of the resistivity survey, a graph is drawn resistivity vs depth in a log-log paper.

b) TEST WELL DRILLING

After the hydrogeological investigations, suitable locations were selected to drill the test wells. These locations were selected using the changing pattern of the earth resistivity, ground conditions, space available at the location and the field experiences. All of these test wells are shallow wells which are drilled until reach the bed rock. Diameter of each well is 6.5 inches and all of wells are protected by installing well caps. For information of the community, a name board also have constructed at each well.



Figure 3.2 Drilling test well

Other than that, Observation wells also constructed for the purpose of the pumping tests. These wells are constructed about 2 –3 meters away from the test well. According to the well yield, distribution and space availability, locations for the observation wells were selected. When the drilling is in progress, soil samples were collected from each soil formation in to the ground. Collected soil samples were analyzed and identified the soil type to draw the well log. That log is comparative to the resistivity curve and it can be used to identify the aquifer geometry.

15.2.3 CHEMICAL ANALYSIS OF WATER AND WATER LEVEL MEASUREMENTS

a) COLLECTING WATER SAMPLES

Water samples were collected from test wells systematically at the wet and dry periods of the year to chemically analyze. Some parameters are checked at the field using the field test kits and three water samples were taken to the laboratory to check other parameters. in-situ chemical tests were done for 07 chemical parameters (Electrical conductivity, Total dissolved solids, Salinity, pH, Nitrate, Phosphate and Total Iron) for each water sample. Two samples were acidified by concentrated Sulfuric acid and Nitric acid separately as a preservation methods. Details of preservation methods and in-situ testing methods as follows.



Figure 4.1 Collecting the water samples

Sample	Amount (ml)	Acidified by,	Amount (ml)	Parametrs
1	100	-	-	Appearance, Colour, Turbidity, pH ,EC ,Total hardness, TDS, Total Iron, Ca, Mg, Total Alkalinity, Cl, SO4, Anion Cation, Charge balance, F, Salinity
2	100	Concentrated Nitric	2	Heavy metals, Na, K
3	100	Concentrated Sulfuric	2	Nitrate and phosphate

Table4.1 Amount of collected samples and preservation methods

Table 4.2 In-situ testing methods

No.	Parameter	Method	Instrument
01	Nitrate, Phosphate and Total Iron	Colorimetry method	Colori meter
02	pH		pH meter or multi meter
03	EC, TDS, Salinity		EC meter or multi meter

15.2.4 PUMPING TESTS

a) INTRODUCTION OF PUMPING TESTS

A pumping test is a practical, reliable method of estimating well performance, well yield, the zone of influence of the well and aquifer characteristics such as the aquifer's ability to store and transmit water, aquifer extent, presence of boundary conditions and possible hydraulic connection to surface water. A pumping test consists of pumping groundwater from a well, usually at a constant rate, and measuring water levels in the pumped well and any nearby wells (observation wells) or surface water bodies during and after the pumping. Pumping test water level measurements should be made prior to, during and immediately following the pumping period. The information collected during the recovery period is used to verify the results of the pumping test.

b) ANALYSIS OF TEST PUMPING

02 number of pumping tests were completed in 2015. Both of the tests were carried out under 04 main steps.

1. Calibration test
2. Step draw down test
3. Constant rate test
4. Recovery test

Under calibration test, instruments were calibrated as a preparation for the test. EC meter, Pump and the valves use for control the discharge rate were calibrated. To decide the step test discharge rates, given flushing yield in the drillers record was verified by pumping about 15 minutes with the rate of each step. If the maximum rate is not enough to detect the aquifer behavior the rate was increased to get the maximum discharge rate without disturbing the aquifer.

After verifying the discharge rates, step drawdown test was decided for 05 different steps. From the results of step drawdown test the rate for the constant rate test was decided. From that rate pumping was proceeded for 24 hours.

c) RESULTS AND DISCUSSION

The study area is normally populated and urbanized. There are number of small scale and large scale industries. The daily consumption of ground water is much high in this area due to the industries and high population. However the sandy aquifer is recharged quickly and the quantity of the water is not showing large variations. The thickness of the sand bed varies from 5 meters to 15 meters. Other than that there are some lateritic caps can be seen.

In this area, the major source of groundwater recharge is the rain fall. From the pattern of changing water level in the test wells and rainfall in the relevant time period, we can get an idea about it.

According to the water quality data, there are no prominent issues other than the salinity of groundwater in the coastal belt. There are no evidences to ground water pollution due to the industries. However the monitoring should be continued further.

Still there's no detections of ground water over abstractions in the area. But water levels should be measured systematically to study more about the ground water fluctuations.

When pumping tests are carrying out, there were some problems which happened to face.

- No pump with enough flow rate
- Well diameter was not enough to install the pumps with high flow rates.

Are some of them. So very few number of accurate pumping tests were carried out.

d) RECOMMENDATIONS

1. Although there is no evidence of industrial pollution of ground water, water level and the quality of water should be measured systematically and the testing parameter of water should be add or remove according to the changes of water quality.
2. Other possible recharge and discharge sources should be considered and collect information besides the rainfall.
3. Detailed pumping tests should be done using high capacity pumps to quantify the amount of water accurately.
4. Since the main recharge source is rainfall it is important to consider the land area which is infiltration is happening, when the constructions are proceeding.
5. A Groundwater flow model should be developed to predict the future issues regarding the over abstraction and pollution.

16. Laboratory

The water samples collected from various projects and private parties were analyzed by the laboratory of the Water Resources Boards and the year under review, 1787 samples were analyzed chemically 171 samples were analyzed bacteriologically. 856Nos samples were analyzed for full chemical para metals.

17. Drilling Division

Tube wells	762 nos.
Concrete basins	8nos.
Repairs	129nos
Observation	8Nos
Installation of hand pumps	253nos.
Tube well cleaning	63nos.
Rehabilitation	06Nos

18 Workshop, Ratmalana

18.1 General workshop

- * Completed the fabrication work of lorry deck of V/No GL – 1833
- * Completed the assembling of pipes/fittings & fabricating 06 Nos of tool boxes for pump unit machines – 02 nos
- * Completed the fabricating works of well caps – 10 Nos for data loggers.
- * Completed the fabricating work of rod holding arrangements to Rig No – 15.
- * Completed the fabricating work of stands – 20 Nos for water tanks.
- * Completed the repair & service of water treatment plant at Monaragala hospital.
- * Completed the hydraulic system of drilling Rig No – 14.
- * Completed the fabrication & installation works of 05 Nos water towers (30 feet height) at Gonaganarawa, Bibila, Buddama, Pollonnaruwa & Mannar.
- * Completed the fabrication & installation work of suction water filter in Gonaganarawa.
- * Completed the tinkering & painting works of drivers cabin of V/No – 4- - 1851
- * Completed the tinkering & painting works of drivers cabin & repair of clutch, brake & electric system of V/No – 40 – 4243.
- * Supervising & monitoring of the renovation work of workshop building – Rathmalana (50% work completed) contract by S.E.C..
- And performed the other all welding, machining, fabricating and maintenance work related to the drilling rigs, air compressors, machinery / plants etc.and also with the jobs requested from the regional offices.

18.2 Vehicle repair unit.

- * Carried out 60 Nos of major & running repairs of board vehicles

18.3 Vehicle service unit.

- * Carried out 103 Nos of full services on board vehicles.

18.4 Heavy machinery repair unit.

Carried out major & running repairs a following heavy machinery

- * Drilling rigs – 14,15
- * Air compressors - 22

& monitoring the operation performance of new drilling rigs & air compressors which donated under dam safety project.

19. Internal Audit Division

Seventeen (17) Nos. audit quarries were submitted and replied Fifteen (15) Nos. audit quarries which were submitted by the Auditor General's Department during the year 2016

20. Finance

The total income for the year concerned was. Rs. 325 million. For the year 2016, Rs. 155 million as recurrent and Rs. 34 million as capital was received from the treasury. The surplus reported in the year was Rs. 27 million.

21. Administration

The total number of staff of the Water Resources Board in the year 2016 was 329 nos. and 04nos. of which were working on contract basis. 56 nos. employees were working on casual basis. In the year concerned, 05nos. employees were recruited for permanent service. 30 nos. employees were recruited on contract basis and casual basis. In this year, 06 nos. employees were resigned and 15 employees were retired.

22. Human Resources Development

An action was taken to direct the employees to the training courses, in order to improve the productivity of the board. 29 nos. employees including executive officers were directed to short training courses and Two were directed to certificate course. 10 nos. employee were directed to workshops and seminars and one was directed to a foreign workshops.

23. Welfare Facilities

In the year concerned, under the welfare and death donation scheme, donated Rs. 0.104 million to the welfare society of the Water Resources Board as to provide transport facilities in a death and also to provide welfare facilities and Rs. 0.772 million was supplied to reimburse the expenses incurred for health facilities of the employees of the Board and their family members.

24. Fleet of Transport

In the year concerned, the fleet of transport of the board was comprised with 69 nos. vehicles and out of which 63 nos. vehicles were in running condition. Those were mainly, cabs, cars, jeeps, lorries, tractors and cranes.

25. Circuit Bungalow – Anuradhapura

The purpose of maintaining the circuit bungalow was to provide accommodation for the officers of the Water Resources Board and the Ministry of Irrigation and Water Resources Management in their official tours and spending their leisure time. Addition to that, an action was taken to provide accommodation for other government officers and general public.

26. Buddhist Society

The Buddhist Society of the Water Resources Board was initiated in 05th of May 1999. In the year 2016, action was taken to decorate the office premises commemorating the Posonfull moon day and Dansela and Dhamma sermon were organized for the Poson festival to commemorate the members who subjected to death after servicing in the board and presented group of employees to the Wesak Bethi Gee function at the Ministry of Irrigation & Water Resources Management

27. Acknowledgement

The board is in pleasure to thank and place on record of appreciation to the Minister of Irrigation and Water Resources Management and State Minister of the Ministry of Irrigation and Water Resources Management, Secretary, officers and staff of the same Ministry, all the officers and consultants of the other government departments, board and corporations, foreign and private institutions . The active involvement and the loyal service rendered by the employees of the Water Resources Board are highly acknowledged.

Eng. A.C.M.Zulfikar
Chairman
Water Resources Board
No. 2A, Hector Kobbekaduwa Mawatha,
Colombo 07.

28.02. 2017

WATER RESOURCES BOARD

Statement of Financial Performance

For the year ended	Note	Actual	Actual	Budget
	No	2016	2015	2016
		Rs.000'	Rs.000'	Rs.000'
evenue from Operating Activities	01	133,573	84,164	148,800
Treasury Grants – Recurrent		155,000	141,000	155,000
Treasury Grants – Capital (Operation)	02	34,003	27,896	33,150
Other Income	03	<u>2,850</u>	<u>6,824</u>	<u>8,500</u>
Total Revenue		<u>325,426</u>	<u>259,884</u>	<u>345,450</u>
Administrative Costs	4.1	(172,763)	(188,944)	(170,190)
Supplies & Requistites	4.2	(28,456)	(34,983)	(26,000)
Contractual Services & Maintenance expenses	4.3	(22,728)	(17,031)	(17,220)
Other Expenses	4.4	(10,323)	(1,485)	(3,980)
Other Project Expenses	4.5	(26,533)	(20,319)	(28,300)
Treasury Grants – Capital (Research Studies)	4.6	(34,003)	(27,896)	(33,150)
Depreciation		(3,526)	(68,626)	(66,000)
Total Expenses		(298,332)	(359,284)	(344,840)
Surplus / (Deficit) from Operations		27,094	(99,400)	610
Tax		<u>(2)</u>	<u>(10)</u>	<u>-</u>
Surplus / (Deficit) for the period		<u>(27,092)</u>	<u>(99,410)</u>	<u>610</u>

WATER RESOURCES BOARD
Statement of Financial Position
As at 31st December,

	Note	2016	2015
	No.	Rs.000'	Rs.000'
ASSETS			
Current Assets			
Cash and cash equivalent	05	7,981	11,024
Trade and other receivables	06	29,575	16,341
Inventories	07	149,225	153,956
Prepayments	08	<u>223</u>	<u>112</u>
		<u>187,004</u>	<u>181,433</u>
Non - Current Assets			
Property, Plant & Equipment	09	<u>377,626</u>	<u>548,867</u>
		<u>377,626</u>	<u>548,867</u>
		_____	_____
TOTAL ASSETS		<u>564,630</u>	<u>730,300</u>
LIABILITIES			
Current Liabilities			
Trade Creditor	10	422	2,283
Other Provisions & Payable	11	51,849	23,683
Deferred Income (Advances for Services)	12	<u>21,413</u>	<u>11,370</u>
		<u>73,684</u>	<u>37,336</u>
Non Current Liabilities			
Retirement Benefit Obligations	13	64,994	90,855
Staff Security Deposits	14	2	14
Deferred Income (For Government Grants)	15	<u>310,900</u>	<u>-</u>
		<u>375,896</u>	<u>90,869</u>
TOTAL LIABILITIES		<u>449,580</u>	<u>128,205</u>
		_____	_____
NET ASSESTS		<u>115,050</u>	<u>602,095</u>
NET ASSESTS / EQUITY			

CAPITAL & RESERVES

Accumulated Fund	16	272,725	329,505
Other Grant	16	233,273	802,079
Accumulated Profit / (Deficit)	16	(392,120)	(532,052)
Revaluation Reserve	16	<u>1,172</u>	<u>2,563</u>
TOTAL NET ASSESTS / EQUITY		<u>115,050</u>	<u>602,095</u>

The Accounting Policies and the Notes from pages 06 to 22 form an integral part of these financial statements.

I certify that the above Financial Statements are true and correct as per the records available .

of the Board.

A. B. M. Chandrasiri

Assistant General Manager(Finance)

The Directors are responsible for the preparation & presentation of the Financial Statements. Approved and signed for on behalf of the Board.

Sgd. Eng.A.C.M. Zulfikar

CHAIRMAN

17th April 2017

WATER RESOURCES BOARD

Statement of Changes in Net Assets / Equity

As at 31st DECEMBER

Sgd. Sathish Kumar

BOARD DIRECTOR

NOTE : 15

	Accumulated Fund Rs' 000	Other Grants Rs' 000	Revaluation Reserve Rs' 000	Accumulated Profit/Deficit Rs' 000	Total Rs'000
Balance as at 31st December 2014 B/F	212,621	228,322	2,563	(368,6	74,875
Adjustments made for prior period events	-	-	-	(64,011)	(64,011)
Restated Balance	212,621	228,322	2,563	(432,642)	10,864
Surplus / (Deficit) for the period	-	-	-	(99,410)	(99,410)
Revaluation – Adjustments	-	-	-	-	-
Contributions / Additions for the Year	704	-	-	-	704
Contributions /from Other Grants	116,180	573,757	-	-	689,937
Balance as 31st December 2015 C/F	<u>329,505</u>	<u>802,079</u>	<u>2,563</u>	<u>(532,052)</u>	<u>602,095</u>
Balance as 31st December 2015 B/F	329,505	802,079	2,563	(532,052)	602,095
Adjustments made for prior period events	-	-	-	112,840	112,840
Restated Balance	329,505	802,079	2,563	(419,212)	714,935
Change in Net Assets / Equity for 2016	2,563	-	(2,563)	-	-
Surplus / (Deficit) for the period	-	-	-	27,092	27,092
Revaluation – Adjustment	(66,943)	(568,806)	-	-	(635,749)
Revaluation Surplus	-	-	1,172	-	1,172
Assets Purchased from Ministry Funds	7,600	-	-	-	7,600
Balance as 31st December 2016	<u>272,725</u>	<u>233,273</u>	<u>1,172</u>	<u>(392,129)</u>	<u>115,050</u>

NOTE :- Details of other grants are as follows

OTHER GRANTS	Balance as 31.12.2016
	(Rs.000)
JICA	11,973
ADB & NWRA	1,025
Others	24,624
Japanese 2 KR Project	81,476
Amerasian Fund	1,771
DSWRPP Fund	<u>112,404</u>
Total	<u>233,273</u>

CASH FLOW STATEMENT

	2016	2015
	Rs'000	Rs'000
Cash flows from operating activities		
Surplus / [Deficit] for the year before Treasury Grants (Recurrent)	(127,908)	(240,410)
Add: Treasury Grants received (Recurrent)	<u>155,000</u>	<u>141,000</u>
Surplus / (Deficit) for the year	27,092	(99,410)
Add: Fund adjustments from projects	5,949	-
Add: Prior Year adjustments	<u>(475)</u>	<u>-</u>
	32,566	(99,410)
Non Cash Movements		
Depreciation	3,526	68,626
Adjustments for Assests & Stocks	-	25,991
Increase in Provisions to Gratuity	(16,180)	20,377
Increase in payables	(1,435)	1,918
Decrease in other Current Assets	4,620	(9,197)
[Gain] / Losses on sale of Property plant & Equipment	(241)	(4,945)
Increase in receivables	(13,234)	<u>(4,286)</u>
Interest received for Gratuity Savings	<u>(116)</u>	(23,060) (235)
Net Cash flows from operating activities	9,506	<u>7,411</u>

Cash flows from Investing activities

Proceeds from sale of Property Plant & Equipments	275	5,036
Purchase of Property Plant & Equipment	(10,847)	(2,975)
Interest income for security deposits	1	1
Interest received for Gratuity Savings	116	235
Payment of Security Deposit	(13)	(5)
Payment of gratuity	<u>(9,681)</u>	<u>(9,228)</u>
Net Cash flows from Investing activities	(20,149)	(6,936)

Cash flows from financing activities

Government Grant (Capital for Property Plant & Equipments)	-	704
Ministry Fund	7,600	-
Net Cash flows from financing activities	7,600	704

Net Increase / [decrease] in cash & cash Equivalents	(3,043)	1,179
Cash & cash equivalents at beginning of Period	<u>11,024</u>	<u>9,845</u>
Cash & cash equivalents at end of Period	<u>7,981</u>	<u>11,024</u>

• NOTES TO THE CASH FLOW STATEMENT

01. Cash and cash equivalents consist of cash on hand and balances with banks. Cash and cash equivalents included in the Cash Flow Statement comprise the following statement of Financial Position amounts.

	<u>2016</u>	<u>2014</u>
	Rs' 000	Rs'000
Cash on hand and balances with banks	5,850	3,047
Savings with National Saving Bank	<u>2,131</u>	<u>7,977</u>
	<u>7,981</u>	<u>11,024</u>

02. Cash flows from Treasury Grant (Capital) for the operational activities are included in the Cash Flows from operating activities.

TREASURY GRANT RELEASES RECONCILIATION - YEAR 2016

<u>Disclosed Statement</u>	Releases (Rs.000)	As per Treasury Printout (Rs.000)	Provision for the year (Rs.000)
01 RECURRENT GRANT			
Vote: 198 - 2 - 4 - 1- 1503 - 11			
- Financial Performance	<u>155,000</u>	<u>155,000</u>	<u>155,000</u>
02 CAPITAL GRANT			
Vote: 198 - 2 - 4 - 1- 2201 – 11			
Financial Performance – Operational	34,003	-	-
Statement of Changes in Net Assets/Equity (for purchase of assests)	-	-	-
	<u>34,003</u>	<u>34,003</u>	<u>35,000</u>

WATER RESOURCES BOARD

NOTES TO THE FINANCIAL STATEMENTS & ACCOUNTING POLICIES

1. Corporate Information

General

The Water Resources Board is a statutory Board established in 1966 under the provisions of Act No. 29 of 1964.

Principal Activities and Nature of Operations

During the year, the principal activities of the Board Comprised of carryout Hydrogeological Surveys, Construction of Tube Wells, Chemical Analysis of Water Samples, Cleaning of dug wells and Preparation of Groundwater Maps etc.

Directors Responsibility Statement

The Board of Directors take the responsibility for the preparation and presentation of these Financial Statements as per the provisions of Sri Lanka Public Sector Accounting Standards.

Address of the Registered Office and the Principal Place of the Activities of the Board

No.02A, Hector Kobbekaduwa Mawatha, Colombo 07.

2. Significant Accounting Policies

2.1.Statement of Compliance

The financial statements of the Water Resources Board are prepared in accordance with the Sri Lanka Public Sector Accounting Standards (SLPSAS) laid down by the Public Sector Accounting Standards Committee of the Institute of Chartered Accountants of Sri Lanka (CA Sri Lanka) with the Participation of the Ministry of Finance & Planning. (Ref: Circular: PED/03/2013 dated 02.10.2013)

Standards of borrowing Cost (No. 04) and the effects of changes in Foreign exchange rates (No. 05) are not applicable to the Board at present.

2.2. Basis of Preparation

The Financial Statements are prepared on the Historical Cost Basis.

2.3. Functional and Presentation Currency

These Financial Statements are presented in Sri Lankan Rupees, which is the Board's Functional Currency and all Financial Information has been rounded to the nearest thousands unless otherwise specifically indicated.

3. Assets and Basis of their Valuation

3.1 Property, Plant & Equipments

Property Plant and Equipments are initially recorded at cost less accumulated depreciation. The cost of Property, Plant & Equipment is the Cost of purchase/revaluation or construction together with any incidental expenses thereon.

Revalued assets are carried at revalued amount less any subsequent depreciation thereon.

3.2 Depreciation

Depreciation of an asset begins when it is available for use and ceases at the earlier of the dates on which the asset is derecognized.

1. Depreciation is calculated so as to write off the Cost / Revaluation of Property, Plant and Equipment on a Straight - Line Basis over the expected useful lives of the Assets concerned. The principle annual rates used for this purpose are,

Buildings	5%
Motor Vehicles	25%
Machinery	20%
Laboratory Equipments	20%
Scientific Equipments	20%
Computers & Accessories	20%
Furniture, Fittings& Office Equip.	10%

3.3 Government Grants

Assets received by way of grants from treasury, line ministry and other related government projects are recognized under Income Approach. Differed income(related to Government Grants) will be setoff against depreciation account in the Statement of Financial Performance on a systematic basis over the life of the assets.

3.4 Inventories

Inventories consist of vehicle spares, stores materials, machinery spares, fuel and other consumables. The cost

of inventories are based on the first – in – First-out (FIFO) principle.

3.5 Receivables

3.5.1 Receivables are stated at the amounts they are estimated to realize.

3.5.2 Bad and Doubtful Debts.

The estimated losses to these debts are based on continuous review of all invoices and claims identified as bad and doubtful.

4.1 Accounts Payables and Accrued

Expenses

Trade and other payables are stated at cost.

Deferred Income

Advances received for services to be rendered are shown as deferred income under current liabilities in the statement of Financial Position until recognize the income.

4.2 Provisions

Provisions are recognized when the entity has a present obligation (legal or constructive) as a result of a past event, and 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 obligation. The expense relating to any provision is presented in the Statement of Financial Performance of any reimbursement.

5. Revenue Recognition

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Water Resources Board and the revenue can be reliably measured, regardless of when the payment is being made.

Major sources of income

Hydrogeological surveys, construction of Tube wells, Hand pump installations, Pumping tests, cleaning of Tube wells, Water sample analysis and Installation of iron removal plants. Revenues from these sources are recognized upon the realization.

Other income

Other income consists of circuit bungalow reservations, fines & surcharges and sundry income and they are recognized on an accrual basis.

Interest Income

Interest income mainly derived from interest on Distress loans, Cycle loans and interest on Deposits at National Savings Bank maintained for the purpose of gratuity payments.

6. Retirement Benefit Obligations

6.1 Defined Benefit Plan - Gratuity

Provision is made in the Financial Statements for retiring Gratuity, which may fall due for payment of Gratuity Act No.12 of 1983. It is provided one half of the basic salary and statutory allowances for the last month of the financial year for each year of continuous service. This item is shown as Non-Current Liabilities in the Statement of Financial Position.

6.2 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 personal emoluments of employees to EPF and ETF respectively.

7. Taxation

Tax expense Comprises Current and any adjustment to tax payable in respect of previous years.

8. Research Studies Expenses.

Operational expenses which have been identified directly to Research Studies under Treasury Grants capital vote have been Charged to the Statement of Financial Performance.

9. Cash Flow Statement

The Cash Flow Statement is prepared using the indirect method as stipulated in SLPSAS 02 Cash Flow Statement, whereby gross cash receipts and gross cash payments of operating activities , financing activities and investing activities have been recognized. Cash and cash equivalents comprise mainly cash in hand and balances with banks.

10. Events after the reporting period

All the material events after the reporting period have been considered and appropriate adjustment and disclosures have been made in to the financial statement, where necessary.

NOTES TO THE FINANCIAL STATEMENT.

REVENUE FROM OPERATING ACTIVITIES	Actual	Actual	Actual
	2016	2015	2016
NOTE NO: 01	Rs'000	Rs'000	Rs'000
HYDRO: INVESTIGATIONS / EXPLORATION			
Hydrogeological Survey	23,583	10,225	10,000
Tube Well Construction	62,650	35,495	72,000
Hand Pump Installation	3,689	5,156	9,600
Pumping Tests	11,981	9,175	14,400
Tube Well Cleaning	1,555	1,332	1,000
Water Sample Analysis	1,682	2,162	4,500
Installation of Iron Removable Plant	<u>1,900</u>	<u>300</u>	<u>1,000</u>
Sub total	<u>107,040</u>	<u>63,845</u>	<u>120,500</u>
GROUNDWATER MONTORING			
Dam safety Water Resources Planning Project	<u>6,698</u>	<u>5,001</u>	<u>9,000</u>
Sub total	<u>6,698</u>	<u>5,001</u>	<u>9,000</u>
GROUNDWATER DEVELOPMENT			
100 Days Programme	-	11,593	-
Gonaganara & Rathupasketiya Project	2,387	1,925	1,700
Chunnakam Project	2,627	1,800	2,600
Well Cleaning at Awissawella to Colombo	3,401	-	3,400
Construction of Production Well – Dry Zone	9,851	-	-
Well Cleaning at Salawa to Colombo	1,569	-	1,600
Small Scale Water Supply Schemes	<u>-</u>	<u>-</u>	<u>10,000</u>
Sub total	<u>19,835</u>	<u>15,318</u>	<u>19,300</u>
Grand Total	<u>133,573</u>	<u>84,164</u>	<u>148,800</u>

NOTE NO: 02**TREASURY GRANT – CAPITAL****(RESEARCH STUDIES - OPERATIONAL)**

Hydrogeological coastal study in Colombo to Negombo	210	230	250
Study in water quality changes in aquifer system – A’pura	238	280	250
Rehabilitation & Improvement Income	3,700	2,908	3,700
Hydrogeological Study in limestones Aquifers in Manner	4,000	4,500	4,000
Jaffna Ground water Monitoring	5,000	2,468	4,400
Hydrogeological Study in Vavunia and Kilinochchi	168	3,019	250
Study on the direct and indirect impacts of climate Changes	1,665	2,254	1,550
Artificial Recharge Project (Phase I Puttlam)	220	2,503	250
Water Quality Studies in CKDU Project	4,826	4,365	5,000
Rehabilitation of H/P Tube Wells in H,tota, Badulla & Mon,gala	5,000	2,872	5,000
Ground Water Assessment of Kirindi Oya Basin (Phase I)	1,676	1,522	2,000
Ground Water Assessment of Kelani Ganga Basin (Phase I)	2,000	783	2,000
Staff Training	300	192	300
Emuse Project	<u>5,000</u>	<u>-</u>	4,200
Grand Total	<u>34,003</u>	<u>27,896</u>	<u>33,150</u>

REVENUE FROM OPERATING ACTIVITIES

	Actual	Actual	Budget
	2016	2015	2016
NOTE NO: 03	Rs.'000	Rs.'000	Rs.'000
OTHER INCOME			
Circuit Bungalow Reservation	191	191	200
Fines & Surcharges	55	51	100
Sundry Income	743	764	600
Disposal Income	241	4,945	7,000
Interests on Loans & Bank Deposits	723	873	600
Water Treatment Plant Income	820	-	-
Staff Accomodation Income	137	-	-
Grand Total	<u>2,850</u>	<u>6,824</u>	<u>8,500</u>

NOTES TO THE FINANCIAL STATEMENTS CONTD.

NOTE NO: 4.1 ADMINISTRATIVE COSTS	Actual	Actual	Budget
	2016	2015	2016
	Rs'000	Rs'000	Rs'000
Salaries & Wages	154,556	138,642	151,000
over time & Holiday Pay	8,304	5,711	6,000
Employees Provident Fund -12%	14,215	14,434	14,000
Employees Trust Fund -12%	3,554	3,609	3,600
Director's Fees	1,041	705	750
Other Allowances	106	23	50
Gratuity	(16,179)	20,377	(11,500)
Traveling – Local	6,009	4,310	5,000
Traveling – Overseas	44	95	150
Welfare & Sports facilities	105	140	100
Medical Scheme	772	760	840
Entertainment	181	89	150
Vacation Leave Encashment	55	49	50
Total	<u>172,763</u>	<u>188,944</u>	<u>170,190</u>

NOTE NO: 4.2 SUPPLIES REQUISITES

Fuel & Lubricants	18,656	12,940	16,000
Drilling Works Consumables	7,706	18,090	9,000
Laboratory Consumable & Others	1,611	3,640	500
Other Consumable	483	313	500
Total	<u>28,456</u>	<u>34,983</u>	<u>26,000</u>

NOTE NO: 4.3 CONTRACTUAL SERVICES & MAINTENANCE EXPENSES

Postage & Telecommunication	1,369	1,188	1,400
Electricity	2,789	1,902	3,000
Rent, Rates, & Taxes	849	695	800
Cash in transit Insurance	10	11	10
Audit Fees	157	200	200
Printing & Publications	830	103	150
Workshop & Seminars	64	54	70
Water Bills	111	141	120
Consultancy Charges	67	67	70
Sundry Expenses	905	249	800
Maintenance of Motor Vehicles	6,520	3,881	4,500
Maintenance of Machinery	6,952	6,733	4,500
Maintenance of Office Equipments	1,816	1,365	1,200
Maintenance of Buildings	<u>289</u>	<u>442</u>	<u>400</u>
Total	<u>22,728</u>	<u>17,031</u>	<u>17,220</u>

NOTE NO: 4.4 OTHER OPERATING EXPENSES

Stationery & Office Requisites	514	381	500
Uniforms	639	116	500
Periodicals & Newspapers	206	97	200
Publicity	681	304	450
Bank charges	165	142	150

Medical Test Charges	70	-	80
Legal Expenses	4	-	10
Stamp Duty	11	6	10
Vehicle Service – Rathmalana	459	259	700
Hiring Charges	11	54	20
Training Centre Expenditure (A'pura)	-	95	-
Water Day Expenditure	1,410	-	1,360
Fine & Surcharges	15	-	-
Bad Debts	190	31	-
Revaluation Deficit	5,948	-	-
Total	<u>10,323</u>	<u>1,485</u>	<u>3,980</u>

NOTES TO THE FINANCIAL STATEMENTS CONTD.

Actual	Actual	Budget
2016	2015	2016
Rs'000	Rs'000	Rs'000

NOTE NO: 4.5 OTHER PROJECT EXPENSES

HYDROGEOLOGICAL COASTAL STUDY IN COLOMBO TO

NEGOMBO

Overtime & Holiday Pay	779	375	
Traveling	855	533	
Stationery & Office Requisites	15	79	
Fuel & Lubrications	2,812	2,034	
Drilling Work Consumables	95	999	
Office Equipment Maint. & Repairs	132	458	
Rent. Rates & Taxes	131	44	
Entertainment	22	180	-
Other Consumables	55	12	
Salaries & Wages	55	43	
Printing & Publication	1	3	
Sundry Expenses	5	9	
Maintenance of Motor Vehicles	104	87	
Consultancy Charges	-	125	

Publicity	-	14	
Maint. Of Machinery	515	7	
Maint. Of Lab. Equipments	-	17	
Water Day Expenditure	1,121	-	
Postage & Telecommunication	1	-	
Sub Total	<u>6,698</u>	<u>5,001</u>	<u>9,000</u>

100 DAY PROJECT

Overtime & Holiday Pay	-	1,225	-
Traveling	-	1,106	-
Stationery & Office Requisites	-	3	-
Fuel & Lubrications	-	4,038	-
Maint. Of Buildings	-	188	-
Drilling Work Consumables	-	4,500	-
Maintenance of Motor Vehicles	-	37	-
Maint. Of Machinery	-	7	-
Sundry Expenses	-	18	-
Printing & Publication	-	6	-
Publicity	-	87	-
Rent. Rates & Taxes	-	133	-
Other Consumables	-	83	-
Entertainment	-	162	-
Sub Total	-	<u>11,593</u>	-

NOTES TO THE FINANCIAL STATEMENTS CONTD.

Actual	Actual	Actual
2016	2015	2016
Rs'000	Rs'000	Rs'000

NOTE NO: 4.5 OTER PROJECT EXPENSES

GONAGANARA & RATHUPASKETIYA PROJECT

Overtime & Holiday Pay	-	82	-
Traveling	-	55	-
Other Consumables	-	10	-

Fuel & Lubrications	-	2	-
Maint. Of Buildings	-	46	-
Drilling Work Consumables	-	1,691	-
Electricity	-	21	-
Hiring Charges	-	18	-
Sub Total	2,387	1,925	1,700
CHUNNAKAM PROJECT			
Drilling Work Consumables	-	1,800	-
Sub Total	2,627	1,800	2,600
WELL CLEANING OF AVISSAWELLA TO COLOMBO PROJECT	3,401	-	3,400
DUG WELL CLEANING & WATER SAMPLE ANALYSIS SALAWA & KOSGAMA	1,569	-	1,600
CONSTRUCTION OF PRODUCTION WELL – DRY ZONE	9,851		
SMALL SCALE WATER SUPPLY SCHEMES	-	-	10,000
GRAND TOTAL	26,533	20,319	28,300

NOTE NO: 4.6 TREASURY GRANTS -CAPITAL (Research Studies)

HYDROGEOLOGICAL COASTAL STUDY IN COLOMBO TO NEGOMBO

Overtime & Holiday Pay	11	7	16
Traveling	14	15	20
Stationery & Office Requisites	3	-	30
Fuel & Lubrications	28	30	24
Ground Water Other	2	1	160
Drilling Work Consumables	17	-	-
Office Equipment Maint. & Repairs	32	-	-
Maint. Of Lab. Equipments	103	177	-
Sub Total	<u>230</u>	<u>210</u>	<u>250</u>

STUDY IN WATER QUALITY CHANGES IN AQUIFER SYSTEM - ANURADHAPURA

Overtime & Holiday Pay	17	17	28
Traveling	22	36	32
Fuel & Lubrications	42	107	60
Maint. Of Lab. Equipments	124	120	-
Drilling Work Consumables	10	-	-
Ground Water Other 100	-	-	-
Office Equipment Maint. & Repairs	22	-	-
Stationery & Office Requisites	1	-	30
<i>Sub Total</i>	<u>238</u>	<u>280</u>	<u>250</u>

Actual	Actual	Budget
2016	2015	2016

NOTE NO: 4.6 TREASURY GRANTS – CAPITAL (Research Studies)

HYDROGEOLOGICAL STUDY IN LIMESTONES AQUIFERS IN MANNAR DISTRICT

Overtime & Holiday Pay	310	471	385
Traveling	263	388	500
Stationery & Office Requisites	2	3	30
Fuel & Lubrications	1,290	1,527	1,300
Drilling Work Consumables	1,904	1,323	1,540
Ground Water Other	6	38	60
Rent , Rates & Taxes	72	105	45
Maint. Of Lab. Equipments	90	120	-
Maintenance of Motor Vehicles	52	96	50
Maint. Of Machinery	1	410	50
Scholarships & Seminars	-	-	40
Sundry Expenditure	8	9	-
Office Equipment Maint. & Repairs	1	9	-
Entertainment	1	1	-
<i>Sub Total</i>	<u>4,000</u>	<u>4,500</u>	<u>4,000</u>

JAFFNA GROUND WATER MONTORING

Overtime & Holiday Pay	285	220	260
Traveling	265	228	360
Stationery & Office Requisites	-	2	50
Fuel & Lubrications	1,872	1,020	1,000
Drilling Work Consumable	2,367	643	2,005
Ground Water Other	18	9	300
Rent. Rates & Taxes	24	52	60
Salaries & Wages	-	-	60
Maint. Of Motor Vehicles	54	56	100
Maint. Of Machinery	7	9	100
Maint. Of Lab. Equipments	106	224	50
Postage & Telecommunication	-	-	5
Entertainment	1	-	-
Scholarships & Seminars	-	-	50
Sundry Expenditure	1	5	-
<i>Sub Total</i>	<u>5,000</u>	<u>2,468</u>	<u>4,400</u>

HYDROGEOLOGICAL STUDY IN VAVUNIA & KILINCHCHI

Salaries & Wages	-	14	-
Drilling Work Consumable	10	936	-
Overtime & Holiday Pay	2	256	16
Traveling	11	281	30
Fuel & Lubrications	80	1,225	54
Ground Water Other	-	5	80
Maint. Of Lab. Equipments	62	109	-

Maintenance of Motor Vehicles	-	102	-
Rent. Rates & Taxes	-	78	40
Maint. Of Machinery	-	8	-
Sundry Expenditure	-	4	-
Stationery & Office Requisites	3	1	30
Sub Total	<u>168</u>	<u>3,019</u>	<u>250</u>

Staff Training	300	192	300
Rehabilitation & Improvement	3,700	2,908	3,700
Sub Total	4,000	3,100	4,000

THE STUDY ON THE DIRECT & INDIRECT IMPACTS OF

CLIMATE CHANGES

Salaries & Wages	-	9	-
Overtime & Holiday Pay	162	99	120
Traveling	147	171	120
Fuel & Lubrications	586	694	470
Drilling Work Consumable	441	942	385
Maintenance of Motor Vehicles	1	12	100
Stationery & Office Requisites	6	1	50
Ground Water Other	3	109	100
Rent. Rates & Taxes	23	49	50
Maint. Of Machinery	1	1	100
Postage & Telecommunication	-	-	5
Sundry Expenditure	1	5	-
Maint. Of Lab. Equipments	281	158	-
Office Equipment Maint. & Repairs	13	4	50
Sub Total	<u>1,665</u>	<u>2,254</u>	<u>1,550</u>

ARTIFICIAL RECHARGE PROJECT (PHASE 1 PUTTALAM)

Overtime & Holiday Pay	17	79	32
Traveling	22	97	40
Stationery & Office Requisites	4	-	30
Fuel & Lubrications	43	492	72
Drilling Work Consumables	10	1,670	-
Ground Water Other	-	6	76
Maint. Of Lab. Equipments	124	120	-
Maint. Of Machinery	-	20	-
Maintenance of Motor Vehicles	-	17	-
Sundry Expenditure	-	2	-
<i>Sub Total</i>	<u>220</u>	<u>2,503</u>	<u>250</u>

WATER QUALITY STUDIES IN CKDU PROJECT

Salaries & Wages	-	-	100
Overtime & Holiday Pay	331	168	620
Maintenance of Motor Vehicles	-	56	100
Maint. Of Machinery	-	2	100
Rent , Rates & Taxes	3	83	100
Traveling	330	220	460
Stationery & Office Requisites	17	10	40
Fuel & Lubrications	1,679	995	1,650
Drilling Work Consumables	1,885	2,420	1,580
Ground Water Other	-	8	150
Sundry Expenditure	-	18	-
Office Equipment Maint. & Repairs	-	-	50
Scholarships & Seminars	-	-	50
Printing & Publication	-	2	-
Maint. Of Lab. Equipments	155	81	-

Entertainment	143	251	-
Publicity	48	51	-
Water Day Expenditure	235	-	-
<i>Sub Total</i>	<u>4,836</u>	<u>4,365</u>	<u>5,000</u>

REHABILITATION OF HAND PUMP TUBE WELLS IN HAMBANTOTA & MONARAGALA

Salaries & Wages	-	-	50
Overtime & Holiday Pay	249	185	250
Maintenance of Motor Vehicles	8	-	100
Maint. Of Machinery	8	-	50
Rent , Rates & Taxes	-	16	100
Traveling	230	151	250
Fuel & Lubrications	1,414	478	1,000
Drilling Work Consumables	3,083	2,024	3,120
Ground Water Other	4	13	-
Postage & Telecommunication	-	-	30
Sundry Expenditure	2	3	40
Stationery & Office Requisites	2	2	10
<i>Sub Total</i>	5,000	2,872	5000

GROUND WATER ASSESMENT OF KIRINDI OYA BASIN (PHASE - I)

Salaries & Wages	-	-	50
Overtime & Holiday Pay	164	107	200
Maintenance of Motor Vehicles	-	82	-
Rent , Rates & Taxes	18	7	50
Traveling	120	128	200
Fuel & Lubrications	752	740	1,000
Drilling Work Consumables	430	377	420
Ground Water Other	-	-	60
Stationery & Office Requisites	-	-	20
Maint. Of Lab. Equipments	192	81	-
<i>Sub Total</i>	1,676	1,522	2,000

GROUND WATER ASSESMENT OF KELANI GANGA BASIN (PHASE - I)

Salaries & Wages	-	-	50
Overtime & Holiday Pay	184	10	200
Maintenance of Motor Vehicles	3	21	-
Maint. Of Machinery	6	-	-
Rent , Rates & Taxes	60	-	50
Traveling	304	14	200
Fuel & Lubrications	593	6	1,000
Drilling Work Consumables	726	651	420
Ground Water Other	2	-	60
Stationery & Office Requisites	22	-	20
Sundry Expenditure	3	-	-
Maint. Of Lab. Equipments	95	81	-
Entertainment	2	-	-
Sub Total	2,000	783	2,000

NOTE NO: 4.6 TREASURY GRANTS -CAPITAL (Research Studies)**DEVELOPMENT OF GROUNDWATER EMERGENCY USE**

Salaries & Wages	-	-	50
Overtime & Holiday Pay	243	-	630
Maintenance of Motor Vehicles	3	-	100
Maint. Of Machinery	8	-	100
Rent , Rates & Taxes	-	-	100
Traveling	224	-	460
Fuel & Lubrications	1,448	-	1,600
Drilling Work Consumables	3,055	-	1,145
Ground Water Other	4	-	-
Stationery & Office Requisites	-	-	15
Publicity	6	-	-
Sundry Expenditure	5	-	-

Maint. Of Lab. Equipments	4	-	-
Sub Total	5,000		4,200
GRAND TOTAL	34,003	27,896	33,150

NOTE NO: 5

CASH & CASH EQUIVALENTS

(1) Bank of Ceylon York Street Branch (0002026295)	86	982
(2) Bank of Ceylon Torrington Branch (0002322267)	5,237	1,288
(3) Bank of Ceylon Torrington Branch (0002322268)	28	36
(4) Bank of Ceylon Torrington Branch (0005342839)	497	727
(5) National Savings Bank – Bammalapitiya (100230211818)	2,131	7,977
(6) National Savings Bank – Borella (1-0061-03-31236)	-	12
(7) National Savings Bank – Borella (1-0061-03-31287)	<u>2</u>	<u>2</u>
TOTAL	<u>7,981</u>	<u>11,024</u>

NOTES TO THE FINANCIAL STATEMENTS CONTD.

	Actual	Actual
NOTE NO: 6	2016	2015
TRADE & OTHER RECEIVABLES	Rs'000	Rs'000
STAFF		
(1) Distress Loan	11,715	12,375
(2) Festival Advance	10	28
(3) Cycle Loan	14	25
(4) Staff Debtors	-	247
Sub Total	<u>11,739</u>	<u>12,675</u>
OTHERS		
(5) Trade	19,790	3,836
(6) Deposits	56	56
(7) Advances to suppliers	243	163
(8) Retention Receivable	149	-
Sub Total	<u>20,238</u>	<u>4,055</u>

TOTAL RECEIVABLES	<u>31,977</u>	<u>16,730</u>
(9) Less : V.A.T. Payable	<u>(2,402)</u>	<u>(389)</u>
TOTAL	<u>29,575</u>	<u>16,341</u>

NOTE NO: 7

INVENTORIES

MATERIALS & SPARES

Vehicle Spares	1,370	1,149
Vehicle Spares (DSWRPP)	2,295	1,361
Fuel & Lubricants	1,973	923
Stores Materials	24,949	19,430
Building Maintenance	144	38
Stationery	237	318
Machinery Spares (with 2 KR Spares)	58,316	66,714
Machinery Spares (DSWRPP)	50,932	55,755
Machinery Spares (MINISTRY)	4,154	5,010
Laboratory Maintenance	<u>4,855</u>	<u>3,258</u>
TOTAL	<u>149,25</u>	<u>153,956</u>

NOTE NO: 8

PRE-PAYMENTS

Cash In Transits	9	8
Newspapers & Periodicals	13	9
Maintenance of Motor Vehicle	139	95
Publicity	62	-
TOTAL	<u>223</u>	<u>112</u>

NOTES TO THE FINANCIAL STATEMENTS CONTD.

PROPERTY, PLANT & EQUIPMENT

NOTE NO: 09

	Balance as at	Additions	Disposal	Balance as at
Cost / Valuation	01.01.2016	for the year	Adjustments	31.12.2016
	<u>Rs'000</u>	<u>Rs'000</u>	<u>Rs'000</u>	<u>Rs'000</u>
Land	1,897	-	-	1,897
Buildings	-	6,258	-	6,258
Motor Vehicles	136,802	121,662	(160,859)	97,605
Machinery, Tools & Equipments	698,681	204,490	(706,281)	196,890
Laboratory Equipments	85,700	17,676	(85,700)	17,676
Furniture fittings & office Equipments	17,157	3,035	-	20,192
Computers & Accessories	11,201	760	(8,716)	3,245
Scientific Equipments	95,457	412	-	95,869
Geological Maps	2,274	-	(2,274)	-
Lab Building (Work in Progress)	<u>300</u>	<u>-</u>	- <u> </u>	<u>300</u>
TOTAL	<u>1,049,469</u>	<u>354,293</u>	<u>(963,830)</u>	<u>439,932</u>

Depreciation

	Balance as at	Charges	Disposal /	Balance as at
	01.01.2016	for the year	Adjustments	31.12.2016
	<u>Rs'000</u>	<u>Rs'000</u>	<u>Rs'000</u>	<u>Rs'000</u>
Motor Vehicles	108,201	17,307	(125,508)	-
Machinery, Tools & Equipments	284,554	93,658	(378,212)	-
Laboratory Equipments	59,072	3,532	(59,072)	3,532
Furniture fittings & Office Equipments	10,952	1,205	-	12,157
Computers & Accessories	8,715	586	(8,715)	586
Scientific Equipment	27,421	18,610	-	46,031

Geological Maps	<u>1,687</u>	<u>587</u>	<u>(2,274)</u>	<u>-</u>
TOTAL	<u>500,602</u>	<u>135,485</u>	<u>(573,781)</u>	<u>62,306</u>
NET BOOK VALUE	<u>548,867</u>			<u>377,626</u>

NOTES TO THE PROPERTY PLANT & EQUIPMENT

Cont.NOTE NO: 09

01. Depreciation

	Charges	Deferred	Disclosed
	for the year	Income for the	Amount
	<u>Rs'000</u>	<u>Rs'000</u>	<u>Rs'000</u>
Motor Vehicles	17,307	(17,290)	17
Machinery, Tools & Equipments	93,658	(93,625)	33
Laboratory Equipments	3,532	(2,434)	1,098
Furniture fittings & Office Equipments	1,205	-	1,205
Computers & Accessories	586	-	586
Scientific Equipment	18,610	<u>(18,610)</u>	-
Geological Maps	<u>587</u>	<u>-</u>	<u>587</u>
TOTAL	<u>135,485</u>	<u>(131,959)</u>	<u>3,526</u>

- 02.** Land of Korakahawewa Training Center (Hec. 2.166) has leased agreement on paying with annual rental basis
- 03.** An extent of 40.0 perches land at Battaramulla has allocated from the Urban Development Authority to the Water Resources Board for the period of 30 years on nominal ground rental basis.
- 04.** Details of the Land & Building which are utilizing of the Board without having legal ownership as at 31.12.2013 are as follows.

LAND	BUILDINGS (Appox)
Head Office	8477 Sq.ft
Work Shop at Rathmalana	32960 Sq.ft
Circuit Bungalow at Anuradhapura	3038 Sq.ft
Work site at Vauniya	1082 Sq.ft

05. 12 Nos of Motor Vehicles have not been transferred to the Board at the end of the Year 2016.(Pls. see page No. 31 for details.)

06. Nos of Motor vehicles (Double Cabs) granted from General Treasury in year 2012 have not been valued. (Vehicle Nos. PE-0623, PE-3448, PD-5851, PD-5856)

NOTES TO THE FINANCIAL STATEMENTS CONTD.

	Actual	Actual
	2016	2015
NOTE NO: 10	Rs'000	Rs'000
TRADE CREDITORS		
NAME		
01. Provincial Sec. Nuwaragampalatha	422	422
02. National Water Supply & Drainage Board	-	1,125
03. Dhanusha Marine	-	626
04. Municipal Council – Dehiwala	-	110
TOTAL	<u>422</u>	<u>2,283</u>

NOTE NO: 11

OTHER PROVISIONS & PAYABLES

(1) Staff		
1:1 Staff Creditors	-	20
SUB TOTAL(1:1)	-	20
(2) Provision for Audit Fees	535	557
(3) E.P.F. 10%	(91)	(84)
(4) Accrued Expenses	13,256	18,443

(5) Bid Bond & Refundable Deposits	639	420
(6) ETF Payable	431	5,169
(7) EPF Payable	37,534	-
(8) SVAT Payable	14	-

SUB TOTAL(2 – 8) **52,318** **24,505**

(9) Less: V.A.T Cash	(469)	(651)
(10) Less: V.A.T Receivable	<u>-</u>	<u>(191)</u>
	51,849	23,683

NOTE NO: 12

DEFERRED INCOME

Service Advance (Pl.se Page No 29 & 30 for details)	21,413	<u>11,370</u>
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NOTE NO: 13

RETIREMENT BENEFIT OBLIGATION

The Amounts recognized in the Statement of Financial Position are as follows

At Beginning of the year	90,855	79,706
Charge / Credit for the year	(16,180)	20
Contribution Paid	<u>(9,681)</u>	<u>(9,228)</u>
At end of the year	<u>64,994</u>	<u>90,855</u>

NOTE NO: 14

SECURITY DEPOSITS

Deposit

		Rs		
(1) Mr. W.P.S. Gunethilake	- Cashier	3,500	-	12
(2) Mr. K.A. Wimal	- Store Keeper	500	2	2
	TOTAL	<u>4,000</u>	<u>2</u>	<u>14</u>

NOTE NO: 15

Deferred Income (Pls. see Page No. 22 for details)

310,900

-

NOTE NO: 16

Please see Page No. 03 for Statement of changes in Net Assets / Equity

Note NO: 17**Events after the reporting period***An amount of Rs. 124,320 has been accounted as bad debts 22.02.2017 which has approved by the board.***WATER RESOURCES BOARD****Note: 15****Deferred Income**

	Balance as At 01.01.2016 Rs.000	Additional During the year Rs.000	<u>Changes for the year</u>		Balance as at 31.12.2016 Rs.000
			Depreciation Rs.000	Revaluation Adjustment Rs.000	
Lands	-	-	-	-	-
Building	-	-	-	-	-
Motor vehicles	-	123,920	(17,290)	(27,105)	79,525
Machinery	-	588,167	(93,625)	(322,752)	171,790
Laboratory Equipments	-	12,183	(2,434)	-	9,749
Furniture Fitting & Off Eq	-	-	-	-	-
Computer & Accessories	-	-	-	-	-
Scientific equipments	-	<u>68,445</u>	<u>(18,609)</u>	<u>-</u>	<u>49,836</u>
Total		<u>792,715</u>	<u>(131,958)</u>	<u>(349,857)</u>	<u>(310,900)</u>



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கணக்காய்வாளர் தலைமை அபிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



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திகதி }

30 September 2017

The Chairman
Water Resources Board

Report of the Auditor General on the Financial Statements of the Water Resources Board for the year ended 31 December 2016 in terms of Section 14(2) (c) of the Finance Act, No. 38 of 1971.

The audit of financial statements of the Water Resources Board for the year ended 31 December 2016 comprising the statement of financial position as at 31 December 2016 and the statement of financial performance, statement of changes in equity and cash flow statement 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 and Section 17(2) of the Water Resources Board Act, No.29 of 1964 as amended by Act, No 42 of 1999. 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. As per the Section 13(7) (a) of the Finance Act, a detailed report had been issued to the Chairman of the Board on 31 August 2017.

1.2 Management's Responsibility for the Financial Statements

The management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Public Sector 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 Auditing 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 judgement, including the assessment of the risks of material misstatements 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 financial statements. Sub-sections (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 the 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 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 Water Resources Board as at 31 December 2016 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.



2.2 Comments on Financial Statements

2.2.1 Accounting Deficiency

Ownership of the Jeep donated by the Sri Lanka Army had not been obtained in proper manner and shown in the financial statements.

2.2.2 Lack of Evidence for Audit

Confirmation of balances in respect of debtors and service advances aggregating to Rs.28,168,520 had not been made available for audit.

2.3 Accounts Receivable and Payable

The following observations are made.

- (a.) Trade debtor balances of Rs. 19,790,468 had been remained outstanding at the end of the year under review. Out of that balances of Rs. 860,800 was due over 3 years. It had been informed a balance of Rs. 2,453,295 receivable from a project was not agreed.
- (b.) Advances of Rs. 21,413,361 had been obtained to provide different kind of services for 36 personals and 47 institutions by the Board. However, Action had not been taken to provide the services by the Board, even though advance of Rs. 1,139,371 had been obtained more than 01 year.



2.4 Non-Compliances with Laws, Rules, Regulations and Management Decisions

The following non-compliances were observed in audit.

Reference to Laws, Rules and Regulations	Non-Compliances
(a) Water Resources Board Act, No. 29 of 1964 and Sections 14 (1) and 14(2) of amended Act, No. 42 of 1999	Even though advises on any or all matters stipulated in the Act, to be given by an Advisory Committee to the Board, an Advisory Committee had not been established during the year under review. As a result, attention of the Advisory Committee had not been given for 11 research studies during the year under review and research expenses thereon amounting Rs.25,003,000 had not been approved by the Advisory Committee as per the provisions of the Water Resources Board Act.
(b) Treasury Circular, No. 842 of 19 December 1978.	Registers for scientific equipment had not been maintained.
(c) Paragraph 9.7 of the Public Enterprises Circular, No. PED/12 of 02 June 2003.	Special allowances of Rs. 2,519,200 had been paid to 28 professional officers in addition to the salary during the year under review without obtaining the approval of the Secretary to the Treasury.

3. Financial Review

3.1 Financial Results

According to the financial statements presented, the financial result of the Board for the year ended 31 December 2016 was a surplus of Rs. 27,094,000 and the corresponding deficit of the preceding year amounted to Rs. 99,400,000, thus indicating an improvement in the financial result by Rs.126,494,000 during the year



under review. The expenditure for the year had been decreased by Rs. 60,952,000 and the income on operating activities had been increased by Rs. 49,409,000 mainly attributed for the above improvement.

The analysis on financial result for the year under review with 04 proceeding years had revealed that the deficit of the financial result since year 2012 to year 2015 had been improved as a surplus during the year under review. However, after a adjusting remunerations and depreciation for non- current assets to the financial result, the contribution of the Board had been improved since year 2012 positively and it was Rs. 203,383,000 during the year under review.

4. Operating Review

4.1 Performance

According to the Section 12 of the Water Resources Board (amendment) Act, No.42 of 1999, the main objectives of the Board are as follows.

- (i) The control, regulation, development, and prevention of pollution drainage system including the conservation and utilization of the water resources of the country.
- (ii) The formulation of national policies relating to the control and use of the water resources of the country with the objectives of the multi-purpose development and use of water resources, the short-term and long-term provision of water resources for domestic and industrial supplies, the control of salinity and any other same objectives.
- (iii) The analysis of reports based on investigations, statistical surveys, plans and proposals relating to the ground water resources of the country made by Government Institutions.
- (iv) Any other suitable measures to be taken by the Government for the proper control and economic use of groundwater.

The Board had not taken substantial measures to achieve the above mentioned objectives.

- (a) Even though research unit of 3,692 scheduled to be commenced under the 13 subjects of the Annual Budget Estimate during the year under review, research units of 2,357 had only been completed by the Board as per the progress reports, thus indicated that the 1,335 of research units ranging from 13 per cent to 100 per cent had not been implemented.

(b) Deficiencies in Implementing Research Studies

The following observations are made.

- (i) Eleven research studies projects had been commenced in order to test the quality of water and its impact on the general public at an estimated cost of Rs.587,531,400 since year 2010 to 2016. Out of that Rs. 104,952,529 had been utilized as at 31 December 2016 thereon. Even though it was scheduled to complete 08 research studies as at 31 December 2016, it had failed to complete the entire 08 projects as expected. As a result, objectives of the projects had not been achieved.
- (ii) The post research experience of the officers who responsible for the research studies had not been included under the proposals of academic and professional qualifications. Therefore, no any research studies had been supervised by a researcher who expert and experienced in the relevant research areas.
- (iii) Even though, a Research Officer required to be appointed on full time basis in order to ensure successful completion of research studies, the Board had appointed the General Manager of the Board as a Research Officer for all research studies. Therefore, research studies had not been completed within scheduled time period, due to the General Manager had to involve in research studies in addition to his normal duty.



- (iv) Financial progress of the research studies was 15 per cent to 65 per cent at the end of the year under review and delays with 01 year to 05 years. Further, reasons and cost estimates had not been submitted in extension of time for the research studies.

4.2 Management Activities

The following observations are made.

- (a) A sum of Rs. 290,000 had been paid for fixing of an engine to a vehicle before certified by the relevant officers.
- (b) Even though the Board had used 16 vehicles which owned to other institutions shown under the financial statements, action had not been taken to vest that vehicles even up to June 2017.
- (c) Action had not been taken to vest of the lands and buildings located in several places such as head office of the Board, Workshops of Ratmalana and Vauniya and Circuit Bungalow in Anuradhapura. Further, a sum of Rs. 6,258,000 had been spent on construction of buildings and renovations of existing buildings by the Board.

4.3 Idle and Underutilized Assets

Non-moving stocks of Rs. 231,071 and expired stocks of Rs. 3,265,967 included in the closing stocks shown in the financial statements had been identified by the Board of Survey since 2013 up to the year 2016, However, a proper action had not been taken thereon.

4.4 Personnel Administration

The following observations are made.

- (a) Even though, 66 employees had been recruited on casual and contract basis, approvals of the Department of Management Services had not been obtained thereon.



- (b) According to the procedure of recruitments and promotions of employees, it was required to be passed the Efficiency Bar Examinations for the each post separately. However, salary increments had been awarded without conducting of Efficiency Bar Examinations and promotions had been made for higher posts.

4.5 Resources of the Board Released to Other Government Institutions

Five officers recruited to carry out the activities of the Board had been released to the other Government Institutions since year 2015, contrary to Section 8.3.9 of the Public Enterprises Circular No. PED/12 of 02 June 2003. Salaries and allowances of Rs. 1,354,613 for the year under review and Rs. 816,897 for the preceding year had been incurred for these employees by the Board.

5. Accountability and Good Governance

5.1 Internal Audit

Even though an Internal Audit Division had been established, an adequate number of qualified officers had not been deployed to audit of the activities of the Board which use more technological and engineering techniques.

5.2 Budgetary Control

It was observed that the budget had not been utilized as an effective instrument of management control, due to estimated and actual income and expenditure had been deviated for 98 items ranging from 20 per cent to 453 per cent.

5.3 Action Plan

Even though Action Plan had been prepared to carry out overall functions of the year 2016 by the Board, action had not been taken to prepare budget estimate and procurement plan as enable to compare with the Action Plan.



5.4 Unsettled Audit Issues

A female Geologist who went abroad for a scholarship in 2005 under condition of compulsory service period of 06 years and a security bond of Rs. 1,308,699 had been released for other institution under the condition of compulsory service of 04 years and security bond of Rs. 435,600 before completion of the compulsory service period. Action had not been taken to recover the security bonds aggregating Rs. 1,744,299 as per the agreements even at the end of the year under review, even though the officer had released permanently from the service of the Board since year 2011 on breach of the 02 agreements by the relevant officer.

6. Systems and Controls

Deficiencies 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 and special attention is needed in respect of the following areas of control.

Systems and Controls	Observations
(a) Accounting	Ownership of the assets had not been obtained by the Board and income and expenditure not accounted properly.
(b) Accounts receivables and payables	Effective measures had not been taken to settle.
(c) Studies on research	Action had not been taken to complete the research studies as scheduled.
(d) Control of Assets	Action not taken to record the non-current assets.

Sgd. H.M. GAMINI WIJESINGHE
Auditor General

H.M Gamini Wijesinghe
Auditor General

The Auditor General,
Auditor General's Department,
No. 306/92, Polduwa Road,
Battaramulla.

The Auditor General's Report made under Section 14 (2) (c) of the Financial Act No. No. 38 of 1971 in respect of Financial Statement of the Water Resources Board for the year ended on 31st December 2016.

This is with reference to your audit report No. IEN/A/WRB/1/17/11 of 03.08.2017 on the above subject.

In respect of the audit observations therein, I make my comments as follows:

2. Financial statement

2.2 Comment on the statement

2.2.1 Accountings shortcomings

- (a) Efforts are being made to acquire the Jeep which is in the Name of Sri Lanka Army.
- (b) Steps are being taken to enter the two printing machines purchased, into Computer Accessories Account and rectify it; the depreciation deficiency value will be Rs. 4265.00. I will take steps to correct that value as well.

2.2.2 Accounts due and payable

- (a) Attention has been paid to settle the balance of loans payable. For the activities performed through the transaction of the ministry of Town Planning and Water Supplies, the invoiced values are correctly entered in the Account Books.
- (b) Attention has been paid to expeditiously settle service activities that are delayed.
- (c) Steps had been taken to send service advance balance to the respective Institutions.

2.2.3 Lack of evidence for auditing

Steps had been taken to despatch letters confirming debt and service advance balances to the relevant customer institutions.

2.2.3 Being not in conformity with laws and regulations.

- | | |
|---|--|
| (a) Water Resources Board Act No. 29 of 1964. | Steps were taken to establish the Inter – Departmental Advisory Committee mentioned under Section 14.1 of the Water Resources Board Act No. 29 of 1964 and the first Meeting of the members of the committee was held on 29.06.2017 at the main office of the Water Resources Board. |
| (b) Treasury Circular No. 842 dated 19.12.1978. | The act of regularization of the register of scientific equipment is being carried out. |
| (c) Government Financial Circular No. 12 dated 02 nd June 2003 | In order to get the approval of the Treasury for this purpose, it has been forwarded to Management Services Department and the attention of that Department is drawn in order to get information. |

4.Operation Review

4.1 Performance

(a) Achieving the objectives

In order to achieve the objectives of the act, the Water Resources Board is empowered by the Gazette notification No. 23/2010 dated 16th March 2017 also and the related planning activities are being done at the moment.

(c) Physical Performance

For the purpose of preparation of the maps relating to research studies stated here, although the required qualitative data analysis of the ground water had to be done at the end of the year, as the limited number of hydrologists available, had engaged in the other important activities of the Board, and due to chemical analysis of water samples that had to be carried out by the laboratories, increased, there had been a physical variation in the physical performance quoted. Notwithstanding, in the year 2017 steps will be taken to forward the delayed data analysis activities will be completed and the final report of each research work, all the collected scientific data of ground water, the results of the data analysis and recommendation relating to the development of the ground water.

4.2 Shortcomings in the implementation of research study

- (a) By December 31, 2016, out of the projects commenced 05 were concluded. The other project works could not be completed as scheduled due increase of work entrusted to the Board under emergency situations. The estimation of the completed projects have been implemented from year 2017.
- (b) In preparing the future project proposals, steps will be taken to enter into the proposals the previous research experience, the educational and the professional qualifications of the officers who will be responsible for the research studies and subject to supervision of a efficient and experienced researcher, the research studies, research work.. However, in planning research work in the year 2017, steps were taken to mention about the officer who is in charge of ech project.
- (c) The research studies of the Water Resources Board will be done under the supervision of Deputy General Manager (Research and Development) and Assistant General Manager (Ground Water).
- (d) In future, necessary action will be taken to bring the financial progress of research studies to a higher level and measures are taken to minimize the time taken for such studies. Likewise, in extending the research studies, action will be taken to indicate the reason for it and to enter a estimate for it.

4.3 Management Activities

- (a) Steps will be taken to get rid of the existing shortcomings.
- (b) Attention has been paid to acquire vehicles in the name of the Board.

4.4 Idling and unutilized assets

Under these items of stock spare parts and accessories for the vehicles are in sufficient quantities and as those machineries are very old, taking into account also of the non-availability in the market and slow moving items are in a state that they cannot be set off.

4.5 Assets which were not acquired through proper means

Efforts are being made to acquire these lands in the name of the Board. Further, in order to continue with the day to work the buildings therein, have to be repaired.

4.6 Pension benefits and building up of a fund

Although savings for the payment of gratuity by the end of 31.12.2016 was Rs. 2.1 millions, even for the workers who will leave the service in 2017, action will be taken to deposit onr behalf of them..

Even by now - by June 2017 a balance of Rs. Rs. 5.6 million is maintained.

4.7 Administration of the working staff

(a) In this regard by letter no. DMS/17/13/V/II dated 15.11.2015 posts have approved in such a way as to make the posts of 15 members becoming private.

(b) By now for the labour grades Efficiency Bar Examinations have been conducted, in future, steps will be taken to conduct other Efficiency Bar Examinations.

4.8 The resources of the Board which were given to other institutions.

By now, this situation has been solved nobody from this institute are employed to do the activities of other State Institutions.

5. Accounting procedures and good governance

5.1 Internal auditing.

For the internal auditing unit of the presently approved staff, there has been no separate staff approved and in future, steps will be taken to amend the workforce. Accordingly, it is expected that the presently existing shortcomings can be rectified.

5.2 Purchasing process

In future attention will be paid to minimize, as far as possible, the variations occurring between the annual budgets and purchasing.

5.3 Budgetary Control

(a) In 2016 the budget estimate was prepared planning to study groundwater studies in various parts of the country and taken as a whole provision of Rs. 35.0 million was allocated for all the activities. Accordingly, the relevant activities could not be carried out in conformity with plans prepared in respect of each project. Further, under the work entrusted to the Board under emergency situations the activities that had to be done increased, there occurred a variation in the progress of the research studies. Despite this, by getting rid of the shortcomings that occurred in research studies as pointed out in the previous auditing, in the year 2016 the variation between the estimated amount and the actual expenditure was maintained at minimum level as far

as possible. In the coming years, in the preparation of planning by being more attentive in this regard, action will be taken to make use of the budget more fruitfully.

- (b) Within the year, in the dry zone instead of constructing agro-wells small scale water supply schemes and production tube wells were constructed. They too are linked with the function of constructing agro-wells in the dry zone and under the estimated amount of Rs. 10.0 million for that purpose, an amount of Rs.9.851 million was spent for the purpose of constructing production tube wells.

5.4 Budget estimate and purchasing plans.

Attention has been drawn to minimize the variations that exist between Action plan, purchasing plan and annual budgetary estimate.

5.5 Unsolved audit deficits

In this regard, as per the instruction of the Ministry, action will be taken to recover money from the relevant Geologist.

6. **Systems and control**

- 7. In future action will be taken pay more attentions to the unit quoted under this.

A. C. M. Zulficar, Engineer,

Chairman,

Water Resources Board.

Copy to: The Secretary, Ministry of Irrigation and Water Resources Management.

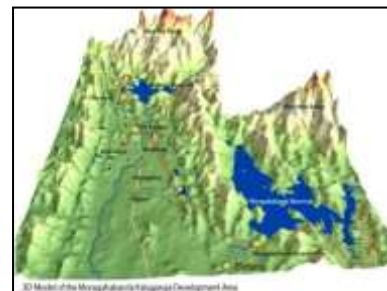
PROJECTS IMPLEMENT BY WATER RESOURCES BOARD PHYSICAL & FINANCIAL PROGRESS SUMMARY - 2016

Operational Activities Performed in the year 2016

The purpose of these wells was to utilize groundwater for lands (82,000ha) in Northern, North Central, Eastern and North Western provinces for their cultivation until the irrigation water received from Moragahakanda Development Project, once it is completed. The total progress is,

Agro Tube Well Program

III.	Geo Physical Investigations	: 20
IV.	Tube Well Constructions	: 13
	Hand Pump Tube Well Program	
V.	Geo Physical Investigations	: 26
VI.	Tube Well Constructions	: 26
VII.	Hand Pump Installations	: 30
VIII.	Iron Removal Plant Installations	: 11



Total Financial Progress of Moragahakande Kaluganga Development Project in 2016 is 13,735,077.19 rupees only.

Western Province

TYPE OF JOB	NOS OF COMPLETED JOBS
Hydrgeological Investigations	72
Construction of Tube Wells	8
Pumping Tests	23
Cleaning of Tube Wells	18
Chemical Analysis of Water Sample	77
Microbiological Analysis of Water Sample	19

Year 2016 progress of commercial works for the western province,

Northern Province

There is a project under the treasury grant funds.

9.3 Jaffna well monitoring project

9.4 Transfer of WRB North Regional Office



Projects in Progress

a.) Dam Safety and Water Resources Planning Project (DSWRPP-AF)

07 Pilot areas were selected as an initiative to identify threats, impact on these groundwater resources through comprehensive studies under component-2 of DSWRPP and subsequently

SN	Activity	Progress (Nos)	Remark
1	Water Quality monitoring in established points in the Peninsula	102	Dry period; preparation spatio-temporal water quality maps to identify the variation
2		102	Wet period; preparation spatio-temporal water quality maps to identify the variation
3	Test pumping	05	Aquifer property assessment
4	Well leveling	32	Assessment of groundwater flow pattern

the established

operational groundwater monitoring network.

Jaffna pilot area

Anuradhapura and Matale pilot areas

b.) Treasury and Ministry Funded Projects

3. Jaffna well monitoring project

4. Hydro geological study in Kilinochchi District (Vavuniya-Kilinochchi Project)

Jaffna Well Monitoring Project

SN	Activity	Progress (Nos)	Remark
1	Water Quality monitoring in established points in the Peninsula on quarterly basis	162	Pre monsoon
2		162	Post monsoon
3		162	June
4		162	March
5	Geophysical investigations	20	Hydrogeological assessment on aquifers
6	Test borehole drilling	16	Hydrogeological assessment on aquifers
6	Test pumping	15	Determine of aquifer properties
7	Well leveling	12	Assessment of groundwater flow pattern

Hydro geological study in Kilinochchi District (Vavuniya-Kilinochchi Project)

Sampling and Chemical analysis has been done in dry & wet season 2016. 2 terms sample collected in the year and 25 samples collected for each term.

Hydrogeological study on the assessment of groundwater contamination in Chunnakum

The specific objectives were to identify the source of contaminants and type of contaminants, the assessment of present extent of pollution level into the Chunnakum aquifer, identify the possible preventive measures to minimize or arrest further pollution of groundwater in the area.



The constructed tube well and dug well locations utilized for the water quality assessment

Commercial work

1.) Consultancy Services for Ponds Rehabilitation in JaffnaCity Region

This study includes all 43 ponds within JMC limits and focal objective of this assignment is conduct site investigations to check on the thickness of accumulated silt and to conduct investigations of soil strata underneath to determine whether it is safe to remove the accumulated silt, and decide on the safe depth of de-silting. Under this project following works were performed by Jaffna provincial office.

SN	Activity	Progress (Nos)	Remark
1	Water Quality monitoring on constructed monitoring boreholes	35	Chemical Parameters analysis
2	Geophysical investigations (1D & 2D)	35	Aquifer assessment to identify the location for monitoring borehole construction
3	Test pumping	10	Aquifer property assessment
4	Well leveling	26	Assessment of all elevation with respect to MSL and assessing the groundwater flow pattern
5	Geotechnical investigations through auguring by NBRO	40	Assessment of silt depth level and recommending the desilt levels
6	Report preparation		Silt depth brief report for first 22 ponds is in progress



North Central Province

a) TREASURY GRANT PROJECTS

Long term groundwater monitoring of Anuradhapura District & conducting training programme on awareness creation about Water Born Health Hazards and conducting water clinics (RS Project) Activities carried out during the year 2016 under RS Project is as follows,

No.	Activity/Description	No. of items
01	Groundwater monitoring & water Sampling	200
02	Chemical analysis of water samples	200
03	Conducting of awareness programme and water clinics	7
04	Data interpretation & recording	

b) Hydrogeological study in Vavuniya and Kilinochchi districts

The specific objectives of the study is to identify aquifer parameters, it is extensions and demarcates the groundwater potential areas within Vavuniya and Kilinochchi districts. Activities carried out during the year 2015 under Vavuniya-Kilinochchi Project is as follows,

No.	Activity/Description	No. of items
01	Carry out Hydrogeological Survey	20
02	Construction of test bore holes	20
03	Conducting pumping tests	10
04	Levelling of monitoring well points	16
05	Water sampling & well monitoring	122
06	Chemical analysis of water samples	122
07	Data interpretation, recording and report	

Water quality study in CKD prevailing areas in Polonnaruwa&Trincomalee district

This study was commenced in year 2014 in Trincomalee and Polonnaruwa Districts under Treasury grant. The main objective of this study is to identify the water quality distribution in CKDu affected areas in Polonnaruwa and Trincomalee. Activities carried out during the year 2016 under CKD Project is as follows,

No.	Activity/Description	No. of items
01	Carryout Hydrogeological Investigations	06
02	Construction of Test Wells	05
03	Hand Pump Installation	03
04	Conducting of awareness programme and water clinics	04
05	Data interpretation & recording	

North Western Province

The details of the activities commenced during the year of 2016 as given below

Activity	No of Items
groundwater investigations	79
tube well constructions	79
pumping tests	17
well cleaning	08
sample analysis	379



Under Hydrogeological study on **Limestone Aquifer system in Mannar** district funded by treasury grant, 15 Hydrogeological Investigations, 15 Test Well Drilling were completed and 20 Pumping tests were performed. 164 water sample analyzed in full chemically and 127 water samples analyzed in partially out 200 collected water samples. **Identify suitable areas for Groundwater Recharge in Sri Lanka** in Mundalama, Puttalam and Kalpitiya DS Divisions 56 water samples analyzed out of 112 water samples collected. The 120 water samples were collected from dug wells and tube wells in GalgamuwaPradesiyaSabha area and the 120 water samples were collected from dug wells and tube wells in MahoPradesiyaSabha area and 100 water samples analyzed in full chemically. The four awareness programmes were successfully conducted at Galgamuwa, Ehetuwewa, Maho and Ambanpola divisional secretariat.

Monaragala District

eleven tube wells are drilled and hand pump installations were completed in Monaragala District. Collection of samples was carried out during dry period of the year in a grid system in which all the surface, shallow and deep water bodies were included in each grid.

PROCEDURES IMPLEMENTED TO OVERCOME ACCOUNTING & MANAGEMENT DEFICIENCIES SHOWN IN THE AUDIT QUERIES & AUDITE REPORTS OF THE AUDITORS GENERAL.

01. Steps taken to mitigate the deficiencies in research studies gradually.
02. Actions taken to implement the professional allowance for the year 2017 approved by the management circular from the month of October of the same year.
03. Revaluation of fixed assets was carried out and depreciated accordingly.
04. Two meetings were summoned with the relevant institutional representatives for the consultation committee during the year 2018.
05. Unnecessary stocks have been identified by the Board survey reports and stated the process of disposal.
06. The action was taken to rectify accounting deficiencies shown by the audit.
07. Action taken to (or to get transfer) acquire the title of the vehicles.

ACTION TAKEN TO UPGRADE THE ACTIVITIES OF WATER RESOURCES BOARD.

Water Resources Board is engaged with Water Resources Studies in Sri Lanka. 14 Nos. of Studies were implemented in 2016. To upgrade the efficiency of the activities of the Board, the following activates were taken.

01. Action was taken to recruit the technical staff. (specially Hydrogeologist, Chemists and Technical officers)
02. Training of the staff to upgrade their management and technical knowledge.
03. Procurement of the goods and equipment for the activities of the Board.
04. Evaluate the weekly progress of all the Divisions of the Board.
05. Action will be taken to manage and control the fixed assets using the software.
06. Introduction of regulation to manage ground water of the country and develop the mechanism to implement the related activities in the ground.
07. Establish a legal Division in the WRB to attend any legal matters related to groundwater.
08. Follow up of all the activities carried out by the Board.



2ඒ, හෙක්ටර් කොබ්බෑකඩුව මාවත, කොළඹ 07.
2A, ஹெக்டர் கொப்பேகடுவ அவென்யூ, கொழும்பு 07.
2A, Hector Kobbakaduwa Avenue, Colombo 07.