Annual Report 2010

National Water Supply & Drainage Board

National Water Supply & Drainage Board

Mission

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

Vision

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

Goals

- Increase the water supply and sanitation coverage
- Improve operational efficiency
- Achieve customer satisfaction
- Increase commercial viability
- Ensure greater accountability and transparency
- Promote Institutional Development
- Provide facilities and service support to rural and marginalized communities

Contents

Notice of the Report 01
Chairman's Statement 02

Corporate Governance and Statistical Review

Key Players 06
Existing Water Supply Schemes 09
Corporate Planning 10
Key Performance 12
Summary of Operations 14
Summary of Investments 18
Employees 21

Sustainability Report

Customer Conveniences 26
Services 27
New Initiatives 28
Non Revenue Water Reduction 29
Energy Management 31
Institutional Development 32
Research and Development 33
Rural Water Supply and Sanitation 34
Ground Water 34
Sociological Activities 35
Policy Formulation 35
Information Technology 35

Infrastructure Development

Ongoing Projects 38
Projects to Commence Physical Work in 2011 54
Projects in Pipeline 55
Planning & Design 56
Regional Support Centers 59

Report of the Audit and Management Committee 62
Financial Statements 65
Auditor General's Report for the year ended 31st December 2010 82

Abbreviations 90
Corporate Information Inner Back Cover



National Water Supply & Drainage Board

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

The National Water Supply & Drainage Board functions under the Ministry of Water Supply & Drainage which was established in 2007 to cover separately the subject area of water supply and sewerage. The National Water Supply & Drainage Board is the only organization coming under the purview of this Ministry.

Around 81.0% of the population have access to safe drinking water of which 31.6% is through piped water supply systems of the National Water Supply & Drainage Board.

Notice of the Report

Hon. Minister of Water Supply & Drainage,
Ministry of Water Supply & Drainage,
Takahashi Building,
34, Narahenpita Road,
Nawala.

Dear Sir,

Annual Report and Financial Statements - 2010
National Water Supply & Drainage Board

In terms of Section 14 (2) of the Finance Act No. 38 of 1971, the Members of the Board have the honour to forward herewith the Annual Report and the Financial Statements of the National Water Supply & Drainage Board for the year ending 31st December 2010.

Yours faithfully,

Karunasena Hettiarachchi
Chairman
National Water Supply & Drainage Board

1st March 2011

Chairman's Statement

The National Water Supply and Drainage Board, being the sole authority for drinking water supply in Sri Lanka continued to extend its services in 2010 as well. It was also dealing with the provision of sewerage facilities in selected urban areas. This resulted in upgrading health, economic and social well being of the Sri Lankan community and contributed to maintain their livelihoods.

The NWSDB's Corporate Plan for 2007 - 2011 which was strategically spelt out to achieve set targets was under implementation for the fourth year. The Members of the Board reviewed the progress on actions taken quarterly, with the intention of taking crucial decisions to steer through the plan. Initial steps have been taken to prepare the next Corporate Plan for 2012 to 2016.

Much of the year's activities had to be focused on providing water supply and sanitation services for the internally displaced persons and to formulate new projects for the settlement areas of the North and East which were under stress for several decades.

The implementation of ongoing capital projects and preparation of new water supply and sanitation project proposals for needy areas continued in 2010. We completed the Nuwara Eliya District Towns Water Supply Project under DANIDA funding and the Project to construct WTPs in Ambatale and Negombo with Spanish assistance and Rehabilitation of Colombo Sewerage Southern Catchment with Austrian funds in 2010. We reached peak implementation stage for the JICA funded Greater Colombo Water Rehabilitation Project and commenced the Eastern Province Water Supply Development during the year.

The NWSDB executed capital works in order to expand the water supply and sanitation coverage qualitatively and quantitatively, using the available funds and other resources. Our special thanks are due to all the donors including multi lateral and bilateral agencies who financed the capital works during the year under review. A total of Rs. 25 billion was originally allocated for the year and Rs. 26.4 billion was expended including supplementary provisions for the work done.

It is important to note that we were able to carry out our operations in 2010 without any increase of water tariff. It is noteworthy too that we performed our functions having a net decrease of 54 employees.

Methods by which customers could make their bill payments have been further enhanced. Using Short Message Service (SMS) technology via their mobile phones was added to customer convenience apart

from payments through Cargills and Keells Super markets, Abans and Singer showrooms in addition to other previously publicized methods.

Water meters are in ample supply to replace defective meters of customers, thereby being able to tender water bills for actual consumption as far as possible.

The NWSDB extended its service to overcome the difficulties encountered by the victims of heavy rains which occurred in the second half of the year by providing bowser supplies for their consumptive purposes. We were responsible in providing water supply facilities to the mobile staff including security forces employed for the two elections held in January and April 2010.

As a new initiative, it has been decided to construct a plant for bottling drinking water conforming to Sri Lanka Standards in order to cater for the needs of vulnerable areas with the special aim to combat the increasing kidney diseases in the North Central Province.

Reducing unaccounted for water (UFW) is a major concern of the NWSDB. In view of achieving this objective, several projects and activities were planned and implemented during the year. Consequently, the island-wide UFW remained as 29% by the end of the year. The UFW of Colombo City was 42% at the end of 2010.

With the intention of reducing the high energy cost of operations, measures were adopted to carry out energy audits to determine ways and means of improving energy efficiency.

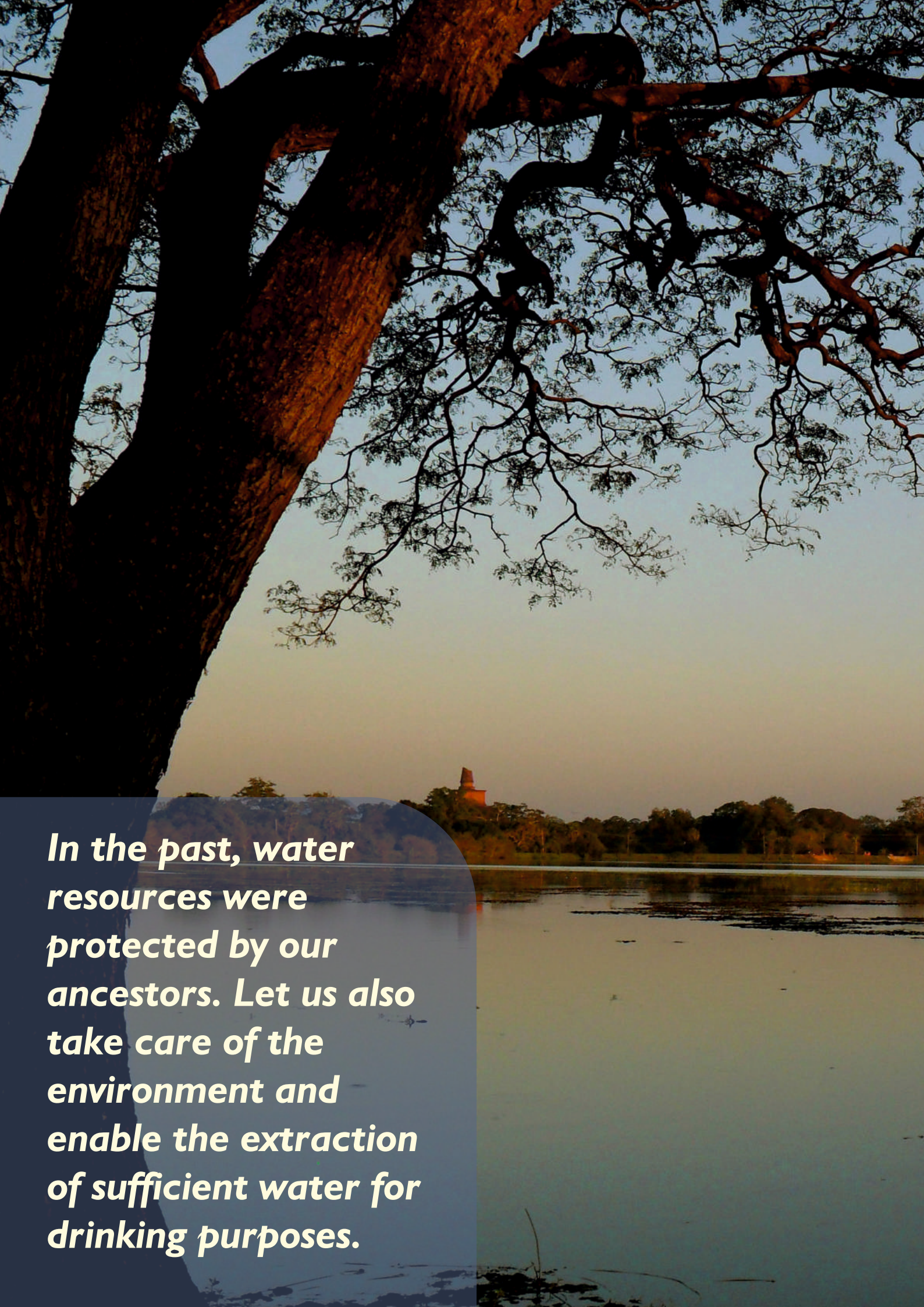
It is our objective to venture out on new initiatives to generate funds for system rehabilitation in order to be less dependent on the General Treasury for such fund requirements.

I am grateful for the timely directions and guidance provided by the Hon. Minister for Water Supply and Drainage during the year for the accomplishment of the role of the NWSDB. At the same time we are thankful to all the staff at the Ministry for the coordination, support and assistance given to our key stakeholders. I take this opportunity to thank our General Manager and the staff for the dedicated service and cooperation they gave towards the proper functioning of the organization. My sincere thanks are also due to the former Chairman, Mr. Channa Amarasinghe for the attempts taken to improve our services.

We will take effective steps to enhance our services on providing drinking water and sewerage facilities for the betterment of the living standards of our community. We will endeavour to simplify the procedures when dealing with us, for the convenience of the consumers. If there were any lapses on our part in providing our services, we request those concerned to bear with us. Meanwhile, we will take all necessary measures to provide better and efficient service to all those who seek our services to the utmost extent.

Karunasena Hettiarachchi
Chairman
National Water Supply & Drainage Board

1st March 2011



In the past, water resources were protected by our ancestors. Let us also take care of the environment and enable the extraction of sufficient water for drinking purposes.

Corporate Governance and Statistical Review

Water is precious; use it sparingly

Photograph by
Naveen Priyankara Ebuldeniya

Our Key Players

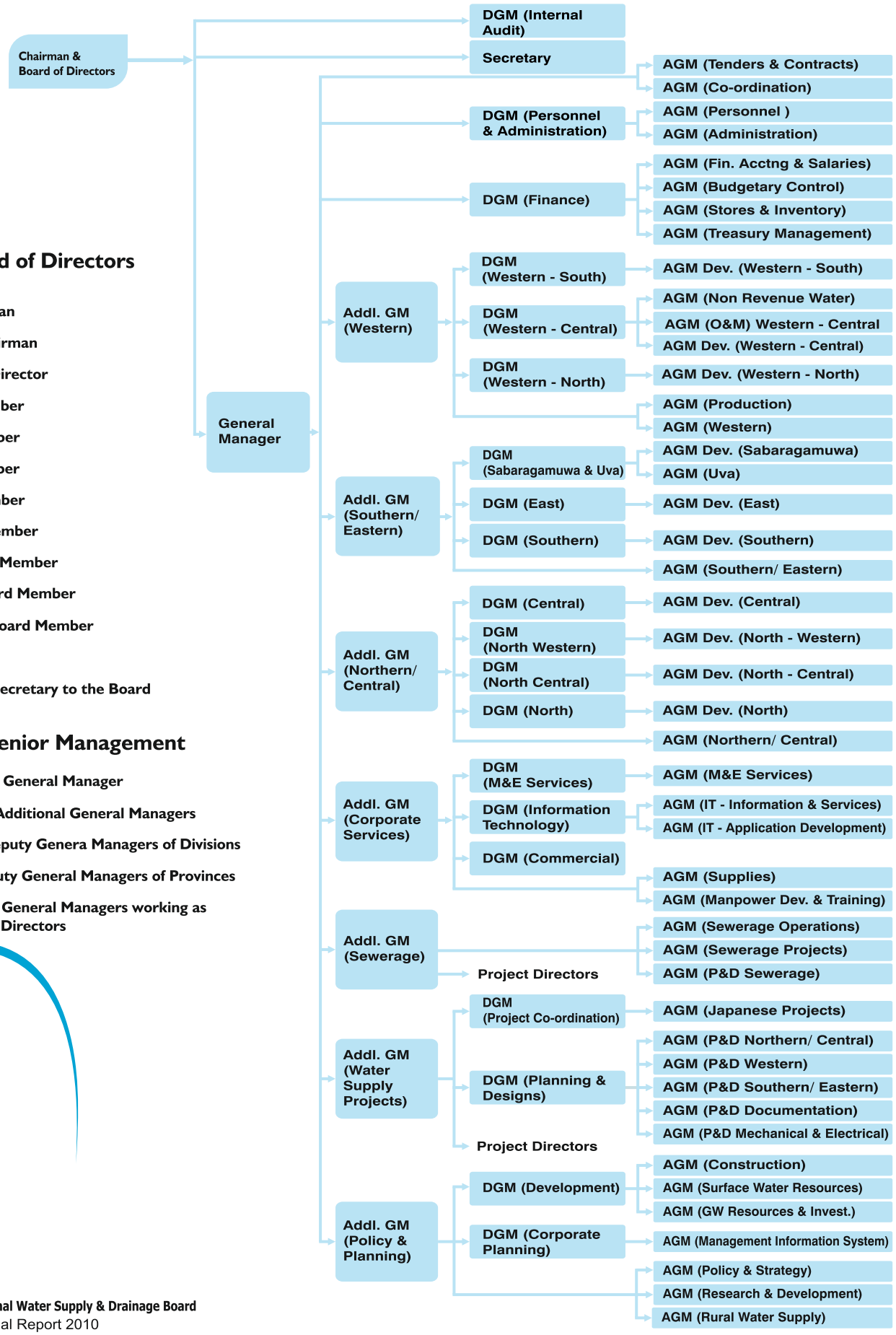
Board of Directors

- 01 Chairman
- 02 Vice Chairman
- 03 Working Director
- 04 Board Member
- 05 Board Member
- 06 Board Member
- 07 Board Member
- 08 Board Member
- 09 Board Member
- 10 Board Member
- 11 Board Member

- Secretary to the Board

Senior Management

- 12 General Manager
- 13 Additional General Managers
- 14 Deputy Genera Managers of Divisions
- 15 Deputy General Managers of Provinces
- 16 Deputy General Managers working as Project Directors



Board of Directors

01 Eng. S. C. Amarasinghe
B. Sc. Eng., Dip. Business Mgt., C.Eng.
FIEE (Lond.), FIE (SL)
Chairman, NWSDB (up to 2010.05.12)

01 Mr. Karunasena Hettiarachchi
B. Sc. Eng. (Hons.), M. Sc. (Leuven)
C.Eng., MIE (SL)
Chairman, NWSDB (w.e.f. 2010.05.12)

02 Dr. A. Uthumalebbe
DIMS (Cey), DFC (USA)
Vice Chairman, NWSDB (up to 2010.05.11)

02 Mr. K. D. Gamini Gunaratne
Vice Chairman, NWSDB (w.e.f. 2010.05.21)

03 Eng. M. S. Nazeer
B. Sc. Eng. (SL), M. Sc. Eng. (UK)
Working Director, NWSDB (up to 2010.05.07)

03 Mr. N. P. Thibbutumunuwa
LLB, BA
Working Director, NWSDB (w.e.f. 2010.09.20)

04 Mr. H. P. C. Herath (up to 2010.04.23)
B. Sc. (Economicx), MBA (Colombo)
Secretary, Ministry of Local Government & Provincial Councils

05 Dr. Y. D. Nihal Jayathilake (w.e.f. 2010.05.26)
MBBS (Colombo), M. Sc. (Medical Administration)
Secretary, Ministry of Local Government & Provincial Councils

06 Mr. H. A. Amarasena (up to 2010.02.12)
Attorney-at-Law

07 Dr. (Mrs.) Damitha de Soyza (up to 2010.04.27)
B. A. Hons. (Economics), Peradeniya
M.Sc. (Agricultural Development Economics) ANU (Australia)
M.A. (Economics) OSU, USA,
Ph. D. (Agricultural Economics) OSU, USA
Director General (Department of Development Finance),
Ministry of Finance & Planning

08 Dr. P. G. Maheepala (w.e.f. 2010.05.26)
MBBS, M. Sc., MD, MBA, DBS, DED, DPM, D (Mgt.)
Additional Secretary (Medical Services)
Ministry of Health

09 Mr. J. H. J. Jayamaha (up to 2010.11.30)
B. Sc. (Hons.) Kelaniya, M. Phil (Glasgow)
Director General (Department of External Resources)
Ministry of Finance & Planning

10 Mr. A. K. Seneviratne (w.e.f. 2010.05.16)
B. Sc. (Hons.), PGD (Business and Financial Administration)
Director, Department of National Budget
Ministry of Finance & Planning

11 Mr. Sanath Panawennage (w.e.f. 2010.12.29)
M. Sc., MBA, C. Eng., MIE (SL), MIE (SL), MIET (UK)
Director/ CEO, Arthur C. Clarke Institute for Modern
Technologies, Ministry of Science & Technology

Secretary to the Board

Mr. K. K. Chandrasiri, JP
B.Sc. (Hons.) Business Administration
PGD (Foreign Affairs), MIM (SL)

The Board met on 15 occasions during the year 2010.

Senior Management

12 General Manager

Eng. K. L. L. Premanath
B.Sc. Eng. (Hon.), DSE (Netherlands), M.Eng.
(Const. Management), C.Eng., FIE (SL)

13 Additional General Managers

Eng. S. K. Wijetunga (Western)
B.Sc. (Eng.), C.Eng., MIE (SL),
P.G. Dip. in Sanitary Eng. (Delft.)

Eng. B. W. R. Balasuriya
(Water Supply Projects)
B.Sc. Eng. (Hon.), M.Sc. (UK), C.Eng., MIE (SL)

Eng. G. A. Kumararathna (Sewerage)
B.Sc. Eng. (Hon.), M.Sc. (UK), C.Eng.,
FIE (SL), MICE (Lond.), MIWEM (Lond.)

Eng. (Mrs.) G. S. Munasinghe
(Corporate Services)
B.Sc. Hon. (Civil Eng.), DSE (Netherlands),
Dip. in Bus. & Fin. Admin, FIE (SL), MICE (Lond.)

Eng. (Mrs.) T. P. Lamabadusuriya
(Southern/ Eastern)
B.Sc. Eng., FIE (SL), M.Sc. in Water & Waste Eng. (UK),
C.Eng.

Eng. D. N. J. Ferdinando
(Policy and Planning)
B.Sc. Eng. (Hon.), C.Eng., FIE (SL), MCIWEM (UK), MICE (Lon.)

Eng. (Mrs.) P. N. S. Yapa
(Northern/ Central)
B.Sc. (Eng.) FIE (SL), C.Eng. M.Sc. (Struc. E.), UK

14. Deputy General Managers of Divisions

Eng. (Mrs.) K. T. P. Fernando (Project Co-ordination)
B.Sc. Eng. (Hons.), MIE (SL), C.Eng.,
M.Sc. (Water & Waste Engineering) UK

Mr. D. Thotawatte (Finance)
B. Com. (Sp.), ACA, MA (Fin. Econ)

Mr. H. Ariyasena (Personnel & Administration)
B.Sc. (Business Administration) Sp.
Dip. in Personnel Management

Eng. A. W. Gunasekara (Commercial)
B.Sc. Eng. (Hon.), M. Eng., C.Eng.,
MICE (Lond.), MBA

Eng. N. M. S. Kalinga (M&E)
B.Sc. Eng. (Hons.), MIE (SL), C.Eng.,
Dip. Sanitary Eng. (Netherlands)

Eng. K. T. Karunadasa (Information Technology)
B.Sc. (Eng.), C.Eng., MIE (SL),
P.G. Dip. in Hydrology (Delft.),
P.G. Dip. in Computer Technology,
MS Certified Professional, M.Sc. (IT)

Eng. G. K. Srimal (Development)
M.Sc. Mech. Eng. (USSR), M.E. Hyd. (India),
C. Eng. MIE (SL),
Exe. Dip. in Bus. Admin. (Colombo), Dip. in HRM

Eng. D. S. D. Jayasiriwardene (Planning & Designs)
B.Sc. (Eng.) Hons., C.Eng., FIE (SL),
M.PH. (Univ. of Hawaii)

Eng. R. S. C. George (Corporate Planning)
B.Sc. Eng. (Hon.), C.Eng., MIE (SL),
M.Sc. (Eng.), FRG, MICE (UK)

Mr. W. A. J. Weerasinghe (Internal Audit)
Fellow of the Institution of Public Finance & Development Accountancy

15. Deputy General Managers of Provinces

Eng. W. B. G. Fernando (Western - Central)
B. Sc. (Eng.), P.G. Dip. (EWREM), FIE (SL), C. Eng.

Eng. K. R. Dewasurendra (Western - South)
B.Sc. Eng. (Hon.), FIE, C.Eng.,
P.G. Dip. (Sanitary Eng. - Delft.)

Eng. (Mrs.) M. K. Bandara (Western - North)
B.Sc. Eng. (Hon.), MIE (SL)
M.Eng. (Sc.) in Public Health Eng. (NSW), Australia

Eng. M. A. M. S. L. Attanayake (Central)
B.Sc. (Eng.), MIE (SL), C.Eng.,
P.G. Dip. (Land & Water), MBA

Eng. W. A. N. Wickramathunge (Sabaragamuwa/ Uva)
B.Sc. (Eng.), MIE (SL), C.Eng.

Eng. L. L. A. Peiris (North Central)
M. Phil (IWRM), University of Peradeniya, SL, P.G. Dip. (Water and Wastewater Eng.), AIT, Bankgkok, B. Sc. (Eng.) Civil Engineering (University of Moratuwa - SL), C. Eng.,
FIE (SL), Int. PE (SL)

Eng. D. U. Sumanasekara (North Western)
B.Sc. Eng. (Hon.,) M.Sc. (Netherlands), C.Eng., FIE (SL)

Eng. T. W. S. Perera (Southern) - Actg.
B.Sc. (Eng.), MIE (SL), C. Eng.

Eng. M.K.Hapuarachchi (East)
C. Eng., MIE (SL), P. G. Dip. in Environmental Engineering Mgt.

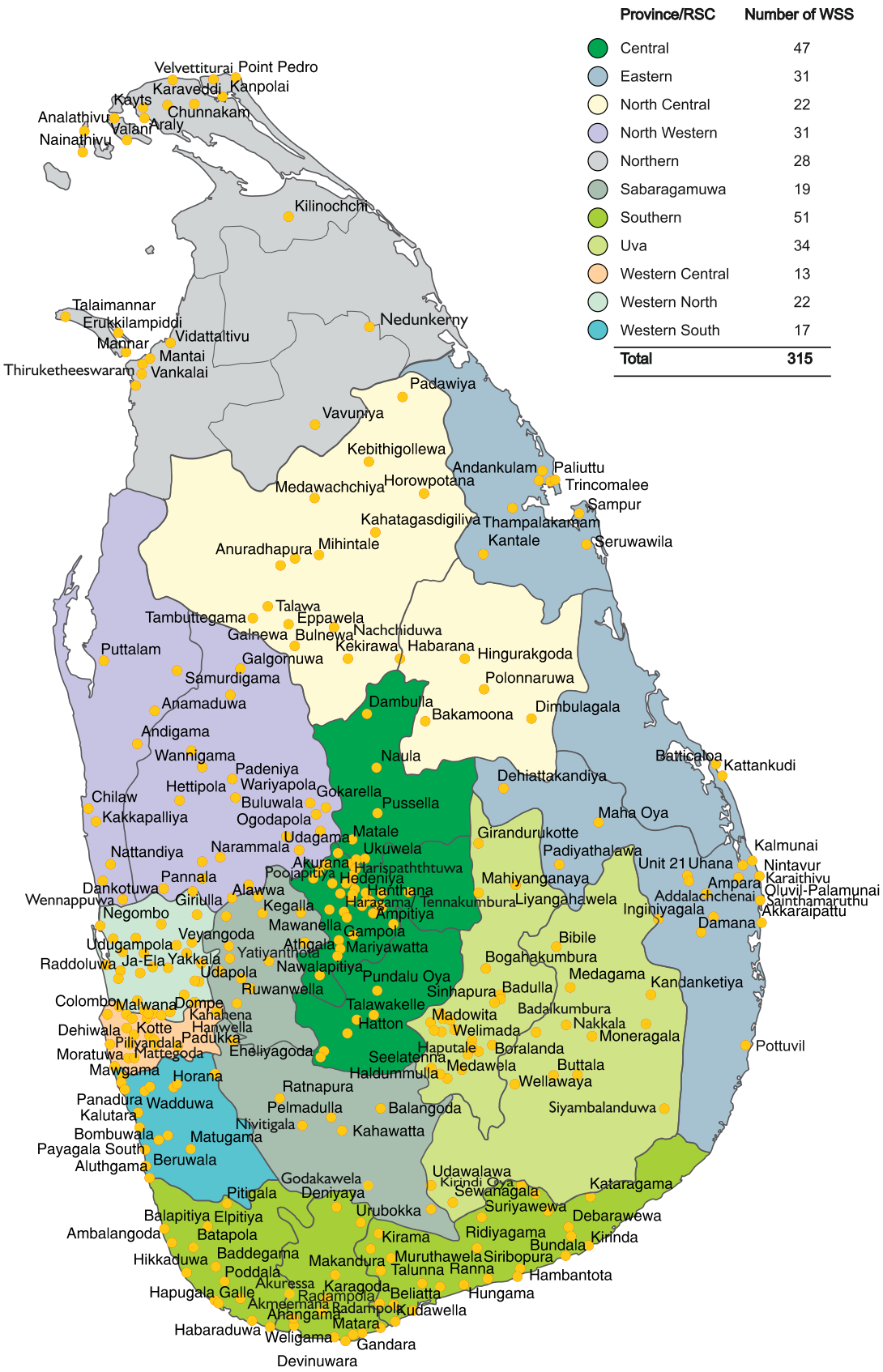
Eng. D. F. S. de F. Gunawardene (North)
B.Sc. Eng., C. Eng., MIE (SL), M. Eng. IHE (Delft)

16. Deputy General Managers working as Project Directors

Eng. (Mrs.) C. J. D. Perera (PD - Kalu Ganga Water Supply Project - Phase I - Stage II)
B.Sc. Eng. (Hons.), MIE (SL), C. Eng.,
Dip. Sanitary Eng. (Netherlands), Dip. Environmental Eng. (SL)

Eng. J. R. B. Nadurana (PD - ADB 5th Project)
B.Sc. Eng. (Hons.), P.G. Dip. in Environmental Science & Technology (Delft.)
MIE (SL), C.Eng.

Existing Water Supply Schemes



Corporate Planning

"The NWSDB continued, working towards the achievement of the goals and objectives set out by the Plan. Special emphasis was given to formulating policy matters, setting procedures and planning items relating to the fourth year of the plan as a follow up from the previous years."

Implementation Status of Corporate Plan 2007 - 2011

The year under review was the fourth year of our Corporate Plan. The Corporate Plan 2007 - 2011 was prepared in September 2006 with assistance from the JBIC.

The NWSDB continued, working towards the achievement of the goals and objectives set out by the Plan. Special emphasis was given to formulating policy matters, setting procedures and planning items relating to the fourth year of the plan as a follow up from the previous years.

It was considered important to have timely reviews for the successful achievement of the goals, objectives and the targets set. A workshop was held in June 2009 with the active participation of the managerial staff and other stakeholders to review the progress made on our Corporate Plan. That is at the end of the first quarter of the third year at which occasion it was also possible to set measurable targets of the plan beyond 2011 up to 2013. But, being at the fourth year of the five year present Corporate Plan, arrangements have been made to prepare a new Corporate Plan for another 5 year period. A special committee has been appointed for this by the General Manager, comprising of 15 senior managers of the NWSDB and are working towards it.

Quarterly progress on the Corporate Action Plans are presented to the Board by each manager responsible for particular goal (there are seven such goals, each overseen by a designated Accountable Manager). Accordingly, first, second and third quarter progress reports on the Corporate Action Plans were presented to the Directors at Board meetings held in 2010.

Promoting Institutional Development is a Corporate Goal. Among the activities, planned in achieving this Valuable Goal, an awarding ceremony was held in the Central RSC for the employees, based on their performance, "Sewaka Abhinandana Pranama Ulela".

Distributing "Sewaka Pranama" by the NWSDB Chairman

Progress Towards Stated Goals

Goal	Key Objectives	Target end 2010	Achievement end 2010
1. Increase WS and sanitation coverage	1.1 Total Pipe-borne water supply coverage	38.2%	39.2%
	1.2 Piped sewerage coverage	2.7%	2.5%
	1.3 Access to safe drinking water supply coverage	81.4%	81.0%*
	1.4 Total sanitation coverage	86.5	85.7%*
2. Improve operational efficiency	2.1 NRW (island-wide)	31.0%	31.6%
	2.2 Total staff for 1,000 connections	7.1	6.7
	2.3 Expenditure on power to total recurrent cost	22.0%	20.8%
	2.4 Maintenance expenses to total recurrent cost	7.0%	4.7%
	2.5 Establishment expenses to total recurrent cost	10.0%	10.7%
3. Achieve customer satisfaction	3.1 Public awareness programmes to be carried out (schools/other)	25 Nos.	25 Nos.
4. Increase commercial viability	4.1 Estimated bills to total number of bills	6.0%	3.0%
	4.2 Collection efficiency	100.0%	104.0%
	4.3 Accounts receivable from -		
	(a) domestic and commercial institutions	50 days	55 days
	(b) Government institutions	60 days	44 days
5. Ensure greater accountability	Initiatives were taken to develop a whole range of management and business tools on human resource development, management information system and business plan.# • Delegation of financial authority • Training on budgetary control & financial regulations • Audits on commercial operations • Audits on stores and supplies • Audits on cash/ cheque payments • Audits on construction contracts • Valuation of assets • Improved Management Information and Coordination		
6. Promote Institutional Development	6.1 In-house training programmes	160	166
	6.2 In-country external training (no. of persons)	250	132
	6.3 Overseas training (no. of persons)	80	69
7. Provide facilities and service support to rural and marginalised communities	7.1 RWS Schemes maintained by CBOs under the the NWSDB backup support	5.5%	5.7%

* Estimated as 83.1% for water supply and 96.7% for sanitation from a sample survey carried out during 2006-2007 by the Department of Census and Statistics excluding Jaffna, Kilinochchi, Mullaitivu, Mannar and Vavuniya districts.

\# Development of 5 year Business Plan for the NWSDB with the assistance from the Merchant Bank of Sri Lanka was completed and reviewing by the Management.

Key Performance

"87,245 service connections were provided during the year, bringing the population that was covered with piped drinking water supplies by the NWSDB to 31.6%, indicating that the target for pipe-borne water supply was almost achieved"

87,245 service connections were provided during the year, bringing the population that was covered with piped drinking water supplies by the NWSDB to 31.6%, indicating that the target for pipe-borne water supply was almost achieved.

Service levels to existing consumers were improved by commissioning several major and minor water supply projects in different parts of the country. Projects being implemented in Tsunami affected coastal areas and war affected Northern and Eastern areas rehabilitated and reconstructed water supply and sewerage facilities, thereby improving the livelihood of those affected. Project components are not limited to restoration of damaged utilities but include water supply and sanitation facilities to resettlement areas, improvement of service levels in affected areas and extensions to new development areas in the vicinity.

Staff recruitments were kept under control, while the ratio of staff per thousand service connections was reduced to 6.7. The NWSDB was actively engaged in institutional development activities during 2010 (page 32 for details).

A tariff revision for water was effected from mid February 2009 after four years. However, the finances of the NWSDB had to be carefully managed since increases in operational expenses, debt service commitments and no tariff increase for four years had created a significant deficit. The debt service commitment could not be fully met with respect to the years 2009 and 2010.

Non-revenue water (NRW) includes authorized but unbilled water supply to tenement gardens and public sanitary facilities in Colombo. The NWSDB is compelled to continue this service, earlier provided by the CMC. If authorized but unbilled water supplies in Colombo City (estimated at 11% of the water supplied) are excluded, unaccounted for water in Colombo City would be 42%. If the authorized but unbilled water supply in Colombo City is excluded, NRW in the Western Province and nationwide would be 30% and 29% respectively. In general, NRW is being maintaining the same level as in 2009..

General

There are 315 major, minor and small water supply schemes in operation under the NWSDB's purview. Out of these, 31 schemes cover major cities and 284 schemes cover townships and villages.

8% of the population is covered with hand-pump tube wells. Community management is promoted with regard to rural water supply schemes through community-based organizations. Proper rain water harvesting is considered an acceptable option as a drinking water source.

		2009	**2010**	Variation (%)
KEY STATISTICS: WATER SUPPLY				
No. of Water Supply Systems		312	**315**	1.0
Piped Water Production (million cu.m.)		449	**469**	4.5
Domestic Connections (Nos.)				
	(a) Western Province	575,852*	**599,846**	4.2
	(b) Other Provinces	590,784*	**648,330**	9.7
Total Domestic Connections		1,166,636	**1,248,176**	7.0
Public Stand Posts (Nos.)				
	(a) Western Province	4,411#	**4,375**	(0.8)
	(b) Other Provinces	2,757	**2,541**	(7.8)
Total Public Stand Posts		7,168	**6,916**	(3.5)
Non-Domestic Connections (Nos.)				
	(a) Western Province	47,592	**50,087**	5.2
	(b) Other Provinces	44,932	**48,394**	7.7
Total Non-Domestic Connections		92,524	**98,481**	6.4
Total No. of Service Connections		1,266,328	**1,353,573**	6.9
Average Household Monthly Consumption				
(cu.m. per house connection)	(a) Western Province	17.25	**17.14**	(0.6)
	(b) Other Provinces	13.53	**13.18**	(2.6)
Average Household Billing per Month (Rs.)				
	(a) Western Province	530.92	**566.17**	6.6
	(b) Other Provinces	294.56	**310.23**	5.3
Total Revenue (Rs. million) With Vat		11,116	**12,409**	11.6
Total Recurrent Expenditure (Rs. million)		9,186	**10,537**	14.7
Non-Revenue Water (%)				
	(a) Western Province	34.38	**34.82**	1.3
	(b) Other Provinces	25.93	**26.65**	2.8
	(c) Island-wide	31.07	**31.55**	1.5
O&M Staff/ 1,000 Connections		5.89	**5.52**	(6.3)
Total Staff/ 1,000 Connections		7.16	**6.66**	(7.0)
Average Recurrent Cost of Water Production (Rs./cu.m.)		20.48	**22.42**	9.5
Collection Efficiency		0.94	**1.00**	6.4
Deep Wells (Nos.)	(a) Drilled	622	**299**	(51.9)
	(b) Successful	492	**243**	(50.6)
Development Expenditure (Rs. million)		21,136	**26,389**	24.9
KEY STATISTICS: SEWERAGE				
Sewerage Connections in Dehiwala-Mt. Lavinia Sewerage System		2,168	**2,221**	2.4
Sewerage Connections in Kolonnawa Sewerage System		1,339	**1,488**	11.1
Sewerage Connections for Institutions		7	**7**	-
Sewerage Connections in Housing Schemes in Greater Colombo		2,290	**2,290**	-
Sewerage Connections in Housing Schemes Outside Greater Colombo and maintained by Greater Colombo Sewerage Section		4,631	**4,631**	-
Total No. of Connections Maintained by Greater Colombo Sewerage Section		10,435	**10,637**	1.9

Notes:
* Figure was updated including Board and Government Quarters
# This figure was corrected in January 2009 resulted from a survey carried out in end 2008.

Summary of Operations

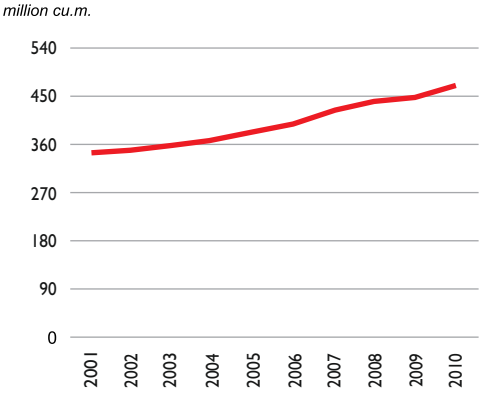
"The Western Province water supply system claims the major share of production through four centres at Ambatale, Labugama, Kalatuwawa and Kandana in Kalutara amounting to 60% of the total water produced by the NWSDB"

WATER SUPPLY

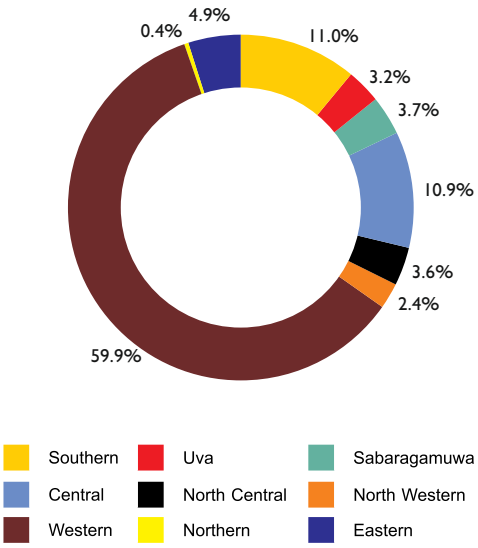
Drinking Water Production

The total quantity of drinking water produced in 2010 was 470 million cu.m. The trend during the last 10 years is given in the chart. The Western Province water supply system claims the major share of production through four centres at Ambatale, Labugama, Kalatuwawa and Kandana in Kalutara amounting to 60% of the total water produced by the NWSDB. The fourth production centre situated at Kalutara was introduced in the latter part of 2006.

Water Production



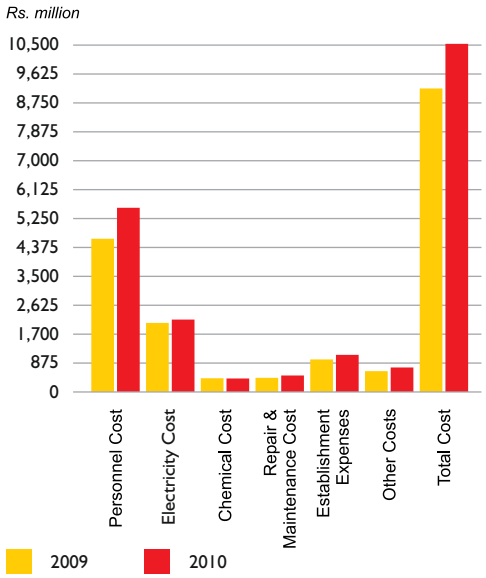
Water Production by Provinces



Cost of Production:

Breakdown of the cost of production (Rs. million) in comparison with 2009 is shown below:

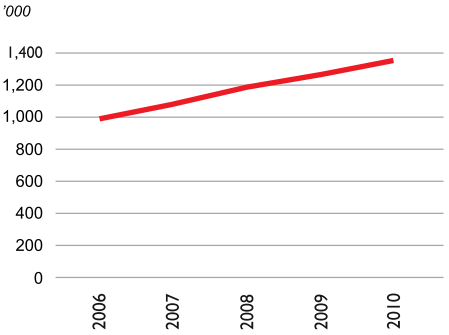
Cost of Production



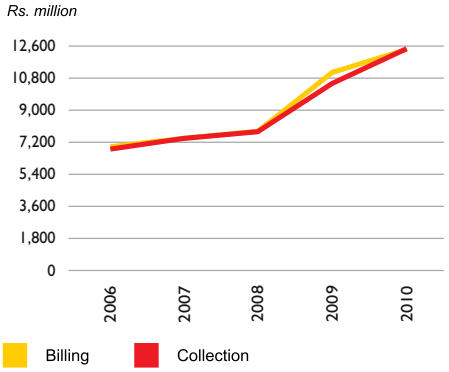
Comparison of Service Connections

Province/ RSC	No. of Connections Province/RSC-wise				No. of Connections Region-wise		
	As at end December 2009	As at end December 2010	Change %		As at end December 2009	As at end December 2010	Change %
Western - Central	338,669	**349,372**	3.2	Priority	2,702	**2,747**	1.7
				Colombo City	125,529	**126,613**	0.9
				TEC North	124,934	**128,862**	3.1
				TEC South	85,504	**91,150**	6.6
Western - North	133,387	**141,601**	6.2	TNC	94,105	**99,616**	5.9
				Gampaha	39,282	**41,985**	6.9
Western - South	155,799	**163,335**	4.8	TSC	86,279	**88,816**	2.9
				Kalutara	42,127	**43,778**	3.9
				Panadura	27,393	**30,741**	12.2
Central	148,470	**164,259**	10.6	Kandy North		**64,230**	
				Kandy South	148,470	**54,122**	10.6
				Kandy East		**45,907**	
North Western	36,347	**40,947**	12.7	Kurunegala	36,347	**40,947**	12.7
North Central	55,669	**62,579**	12.4	Anuradhapura	55,669	**62,579**	12.4
Sabaragamuwa	66,121	**69,264**	4.8	Ratnapura	29,303	**30,955**	5.6
				Kegalle	36,818	**38,309**	4.0
Southern	188,550	**203,820**	8.1	Hambantota	64,482	**68,350**	6.0
				Matara	61,642	**65,922**	6.9
				Galle	62,426	**69,548**	11.4
Uva	52,624	**56,771**	7.9	Bandarawela	32,686	**35,217**	7.7
				Monaragala	19,938	**21,554**	8.1
Northern	5,631	**6,456**	14.7	Jaffna	5,631	**1,058**	14.7
				Mannar		**5,398**	
Eastern	85,061	**95,169**	11.9	Ampara	23,732	**25,371**	6.9
				Trincomalee	29,048	**29,663**	2.1
				Akkaraipattu	32,281	**40,135**	24.3
Total	1,266,328	**1,353,573**	6.9	**Total**	1,266,328	**1,353,573**	6.9

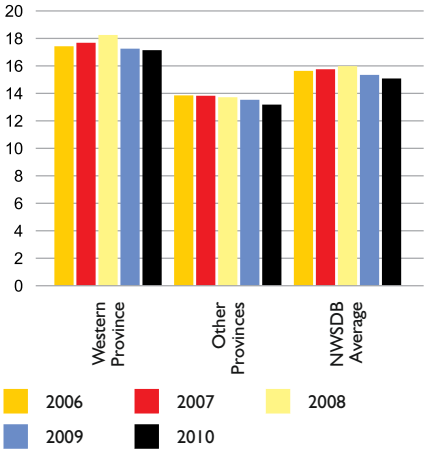
Growth of Connections



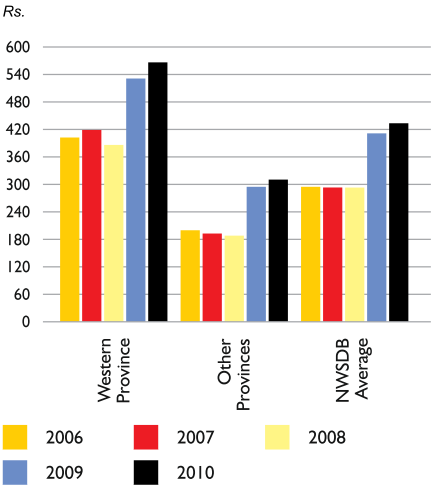
Comparison of Annual Billing and Collection



Average Household Monthly Consumption cu.m. per Connection



Average Household Monthly Bill



Billing Statistics

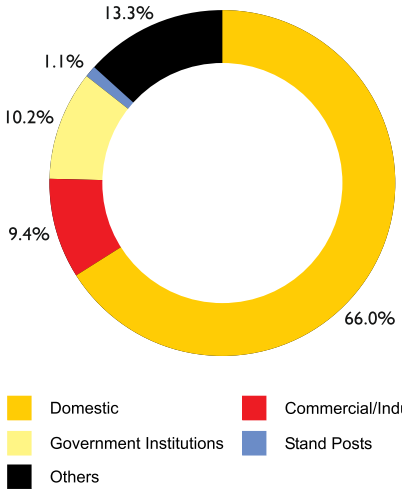
Description	2009	2010
Billing Target (Rs. million)	10,612	**11,890**
Actual Billing (Rs. million)	11,119	**12,409**
Collection Target (Rs. million)	10,925	**12,658**
Actual Collection (Rs. million)	10,502	**12,453**

Quantity of Water Sold and Revenue by Consumer Categories (2010)

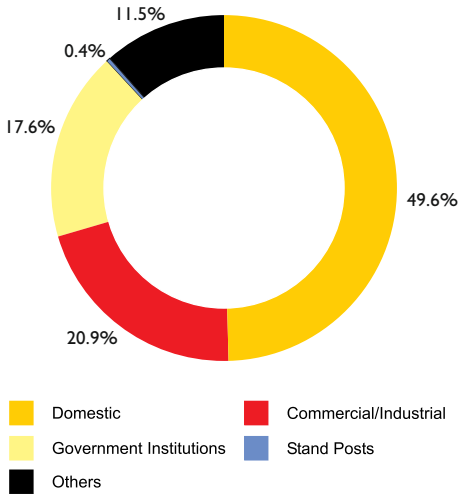
Consumer Category	Quantity sold cu.m '000s	%	Revenue Rs. million	%
Direct billing (domestic, NWSDB quarters, Government quarters)	215,114	66.6	6,214	50.1
Schools	4,260	1.3	96	0.8
Tenement gardens	10,696	3.3	268	2.2
Public stand-post supply	2,634	0.8	37	0.3
Government institutions, NWSDB premises	33,107	10.3	2,153	17.4
Commercial and industrial	30,116	9.3	2,581	20.8
Tourist hotels	2,197	0.7	173	1.4
Shipping	180	0.1	81	0.7
Board of Investment	7,380	2.3	436	3.5
Religious premises	4,160	1.3	94	0.8
Subtotal	**309,844**	**96.0**	**12,133**	**97.8**
Bulk billing	10,449	3.2	187	1.5
Others*	2,540	0.8	89	0.7
Grand Total	**322,833**	**100.0**	**12,409**	**100.0**

* All other billing categories have been grouped under 'Others'. Setting-off rebates have also been included in this category.

Percentage Quantity of Water Used by Consumer Categories



Percentage Revenue by Consumer Categories



SEWERAGE

The Greater Colombo Sewerage Section is responsible for the operation and maintenance of the sewerage systems of -

- the Dehiwala-Mt. Lavinia Municipal Council area;
- the Kolonnawa Urban Council area; and
- the sewage pump-houses and pumping mains of some NHDA housing schemes and several Government institutions within the Greater Colombo area.

Sewerage charge is being imposed for sewerage connections from January 2008. Almost all connections outside Colombo Municipality area were entered for sewerage tariff as at end of 2009.

Dehiwala-Mt. Lavinia Sewerage Scheme
(address: 480, Roxy Garden, Wellawatte)
This system, constructed between 1980 and 1987, consists of two pumping stations and a 32 km long sewer network. It has been designed to accommodate 5,000 property connections. At present, the number of property connections stands at about 2,221.

Kolonnawa Sewerage Scheme
(address: 400, Avissawella Road, Wellampitiya)
This system, consisting of four pumping stations, was also constructed during 1980 - 1987. The sewer network is about 20 km long. The system is designed to accommodate about 3,900 property connections. At present, about 1,488 property connections exist.

Sewerage Systems in some Housing Schemes and Government Institutions

In addition to the above-mentioned major sewerage schemes, the NWSDB is also responsible for the provision of sewerage services at several large housing schemes built by the National Housing Development Authority within the Greater Colombo area, as well as some Government institutions outside the Colombo Municipal limits but within the Greater Colombo area. There are about 6,921 sewerage connections in following housing schemes.

(a) Housing Schemes
1. Soysapura Housing Scheme
2. Maligawatta Housing Scheme
3. Mattegoda Housing Scheme
4. Jayawadanagama Housing Scheme
5. Crow Island Housing Scheme
6. Maddumagewatta Housing Scheme
7. Stace Road Housing Scheme

(b) Government Institutions
1. Presidential Secretariat
2. Speaker's Residence
3. Parliament (water and sewerage)
4. Sethsiripaya (water and sewerage)
5. Isurupaya (water and sewerage)
6. Jayawadanagama Hospital
7. Maligawatta Hospital

There are three waste water treatment plants, located at Seethawaka, Soysapura and Mattegoda. Effluent collected from all pumping stations in Dehiwala-Mt. Lavinia and Kolonnawa sewerage schemes is disposed of via two sea outfalls, one at Wellawatte and the other at Mutwal.

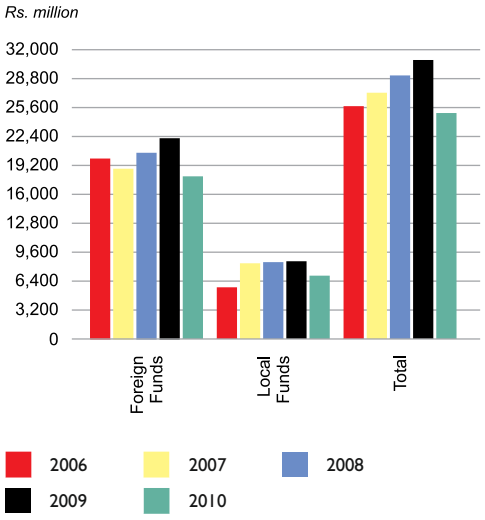
Summary of Investments

"Inclusive of the two pending supplementary votes capital fund utilization stood at 98% in 2010, whereas it was 69% in 2009, but with Rs. 3.85 billion more allocation."

Financial Sources

The NWSDB was provided with Rs. 15,892 million as foreign funds for capital works on water supply and sewerage projects. The GOSL contribution was Rs. 5,157 million as counterpart funds. In addition, Rs. 1,300 million of local consolidated funds were allocated for small and medium water supply projects. For the reconstruction of tsunami-affected water supply systems, a sum of Rs. 2,100 million in foreign funds and Rs. 546 million in local counterpart funds were provided.

Capital Budget Allocations

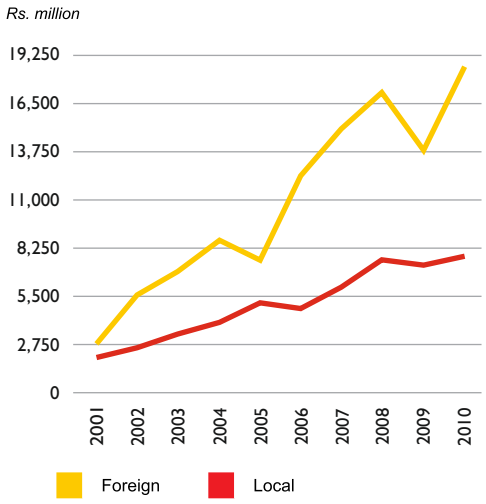


The annual allocation for WS&S infrastructure had been increasing steadily from Rs. 25.6 billion to Rs. 30.9 billion during the period 2006 to 2009. The year 2010 show a significant drop in allocation amounting to Rs. 22.91 billion.

Utilization of Capital Funds

Three supplementary votes amounting to Rs. 2,090 million, 1,667 million and 350 million were sought in 2010 to meet the expenses relating to Development activities out of which only the first one was provided while two others were not approved by the end of 2010. Hence some expenses appear to be exceeding the respective budget allocation. Had they been made available all project expenses would have been within the budget.

Capital Fund Utilization



Comparison of Capital Fund Utilization 2009/ 2010

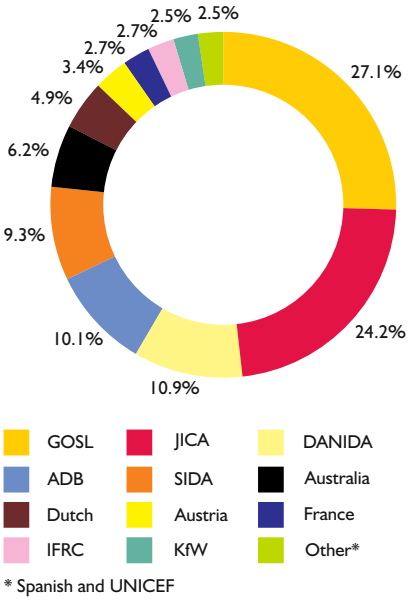
Description	2009		2010	
Foreign Component (Rs. million)	13,838	62.2%	**18,602**	**103.3%**
Foreign Aid Related Domestic Component (Rs. million)	6,348	82.7%	**6,410**	**112.4%**
Consolidated Funds for Local Projects (Rs. million)	950	103.3%	**1,377**	**105.9%**
Total	21,136	68.5%	**26,389**	**105.6%**

Inclusive of the two pending supplementary votes capital fund utilization stood at 98% in 2010, whereas it was 69% in 2009, but with Rs. 3.85 billion more allocation.

The Deputy Minister of Finance & Planning had assured that an additional allocation for Buttala WSP (Deyata Kirula Exhibition) would be made available.

Expecting this allocation, the NWSDB spent Rs. 70 million for Buttala WSP, but the expected additional funds were not received on time causing the over expenditure.

Foreign Aid Contribution by Donors and Related GOSL Funds



* Spanish and UNICEF

Rehabilitation and Improvement of Existing Water Supply Schemes

The NWSDB continued to rehabilitate and improve existing water supply schemes using Rs. 510 million of its own finances in 2010. These funds were used to improve the quality and quantity of water supplies, maintain NWSDB assets and undertake related support services in operational activities. Priority was given to improvements in schemes where donor assistance or major funding was not available.

GOSL Funding through small-scale Infrastructure Rehabilitation and Upgrading Projects

There are locally funded projects planned, designed and costed by the NWSDB. The implementation of the projects are supervised by the respective provincial staff and taken over by the provincial O&M staff when completed.

Under the locally funded Capital Works Programme, 14 new water supply projects and rehabilitation and augmentation of a further 31 water supply schemes were continued in 2010.

District-wise Capital Works Programme 2010

District	**Allocation 2010 Rs. million**	No. of Projects with Allocation	Beneficiaries
Ampara	**97.0**	1	17,500
Anuradhapura	**120.0**	2	8,000
Badulla	**25.0**	2	37,150
Colombo	**100.0**	3	62,273
Galle	**13.0**	2	8,000
Gampaha	**32.0**	2	20,000
Kalutara	**115.0**	1	142,000
Kandy	**70.0**	2	142,300
Kegalle	**159.0**	5	122,300
Kurunegala	**80.0**	1	12,000
Matale	**30.0**	2	25,800
Matara	**108.0**	5	192,000
Monaragala	31.0	3	37,800
Nuwara Eliya	**13.0**	1	10,500
Polonnaruwa	**159.0**	3	80,200
Puttalam	**10.0**	1	2,500
Ratnapura	**75.0**	5	165,600
Trincomalee	**33.0**	3	60,000
Total	**1,300.0**	**44**	**1,145,923**

The full allocation has been utilized during the course of the year.

Almost all the locally funded projects were started 6 to 8 years ago. Owing to small annual budget allocation these projects have been prolonged. As a result, their TCEs have increased owing to price escalations. Furthermore, local funds have not been released on time to settle the contractors' claims for work done. There was a delay of several months and the contractors' cash flow was affected. The NWSDB assessed the status of all the on-going local projects in 2009 and concluded that Rs. 7,365 million was required to complete 40 projects considered. But the allocation received for 2010 was Rs. 1,300 million. The potential beneficiaries are deprived of water supply facilities owing to this prolongation.

Completed Projects

The following new projects were commissioned in the year under review.

Eastern	Ampara WSS (under KfW Project)
Southern	Akuressa WSS Radampola WSS KfW funded Tsunami Project
Central	Nuwara Eliya District Group Town WSP
Western	Rehabilitation & upgrading of Southern catchments of Colombo sewerage Ambatale WTP (under Spanish project)
Southern & Eastern	UNICEF funded Tsunami (Thirukkovil)
Sabaragamuwa	Godakawela WSS

Godakawela WSS (commissioned on 18.12.2010)

Initiated Projects

The following new projects were initiated in the year under review.

Eastern	Eastern Province WS Development Eastern Coastal Towns of Ampara District (ECTAD) Phase III
Western	Capacity Development for NRW Reduction in Colombo City
Southern	Bonavista Kanda WS
North Central	Mahanelubewa WS

Employees

"NWSDB's Manpower Development & Training Division continued to provide training opportunities to employees during 2010, as in the past"

Staff Strength

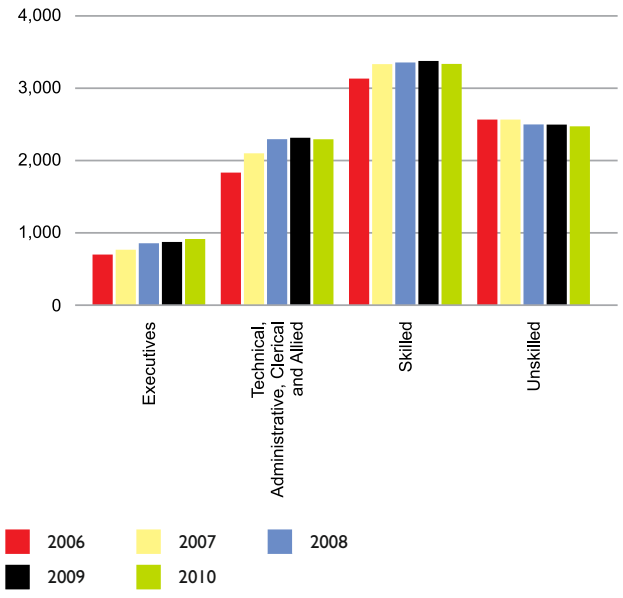
	Staff	2009	**2010**	Variation (%)
(a)	Permanent*	8,569	**8,627**	0.7
(b)	Casual	308	**202**	(34.4)
(c)	Contract	137	**119**	(13.1)
(d)	Plant Technician Apprentice	49	**70**	42.9
	Total	9,063	**9,018**	(0.5)

** The permanent staff figure excludes staff recruited for foreign funded projects*

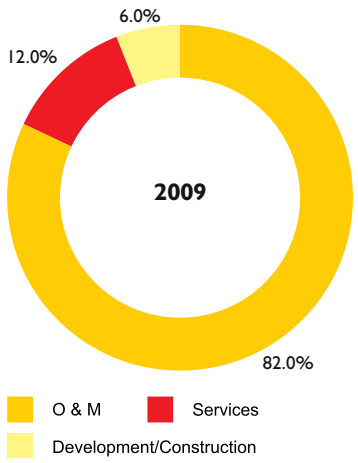
There were 119 contract, 202 casual and 70 plant technician apprentices in addition to a permanent staff of 8,627 at the end of 2010. Most contract employees were recruited for work on foreign funded projects.

There were 491 permanent, 139 casual, 78 contract and 22 plant technician apprentice recruitments of various staff categories during January to December 2010. In the same period there were 433 permanent, 245 casual, 96 contract and plant technician apprentice terminations which includes retirements, resignations, vacated posts and deaths in different categories of staff. This resulted in an increase of 45. The 70 plant technician apprentices, are likely to be made permanent later.

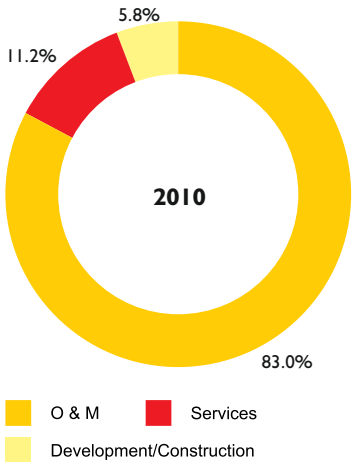
Distribution by Key Job Function



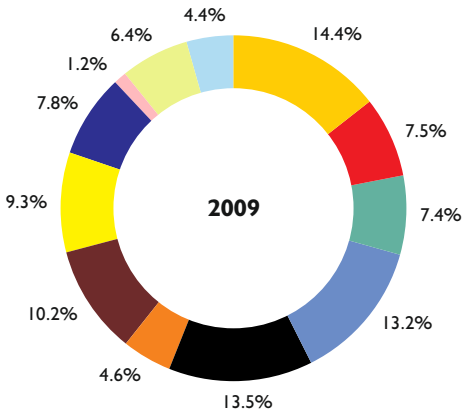
Staff Distribution by Key Job Functions



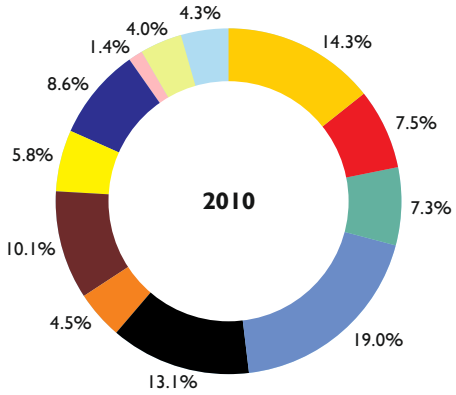
Staff Distribution by Key Job Functions

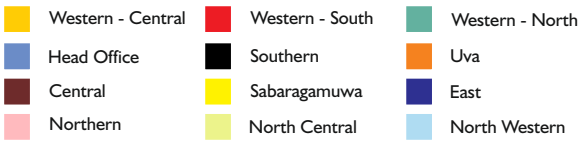


Staff Distribution by Location



Staff Distribution by Location





Staff Benefits

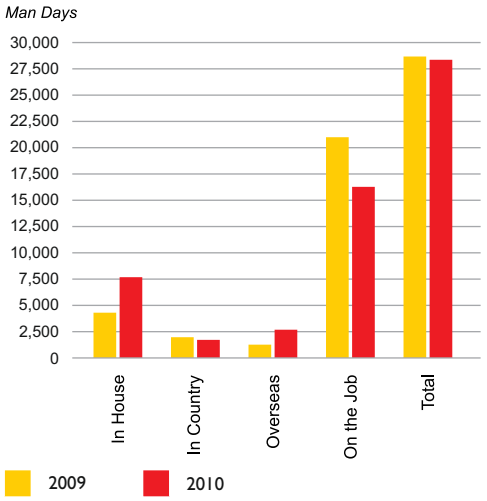
- An annual bonus of Rs. 23,000 and in addition a productivity incentive was paid to eligible employees.
- Encashment of unused medical leave was continued.
- 1,728 Concessionary Loans [1,542 ten months loan and 186 twelve months loans] (approx. Rs. 751,409,430) have been disbursed among employees.
- 325 employees were felicitated for their unblemished services at the World Water Day ceremony held in the Bandaranaike Memorial International Conference Hall (BMICH) in 2010.
- Transport facilities were made available to officers at a concessionary rate, in addition to the home to office transport for employees provided on selected routes.
- Rs. 6,944,036 (apporx.) has been spent for medical expenses of employees for in-door and out-door treatments (including family members). Medical facilities have been extended to family members from the year 2010.
- 338 casual/ contract employees have been made permanent in their posts in 2010.
- Death donation for permanent employees.
- Local/ foreign training facilities to employees.
- Optional tea allowance of Rs. 500 for employees.
- Loan facilities via Government Banks (housing loan from Peoples Bank and vehicle loan from Bank of Ceylon.
- Festival Advance of Rs. 5,000 is continuously being paid to employees.
- Giving priorities for qualified children of employees for filling vacancies

STAFF REMUNERATION AND BENEFITS

Comparison of Staff Remuneration in 2009 and 2010

Description	2009 Rs. million	**2010 Rs. million**
Salaries	4,347	5,258
Contribution to Employees' Provident Fund	390	480
Contribution to Employees' Trust Fund	98	120
Total	4,835	5,858

MANPOWER DEVELOPMENT AND TRAINING



Based on the training need priorities identified through the senior and the line-managers, employees in various categories were provided with the training through the following approaches.

Following training programmes have been introduced during 2010

Calculation of Price Escalation using ICTAD formula for Engineers and EAs, Water Quality Indices on Calculation of Water Quality Index for Lab Assistants, Application of New Development in Water Analysis for Chemists, Connection Procedures of PE pipes for Pipe Fitters, Awareness on Accounting Standards for Accountants, Basic Training on GIS Package for Engineers, EAs and Draughts personnel and Digitizing Maps using GIS ArcView for EAs and Draughts personnel.

Formal In-house Training Programmes, Seminars and Workshops

The Manpower Development & Training Division has conducted 166 in-house training programmes, related to the following areas during 2010, where 460 Managerial Staff 1,605 Supervisors, 931 Clerical and Allied grades, 821 Operatives were included. Some training programmes were arranged at Regions also.

Services of external experts were obtained in the areas of Management and Finance.

Water Quality Monitoring, Water and Waste Water Treatment, Construction Management, Tender Procedures and Contract Payments, Leadership, Leak Detection, GIS, Disciplinary Procedures, Administrative procedures, Financial Procedures, Material Management, Commercial Activities, Customer Relations, Clerical Skills, Computer Applications, Management Skills, Familiarization programmes for New Recruits, Refresher programmes, Road Safety and Handling Machinery and Equipment in WSSs.

Training at other Training Institutions in the country

Provided training through external institutions by utilizing 98% of the funds allocated for external training. 132 employees received training externally through local training Institutions. This includes Masters and Postgraduate programmes conducted by local Universities and Diploma and Certificate courses conducted by Institutions such as National Institute of Business Management, Institute of Personnel Management, Sri Lanka Institute of Development Administration, Center for Housing, Planning and Building and short courses in Human Resources, Supplies, Construction, Management and in mechanical & electrical fields.

Officers have been nominated for the following new training programmes during 2010

Skill Development Course on WTPs in the ITI, Training on CoralDRAW in Wijeya Graphics, Customer Service Excellence in the SLFI, Training of Trainers in the SLIDA, Selection and Employment of Consultants in the Institute of Engineers Sri Lanka (IESL), Tender Procedure and Supplies Management in the Central Bank, Contract Issues related to Procurement Work in the IESL.

Overseas Training/Official Visits

Overseas Training was provided to 69 employees of the NWSDB with the financial support of ADB, JICA, SIDA, DANIDA, Netherlands Fellowship Programme and TICA. In addition 75 officers participated in inspection visits, meetings, seminars, etc.

On-the Job Training

On-the Job training was provided to 169 Apprentices (Undergraduates, Special Apprentices, National Diploma in Technology/ Higher National Diploma in Engineering trainees, Craft Apprentices, Technical College, Institute of Charted Accountants, AAT, Vocational Training Authority and National Apprentices & Industrial Training Authority Trainees).

Careless human activities can result in drought situations. Let us take care of the environment and enable the extraction of sufficient water for drinking purposes.

Water is precious; use it sparingly

Photograph by
Sumudu Hettiarachchi

Customer Convenience

"On the spot cost estimation for new connections at selected offices, provision of new connections within a maximum of seven working days after the payment of the charges, deployment of leak repair teams, capturing customer grievances through the Web, are some measures being taken to provide a customer friendly service."

The NWSDB is making several efforts to make matters easy for its customers.

Call Centre

The NWSDB all Island call center, 1939 is operated for 24 hours, toll free and tri-lingual which is for seeking information of the services or any complaints on the breakdowns, interruptions and water leaks. The Call Center was in operation and enhancements were made to the system. At present 12,000 customer complaints (mainly leak repairs) have been handled with this system. SMS technology was incorporated to call center facility. When the complaint is lodged at the Call Center regarding pipe leaks or service breakdowns, a SMS will be sent to the relevant Area Engineer/ District Engineer.

Customer Charter

The NWSDB is committed to ensure an efficient and reliable service to the beneficiaries by improving the present condition of WSSs in accordance with the guidelines mentioned in the Customer charter. On the spot cost estimation for new connections at selected offices, provision of new connections within a maximum of seven working days after the payment of the charges, deployment of leak repair teams, capturing customer grievances through the Web are some measures being taken to provide a customer friendly service.

Bill Payment Facilities

All State Banks accept water bill payments. In addition, Sampath Bank, Nations Trust Bank, HSBC, City Bank, Commercial Bank, Deutsche Bank, National Development Bank, Union Bank, Standard Chartered Bank, Seylan Bank and Pan Asia Bank accept water bill payments. The Standard Chartered Bank and Union Bank have telephone banking services for their customers. The Sampath Bank has its own Sampath Net to accept water bill payments. The NWSDB has its own Cashier Points at various offices. Furthermore, it has registered collection agencies, Agency Post Offices and LECO Agents who also collect water bill payments. Cargills Food City and Keells supermarkets, Abans showrooms and Singer showrooms as well, have been appointed to collect water bill payments.

It is possible for customers to register with NWSDB web www.waterboard.lk and thereafter make monthly payments through the web using Credit Cards through HSBC as well. The online payment system was in operation and the NWSDB customers continued to pay their water bills.

Short Message Service (SMS) Technology to pay water bills

This is the latest method launched in November 2010. A customer could pay the water bill using the mobile phone. Initially, the mobile phone number and the NWSDB customer account number will be registered with the bank account of the customer. Thereafter, the customer registers with the NWSDB using the mobile phone number. ORIK Corporation was contracted for this service. Such mobile invoicing services will enable customers to enjoy hassle free services, without filling forms, standing in queues, cash, etc. These innovative methods are embarked with a view to enhance customer convenience.

Monthly bill values are conveyed to customers through their mobile phones. The customers will agree to make the payment to their banks wherever they may be. This instruction will be noted by the customer's Bank, which will remit the payment to the NWSDB. The NWSDB in turn, will identify the customer's payment from the bank and give credit to their dues. This updating of customer accounts will take place on a daily basis.

As usual, a 2% rebate will be given when the payment is made within 14 days of billing. If the customer has already deposited excess funds in the NWSDB to meet the full bill value, a 4% rebate will be given to the customer.

Public Awareness Programmes

Enhancement of Public Awareness on water conservation; saving of purified water and prevention of water bodies from pollution by human activities was continued, giving main concentration for school children. 24 school programmes covering, Polonnaruwa, Ampara, Gampaha, Kalutara and Colombo Districts as well as another 2 programmes at General Hospital Anuradhapura and at National Central Blood Bank, Narahenpita were conducted by Public Relation Unit of the NWSDB during 2010, with the involvement of RSC and RWS officials.

World Water Day, on March 22nd was celebrated for motivation among stakeholders and improve awareness on the water sector. "Jalaya", quarterly News Paper was continued.

Assistance to sustain Rural Water Supply by CBOs

More than 3,000 small scale rural water supply schemes were constructed by various government & non government organizations, in the country. They provide water to about 8% of total population of Sri Lanka. At present there is no clear system to provide necessary assistance to them. As sustainability of them is very important in the context of achieving Millennium Development Goals on water supply, The NWSDB has taken a positive step in assisting them. Accordingly, the NWSDB has decided to establish rural water supply units attached to regional offices throughout the island to provide necessary back up support for communities who run their owned WSS. 12 units were established at the end of 2009 and another 5 was established during 2010. They are at Ampara, Vavuniya, Badulla, Polonnaruwa and Matale. For the eshtablishment of RWS units at Mannar, Trincomalee and Batticola, necessary funds have been obtained from UNICEF for purchasing furniture, equipment for these units and also for conducting awareness programs for stake holders in District level.

Water Quality Surveillance Program

Water quality surveillance program for rural water supply schemes was initiated since August 2009 by the NWSDB through District RWS units with the support of Ministry of Healthcare & Nutrition. Under the above program, at least two water samples of each community managed WSSs are tested every year, for bacteriology to ensure safe drinking water. Public Health Inspectors (PHIs) collect water samples and deliver to respective laboratories of the NWSDB. Cost for testing water samples are borne by O&M budget of the NWSDB.

National level and district level coordination mechanism were already established to implement the above program. National level steering committee was established to review the above program. Ministry of Health, Ministry of Water Supply and Drainage, NWSDB and other sector partners are members of the national level steering committee. In district level, District Secretary chaired the water quality monitoring committee and other sector partners participated. At this meeting, water sample test results of community managed WSSs are assessed and necessary remedial action taken and informed to CBOs to prevent such issues.

New Initiatives

To prevent the water quality issues of CBO managed WSSs, preparation of water safety plans were introduced with the assistance UNICEF funds. Regional staff of the NWSDB were trained for developing water safety plans for rural and urban WSSs. National level TOT (training of trainers) program was conducted to train the selected core staff of RSC for preparation of water safety plans. Necessary funds were transferred to RSCs for conducting TOT programs to other required staff of RSCs.

Southern RSC and RWS officials were technically supporting to 330 CBO managed small town WSSs and 17 local authority WSSs which are functioning in Southern Province. Water Supply Committee of Southern Province was started. District committee for water quality surveillance in Galle, Matara and Hambantota were established.

Testing of Water and Wastewater Quality

Raw water and purified water samples are tested for basic chemical, physical and microbiological parameters. As appropriate in special cases, water samples are tested for Total Organic Carbon (TOC), metal/ heavy metal and algae. Results area scheduled on a monthly basis for the review of respective provincial DGMs and other sectional heads for any remedial action. Wastewater quality analysis is also done for wastewater treatment plants operated by the NWSDB and for the private sector on payment basis.

Pesticide residue, enumeration of algae and dissolved Total Organic Carbon (TOC) analysis is continuing with the surface water quality monitoring programs. In order to investigate the contamination of heavy metals in lake sediments, studies were done in Nuwara Wewa in the North Central province and sludge analysis for the Ambatale WTP. Comparative study has been done for the water treatment coagulants used in Sri Lanka..

Digital Microscope used for enumeration of algae

Among New Initiatives to be taken to enhance the provision of water supply and Sewerage services, following listed subjects were dominant in 2010.

- Development of alternative Business Models to secure Investments through Public Private Partnerships [Build, Operate & Owen (BOO) / Build, Operate Owen & Transfer (BOOT) types]
- People living in certain areas of the country are suffering from chronic renal failure. The cause is suspected to be their drinking water. As a precaution, a special venture will be embarked to provide water in large cans, eg. 25 litres capacity for their drinking and cooking purposes
- In order to supplement investment from the government for water supply and sewerage, investors will be encouraged to construct water treatment plants to supply drinking water in bulk to the NWSDB, for which a rate will be agreed/This rate will include their investment costs as well
- The possibility of securing loans for developing infrastructure facilities from local Development Banks will also be studied
- The concept of "New Water" to capture rain water and household wastewater, treat it and use for purposes other than consumption will be promoted
- Large institutions and commercial complexes will be urged to install facilities to capture rain water and wastewater, carry out on-site treatment and make use of it; if necessary, not providing them with a water supply connection unless they attend to it will be considered
- The possibility of assembling and thereafter manufacturing of water meters will be looked into
- The NWSDB has around 9,000 strong workforce at present. It is involved in the operation and maintenance of more than 300 water supply systems throughout the country. In order to economise on operating costs, it is proposed to form fully owned subsidiary companies of the NWSDB to provide specific water and sewerage related services to the customers
- The possibility of using trenchless technology to reduce road damage and public inconvenience while pipe laying, where ever possible will be looked into

Non Revenue Water Reduction

Non Revenue Water (NRW) has four major components. They are physical losses, administrative losses, unauthorized consumption, free water (un billed but legitimate water consumption). This chapter briefly explains the steps taken to reduce NRW in Colombo City.

Reduction of losses in Free water Outlets

There are about 1,500 underserved settlements in Colombo City. Many occupants in these settlements get the water supply through public stand posts. While these lead to high wastage of water, they increase NRW as well. A special program know as, "Randiya Program" to provide individual connections on concessionary terms and reduce the number of stand post is being implemented. This program commenced in 2000 and there were 20,500 beneficiaries up to 2009. During 2010, 828 beneficiary families opted to take individual connections and 126 common outlets were disconnected.

Use of free water outlet in a community garden in Colombo

Most of the occupants in these settlements are daily wage earners, and to make it convenient for them to make the application and the required payments, mobile offices were conducted in the settlement itself. In 2010, mobile offices were conducted in five settlements.

Provision of individual water connections is initiated once all the beneficiaries have submitted their applications and made payments. Execution of this program is a time consuming and negotiating process. There is some confusion in these settlements about the government relocation plan.

If there is difficulty to give individual water connections to individual households as there are insufficient space or drainage facility, then a committee is formed among users of the particular stand post and their consumptions is metered. The payment has to be shared by them for the water consumed.

Reduction of Unauthorized Consumption

Identification on unauthorized consumption is carried out by five gangs headed by Engineering Assistant. Various methods are adopted to locate the unauthorized consumer. Some of the methods adopted are, responding to information received from the general public, programmed search in area for unauthorized consumption in commercial premises, checking of water usage in disconnected premises, checking all premises in identified area as indicated in electoral list in a planned manner with intention to cover the whole Colombo City.

Unauthorized consumption could be in houses of poorest of poor or else in reputed commercial premises etc. All are treated alike under the law of the country, once a detection is made loss incurred for a period of two years to the NWSDB is recovered and the future occurrence of the losses is eliminated by regularizing the connection where possible.

An example for unauthorized water consumption (By pass with pump installed)

During 2010 alone 1,669 detections had been made, out of these detections 453 were detected from disconnected premises, Rs. 55.07 million has been recovered. It is noteworthy that 78 detected unauthorized consumers made payments individually over Rs. 100,000. When comparison is made with the past performance, the number of detections made during last two years has shown a significant drop. Arrangements are being made to receive information from the general public through the toll free number 1939 and this to be publicized shortly.

Reduction of physical losses

The old deteriorated system existing in the Colombo City, is the main cause for the loss of water. The customers inform visible leaks to the Area Engineers' office or to the toll free number 1939. Leaks occur from main distribution pipes or from the piping system giving service connections. During 2010 main leak repairs were carried out in 2,059 locations and service

leaks carried out in 4,289 places.

Administrative Loss Reduction

The target set by the NWSDB is to maintain defective meters less than 1% of the total connections. This percentage was achieved for the Western Central area in 2010 for the first time. The number of unmetered connections was 1,307 in 2009 which was brought down to 587 in 2010. Rotation of meter readers commenced periodically in some areas to deter meter reader connivance with customers. This method ensures meter reading accuracy. This rotational method will be implemented in other areas too.

Other Steps taken for NRW Reduction

a) Customer Premises Survey to Reduce Unaccounted for Water

The visit to customer premises was initiated in 2009 with the objective to identify and address all factors that contribute to UFW within the customer premises. The outcomes of this practice were, system pressure improvement, dropping in NRW in selected areas and increase in consumption. In spite of having a budget reduction in 2010 the practice was continued in adjacent areas. This exercise is time consuming, where only 8 to 10 premises could be completed per day by a gang lead by an EA. At present 6,186 premises have been covered. The general observation is that even in the best of residential area, unmetered, unauthorized consumption could be seen.

b) Empower the O&M staff for NRW Reduction

Effective NRW reduction could be achieved when all four factors that contribute for NRW are addressed simultaneously. This was carried out through the JICA Grant project "Capacity Development in NRW reduction in Colombo City". Within the scope of the project there are only two zones covered. Opportunity was extended for others to get the knowhow by participation in the weekly meetings.

In carrying out this exercise the buried valves were surfaced, they were made to operate or were replaced. Maps were updated with newly found information. The condition of the existing pipes became known. Distribution network was rearranged to reduce the number of inflows to the selected area, house connections given from different roads became known.

In 2010 the said procedures were adopted in five sub zones having 2,330 connections, further three sub zones were selected additionally by the Area Engineers (AE)/ Officer in Charge (OIC) outside the project area. The number of connections in the additional sub zones were 963, here too they carried out the same procedure under the guidelines of the Japanese experts.

This gave a clear idea to the O&M staff that reduction of NRW needs a holistic approach and where emphasis needs to be made for effective NRW reduction.

Other Services Provided by the NRW Section

a) Identification of leaks in Distribution Systems

Whenever there is visible leak or suspected leak, assistance will be provided to any part of the country to detect the leak on request to outside Regions. Locating leaks has to be done during night time when there is no external disturbance from moving vehicles. This year in total 76 leaks have been identified, out of those 32 identifications were done outside Western - Central area.

b) Identification of leaks in Private Premises

Customer premises leak checking is done for a fee at the request of the customer. This service can be provided to even these who are not our customers. The customers make their request to relevant Area Engineer for the required service and make the necessary payments. During this year 441 premises have been checked. This number is much more than the previous year and leaks have been confirmed in 294 premises. In addition four commercial premises had been checked.

c) Flow and Pressure measurements

Measurement of flow and pressure using portable instruments is a routine. It is also done on request by other regions. On average, 17 measurements were taken monthly during 2010, and additionally 50 measurements had been taken for calculation of NRW figures. Further, 119 measurements were taken on request from various parts of the country.

d) Valve Location

The importance of a valve is known only when it has to be operated for some operational purpose such as to stop water flowing to attend to a repair, control the flow in the distribution system, isolate an area etc. The necessity to operate a valve occurs rarely. The valves get covered when road improvements are made by other agencies. In 2010, 250 buried valves were located.

e) Nagamupurawara Programme Phase 1, Phase 11

The Nagamupurawara program was jointly carried out by the CMC, NHDA, CEB, NWSDB, and other related government organizations to improve the conditions in 300 underserved settlements in Colombo City. NWSDB focused on reduction of wastage in common outlets and elimination of leaks. The same program was repeated in another 143 underserved settlements.

Main activities in some of other areas

Highlights of NRW reduction activities in Western North RSC were; replacement of 16,652 defective meters and 4.5 km AC pipes, fixing of over flow alarms for water towers at Dompe, Malwana, Mahara, Ragama, Elpitiwala and Ja-Ela and establishment of water level indicator systems for Veyangoda, Gampaha and Nittambuwa WSSs and purchasing of a leak detection equipment for Gampaha Region.

Highlights of NRW reduction activities in Western - South RSC were; reduction of public stand posts to 18 from 27 at Panadura - Horana Region, replacement of around 4 km of AC pipes at Wadduwa distribution system and 5 km along Galle Road at Panadura area and taking action to fix bulk flow meter to tower outlet pipe at Dehiwala water tower.

Highlights of NRW reduction activities in Central RSC were; repaired defective meters and replaced 10,500 defective meters. Installed 38 new valves and refurbished existing valves. Installed District meters, 118 water leaks were detected after carrying out night surveys. Initiated a programme for replacement of Bundle Pipes. NRW in Nawalapitiya WSS was reduced from 36% in January 2010 to 10.6% in September 2010 and being the best water supply scheme in 2010. Conducted 400 house to house surveys. Carried out 31 flow measurements and step testing.

North Central (NC) and North Western (NW) RSCs were spent about Rs. 16 million each for NRW reduction such as replacement of old pipelines, valves and specials in both provinces and fixing of new valves for zoning to improve the system in NC and installation of Auto Cut-off Signal Systems for the water towers in North Western Province.

Highlights of NRW reduction activities in Sabaragamuwa and Uva RSC were; replacement of 6,482 and 9,525 defective meters in Sabaragamuwa and Uva Regions respectively, replacing of 5 km length of bundle pipes in Monaragala WSS, replacement of 4 bulk meters in Haliela WSS, installation of a pressure reducing valve in Wellawaya WSS and replacing of bundle and under depth pipe lines in Haputale WSS.

The Energy Management Programme of the NWSDB achieved substantial progress and activities upgraded to a higher level qualitatively and quantitatively.

There was 100 % continuation of the savings due to the Tariff category rectifications, M&E Capital Works, etc., completed in the previous years and these savings continued to accumulate in 2010 also. These savings are about Rs.15 million, annually. Continuing the process of increasing the savings from energy use 32 energy audits have been completed in 2010. Recommendations of these energy audits will be implemented in 2011 and 2012. Total estimated savings from these will be an additional Rs. 35 million, once they are completed.

In addition, work commenced in the Old Wakwella Intake Pump Housing costing Rs. 22 million, which would result in annual savings of Rs. 12 million. Work is scheduled to be completed in April 2011. M&E capital works are in progress in 03 schemes in Sabaragamuwa RSC costing Rs. 5 million which would result in Rs. 960,000 per year when completed. Completion is expected in June 2011.

Proposed JICA Financing through the Sustainable Energy Authority (SEA), Sri Lanka, for the Energy Conservation Programme of the NWSDB has shown considerable progress in 2010. At the end of lengthy feasibility studies about the energy situation of the NWSDB carried out by JICA and SEA, a pilot project is financed by JICA costing Rs. 4 million. This project is being implemented by the NWSDB, at the Jubilee Pump House. JICA procedures are expected to be completed by SEA in 2011 and the tentative commencement of the project will be in 2012.

Clean Development Mechanism (CDM) procedures of the United Nations Framework Convention on Climatic Change (UNFCC) have been initiated covering the whole energy programme of the NWSDB, with the Ministry of Environment (MOE) who are the Designated National Authority for CDM in Sri Lanka. Guidance is provided by the JICA Team for Capacity Building on CDM in the MOE. Initial documents on CDM of the NWSDB have already been submitted to the JICA Team. Though the procedures are laborious and tough by nature, the financial, environmental and other non-tangible benefits to be achieved with the implementation of CDM are very high, because of the high energy consumption level of the NWSDB.

Institutional Development

The importance of institutional development as a pre-requisite for the NWSDB to develop its full potential has been identified. An assessment of the needs has made and developed a programme to meet the needs which is being implemented. The motives of the program are;

- Change attitude of employees at all levels towards achieving improved productivity and customer care
- Aim at achieving Corporate Goals
- All employees to work with a vision to achieve the goals
- Recognition of contribution of each employee through participatory approach

Aspects of training, skills development, improving IT literacy, maintaining a friendly and work-oriented office environment and practicing 5S principles, participating in productivity award competitions and winning some of those were continued in general. Achievements and highlights on activities of Institutional Development Programme during 2010 are described below.

"Dayata Sewana" National Tree Planting Campaign was held in island wide NWSDB's offices.

Three offices of Western - Central RSC participated for the Productivity Award Contest and Kotte Manager's office won a special merit certificate. There was a Christmas celebration in Western - Central RSC Office, including distribution of gift packets of essential grocery items for poor people, singing carols and having a get-together at the end.

A programme for change attitude of employees and field visit to Kalu Ganga WTP at Kandana was held for Western - South RSC staff. Arranged displaying of the layout plan of the office for the convenience of the water consumers at Panadura-Horana regional office and at Panadura AE's office. Increased area and facilities of the consumer relation section in the Area Engineer's offices at Panadura-Horana and TSC regions. Conducted productivity improvement lectures at Wadduwa, Kalutara, Payagala and Aluthgama OIC offices.

Organized organic farming and tree planting in all the sites of WSSs in Central RSC. Conducted quality circles. Won Productivity Awards for the Kandy North Office, Greater Kandy WTP and Pathadumbara schemes. Kandy East Manager's office won 3rd place of Central Province, organized by the Department of Industrial Development and Enterprises Promotion.

Offices of the Manager (O&M) Matara, WTP at Malimboda and Southern RSC received special skill certificate of manufacture and service sector under the National Productivity Awards.

ADB Technical Assistance (TA)

The ADB TA (NO. 7078) has been formulated in June 2009 for Institutional Strengthening such as to support the GOSL and the NWSDB efforts to improve water sector utilities, management and operation. The TA was included following four specific components;

Regional Benchmarking

Regional benchmarking lead to the collection, analysis and comparison of key provincial performance data. IT serves as an effective management, monitoring and planning tool to help address localized problems and improve overall performance.

Regional Business Plan

Keeping objective as maintaining a better business of drinking water and enhance the service level of the NWSDB, prepared separate business plans at regional levels which are decentralized. A corporate business plan for NWSDB is being prepared by the Merchants Bank of Sri Lanka. Through the business plan preparation, the requirement of a regional tariff is surfaced.

Asset Management Planning

Generally RSCs are responsible for asset management including asset management planning. So the TA emphasized the requirement of a centrally based working group to guide the formulation of policy and to provide support to the RSCs in developing the necessary skills and capability for proactive asset management for next 5 years.

Internal Monitoring and Regulation

To catalyze the implementation of internal monitoring systems as well as technical and economic regulation, the TA supported NWSDB in developing and implementing an agenda, including working plans and schedules. It is proposed that the NWSDB should be formulating policy statements incorporating the objectives and linkages for setting up an internal monitoring and regulatory unit including its mandate, functions and authority.

The ADB TA 7078 was concluded successfully in May 2010.

Research and Development

Mainly, the following research activities aimed for efficient drinking water supply were carried out to enhance the quality of drinking water supply during the year under review.

Hardness and Manganese removal at Puttalam Water Supply Scheme

The quality of water produced from the Puttalam water treatment plant was hard for a long time. The reason was identified as the hardening of rapid sand filter media making the filters unoperatable. According to water quality reports the raw water contains high hardness and manganese levels which were suspected to be the reason for this problem. It is obvious that the present treatment system consisting of aeration and filtration is not satisfactory.

As an effort to solve the problem, a pilot plant, run along with laboratory simulation was conducted to arrive at a suitable solution. Initially lime soda process with subsequent pH correction was tried. This method ended with dosing sensitivity problems and pipe line clogging problems in the model plant. The final outcome was unsatisfactory due to high production cost and unacceptable conductivity in the purified water.

Subsequently a method was derived upon laboratory testing. This method uses lime and NaOH to raise the pH and subsequently clay and alum to settle the deposits. The advantage of this method is that no special pH correction is needed at the end of treatment process and reduced conductivity in the range of 1500 to 1800 ms/cm in the purified water. In addition to that, reduction of Ammonia and Alkalinity is beneficial. Finally the cost of treatment was in the range of Rs. 13 per cu.m.

Although lime softening process has been there in the text books, this is the first effort in Sri Lanka to implement the same.

Evaluation of the performance against the design parameters of the unit processes of the Konduwatuwana Water Treatment Plant

The Eastern Coastal Towns of Ampara District (ECTAD) Water Supply Project has been planned to be implemented in two phases. Phase I (17,500 cu.m. per day) and Phase II (72,000 cu.m. per day) were commissioned in 2001 and 2007 respectively. In both phases dissolved air floatation is used to remove algae. After commissioning the treatment plants, there were sporadic complaints from the consumers about colour, smell and taste in the water they received. This study focused on running the plant under different treatment options to address the quality issues of the treated water and achieve the best solution.

The study helped to identify many shortcomings in the treatment process. It was concluded to do more studies on optimizing chemical usage and observe manganese removal efficiency of the plant.

Contaminants of the Bomuruella Reservoir at Nuwara Eliya

Bomuruella Reservoir, constructed and operated by the Department of Irrigation is an important water source in the Nuwara Eliya area. The villages Ambagasduwa, Lunuwatta, Welimada, Uva Paranagama and Keppetipola are provided with drinking water using water downstream of Bomuruella. Therefore this study on water pollution of the Bomuruella reservoir is important as many contaminants have been identified such as landfill leachate, vegitable wash water, Municipal waste water outlet, surface water from cultivations and waste water from housing areas. The study revealed that the inflows to the reservoir have high loads of organic wastes with COD values as high as 225 mg/l during certain times of the year. High BOD, turbidity and ammonia levels were also observed. The conclusion is that the water in the reservoir is not suitable for drinking even with simple treatment. However, pollution due to heavy metals was found to be insignificant during this study. Remedial measures are recommended to control further pollution of the reservoir which may severely affect the downstream intakes. Further studies are recommended on parameters such as pesticides and algae.

Hydrogeological and Geochemical study on the Natural Springs in the Matale District

Natural springs of Matale play a major role in water supply. This study was done to evaluate the hydrogeological and hydrogeochemical characteristics of the springs with respect to geology, structure, topography, drainage, weathered over burden and temporal and spatial behaviour of water quality parameters.

Detailed field mapping, measurement of yields in wet and dry seasons and yields of the springs were compared with geology, structure, topography and the drainage pattern of the area. Spring discharges were measured and analysed to find out relationships with the above features. Monthly rainfall and pan evaporation data were averaged and compared. A total of 27 springs were analysed. pH, conductivity, hardness, major cations and anions were analysed.

Springs in Matale area have been formed mainly in marble due to karstic formation joints and fractures and grain size variation of marble. Major lineaments are present in E-W and N-S directions. It was found that the spring formation is associated with lineaments and low elevated valley areas. There is a general increase in yields of springs towards the North. Yields of springs do not show considerable seasonal variations. Rainfall is the main recharging source which showed a bimodal variation with clear cyclicity. Borehole record analysis revealed that yield of springs is higher in areas having shallow water level and facture depths.

The spring water from marble is of calcium-magnesium bicarbonate type. Except electrical conductivity, the concentration of most of the ions increase in the dry season compared to the wet season. An area wise distribution of the parameters shows a striking similarity regarding general shape of the distribution pattern. Alkalinity, conductivity, bicarbonate and total dissolved solids show increasing trend from SW tone direction and Chloride, Potassium and Sulphate show decreasing pattern in the same direction.

Water quality parameters indicate that the ground water of the springs in the area is suitable for irrigation and drinking purposes. Development of the spring water as water supply source to serve a considerable fraction of the community of the area is possible.

RWS and Sanitation

The Secondary Towns and Rural Community Based Water Supply and Sanitation Project is a large scale community participatory rural water supply project being implemented at present (more details in page 41).

PAC approval for rural water supply project proposals for Polonnaruwa, Matale and Kurunagala Districts and Uva province have been obtained. Proposals for Southern and Eastern provinces have been prepared and PAC approval obtained during the year.

Rural water supply proposal for Uthuru Wasantha program has been sent to the Ministry of Resettlement and Disaster Relief Services to cover Vavuniya, Mullaitivu, Mannar and Jaffna Districts.

Comprehensive project proposals for rural supply in Kurunegala, Badulla, Monaragala and Kilinochchi Districts were prepared for World Bank funding.

The World Bank funded pilot project for rural water supply for the North and East areas was in negotiation stage and it will commence during the first quarter of 2011.

A competition among CBOs has been planned for the World Water Day 2011. The required funds for the awareness campaign for the competition have to be arranged from the UNICEF, IFRC and other NGOs.

Necessary funds were received from the UNICEF for the establishment of a database for rural water supply. Under the above program, computer facilities were provided for district level RWS units and software programs for the establishment of the data base has been installed in computers. District level data bases are linked to the RWS division through existing servers in RSCs. GND wise data are being entered to the above data base by District RWS units and all GND based data entries will be completed during 2011.

Preparations for SACOSAN IV International Conference

The NWSDB assisted the SACOSAN National Steering Committee in organizing a national workshop as well as regional workshops among key stakeholders in order to prepare for the International Conference. The National workshop was held in Colombo and two Provincial Awareness programs were conducted in Matara and Bandarawela. Awareness programmes in Kandy, Anuradhapura, Vavuniya and Ampara are to be held within January - February 2011. In addition, assistance is being provided for the SACOSAN IV Conference to be held in April 2011.

Ground Water

During the year under review, the work related to ground water activities were, hydro-geological and geophysical investigations for hand pump and productive tube wells, drilling of deep and shallow tube wells, installation of new hand pumps, pumping tests for productive tube wells, flow measurements, water jetting activities and dug well cleaning in Northern and Eastern areas. Progress was completion of 478 hydro-geological investigations, 276 tube wells (deep and shallow), 82 pumping tests, 448 hand pump repairs and rehabilitations, 114 hand pump installations, 105 wells developments, 4 water jetting activities, 2 surface water flow measurements and 646 dug well cleaning activities.

Sociological Activities

Highlights of Sociological Activities carried out in 2010 are listed below.

- Facilitated sociological research on piped WSS carried out by University of Colombo
- Conducted training programme on social aspect related to Procedure Manual on Project Planning and Preparation of Feasibility Reports (P1) for Engineers, Sociologists, Chemists and Technical Officers.
- Consumer vigilance communities were formed in Kandy Region by Regional Sociologist in order to Safeguard the water supply system in terms of quantity and quality.
- Prepared guidelines, for the compensation to fishermen who will be affected due to construction of the proposed sea outfall at Angulana, Ratmalana. Also Public consultation meetings were held in order to make the fishermen aware on the advantages of wastewater treatment facilities.
- Necessary changes were made on Hand Pumps Maintenance Policy (Three-Tier System) on hand pump wells in RSCs in terms of community involvement. Also facilitated research activities on community participation in water supply and sanitation program with special reference to the three-tier system of hand pump wells
- Conducted several public awareness programmes on water conservation and NRW reduction with the involvement of RWS and Publicity Units.
- A special study on non-payment of bills in Moratuwa area by regional sociologist.
- Preparation of planning guidelines for small scale WSSs.
- Conducted several awareness programmes on SACOSAN in order to sensitize political leader ships to deliver proper sanitation services to the general public.

Policy Formulation

Two separate Policies, National Policy on Drinking Water and National Policy on Sanitation have been developed. Several rounds of stakeholder and public consultations have been held through public/ media publicity and both the policies have been updated incorporating the public and stakeholder comments. The Cabinet of Ministers have granted approval for the National Policy on Drinking Water. Cabinet approval is pending for the National Policy on Sanitation.

Information Technology

The Enterprise-wide IT Solution introduced with the implementation of Indian funded IT project, consists of 11 major modules covering important business functions of the NWSDB. During 2010, it was mainly involved in the deployment of the Enterprise-wide IT Solution Project. The IT Division of the NWSDB was strengthened and well equipped to implement the solution island-wide and maintain the solution using the in-house staff/ resources. Rs. 10 million worth equipment was procured for improving the IT infrastructure during 2010.

Under the IT Project, the Hand Held Devices had been introduced to the Meter Readers in Kotte area. Procurement for Printers for Hand Held devices was continued in 2010. The application for the devices had been developed with the software modules of the IT Solution. The printers had been delivered at Kotte in 2010.

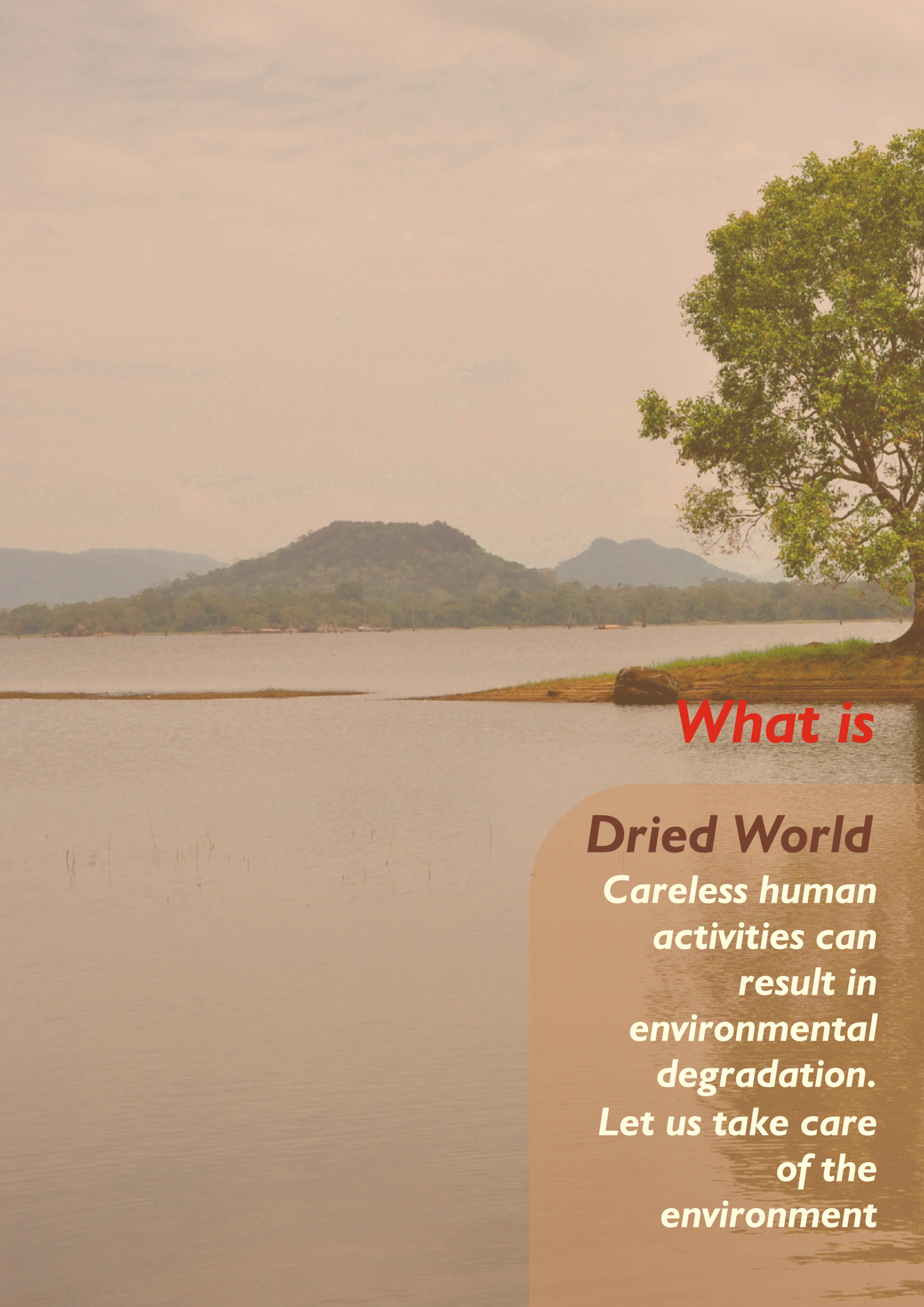
Customer complaint system was improved which facilitates the NWSDB customers to lodge their complaints via the NWSDB web site.

The Virtual Private Network (VPN) connecting the Island-wide NWSDB offices was expanded during 2010. The Virtual Private Network now covers most of the Island-wide offices, except a few including Jaffna and Vavuniya. Email system of the NWSDB was in operation during 2010. 300 email accounts are available at present for the NWSDB staff.

The water quality data can now be entered from Regional Laboratories to the Central Laboratory at Thelewala, online through the ADSL facility.

Future Plans

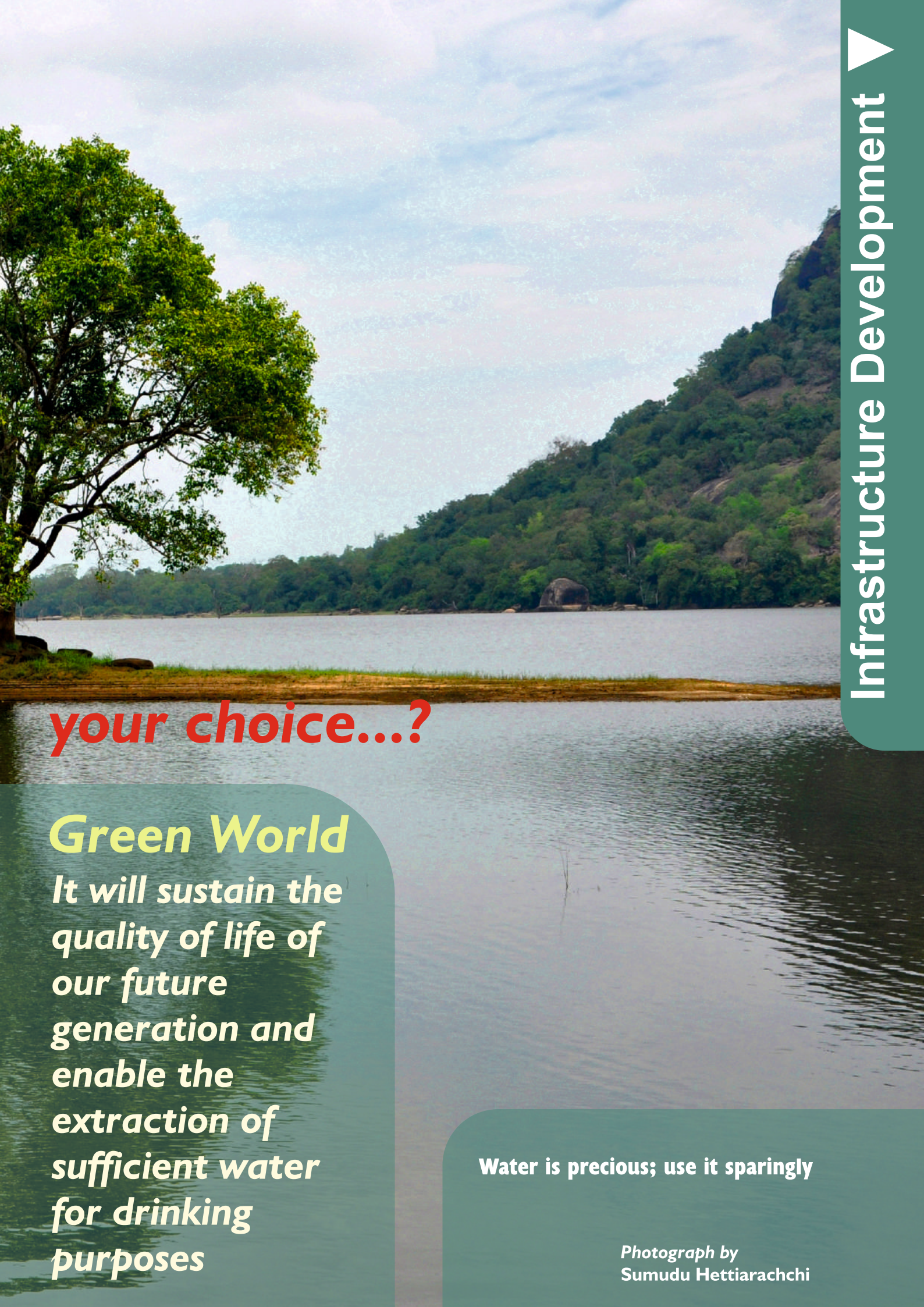
Research work is being done for implementing automated water meter reading, pre-paid card system for water billing, Water Level monitoring with electronic devices and SMS technology, measurement of chemical concentrations with electronic devices and Asset Management using Bar Code / Reference Identification (RF_ID).



What is

Dried World

Careless human activities can result in environmental degradation. Let us take care of the environment



your choice...?

Green World

It will sustain the quality of life of our future generation and enable the extraction of sufficient water for drinking purposes

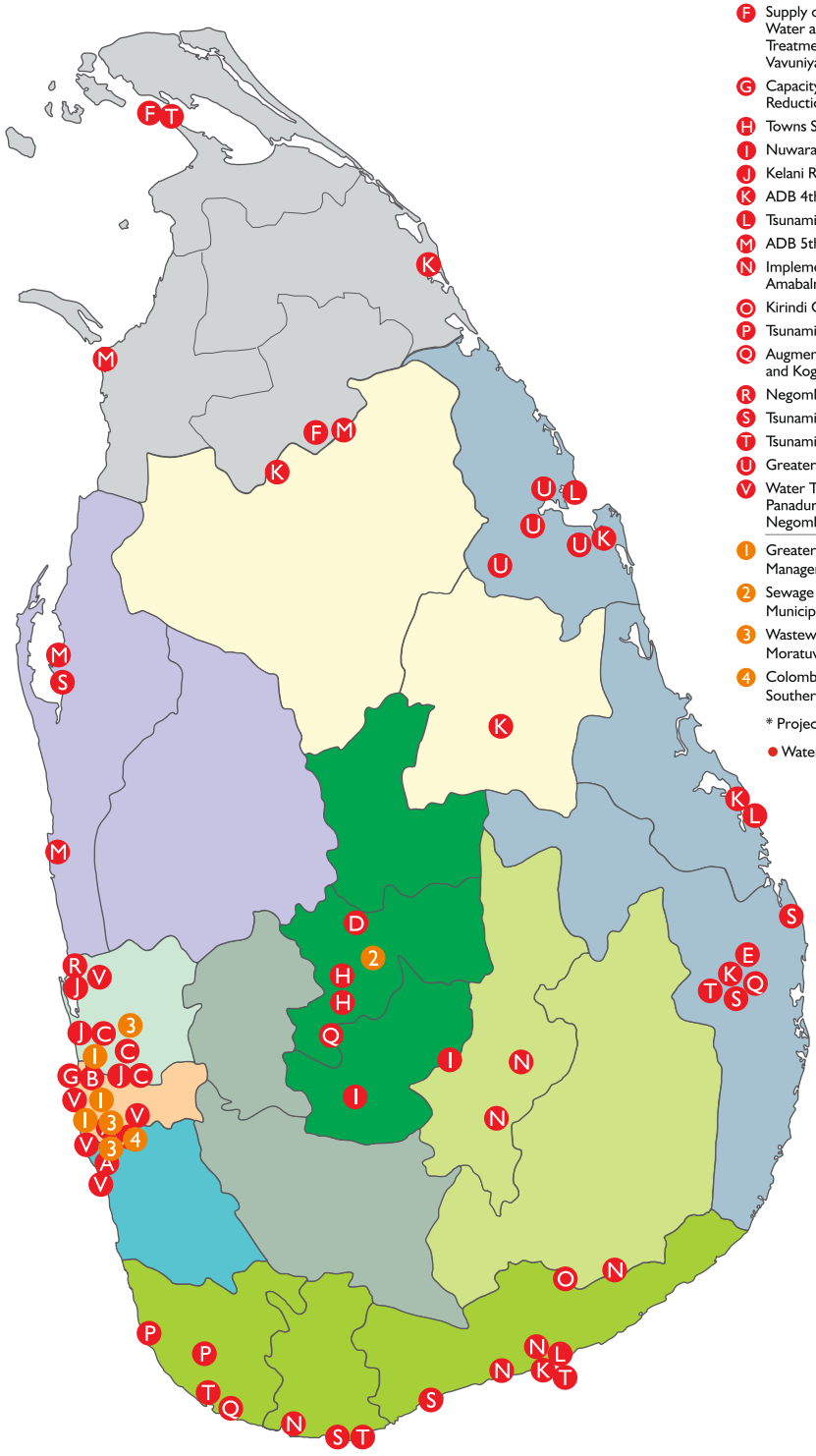
Water is precious; use it sparingly

Photograph by
Sumudu Hettiarachchi

Ongoing Projects

Major Water Supply and Sewerage Projects Accomplishments

Location Map of Foreign-funded Projects under Construction/ Augmentation during 2010



	Project	Funding Agency
A	Kalu Ganga WSP - Phase I, Stage II	JICA
B	Greater Colombo Water Reh. Project	JICA
C	Towns North of Colombo WSP - Stage II	JICA
D	Greater Kandy WSP - Phase I, Stage II	JICA
E	Eastern Province Water Supply Development	JICA
F	Supply of Equipment for the Provision of Safe Water and Construction of Septage Treatment Plant for IDP Welfare Centres at Vavuniya	JICA
G	Capacity Development Project for NRW Reduction in Colombo City	JICA
H	Towns South of Kandy WSP	DANIDA
I	Nuwara Eliya District Group Towns WSP	DANIDA
J	Kelani Right Bank WTP	DANIDA
K	ADB 4th WS & Sanitation Project	ADB
L	Tsunami Affected Area Rebuilding Project	ADB
M	ADB 5th WS Project	ADB
N	Implementation of Hambantota, Amabalntota, Weligama WSPs	Austrian
O	Kirindi Oya WSP	Austrian
P	Tsunami Rehabilitation Project (Galle District)	Germany
Q	Augmentation of Ampara, Nawalapitiya and Koggala WSSs	Germany
R	Negombo WS and Optimization Project	Netherlands
S	Tsunami Rehabilitation Project	UNICEF
T	Tsunami Rehabilitation Project	IFRC
U	Greater Trincomalee Integrated WSP	French
V	Water Treatment Facilities to Moratuwa/ Panadura, WTPs located at Ambatale and Negombo	Spanish
1	Greater Colombo Wastewater Management Poject	ADB*
2	Sewage Disposal Systems for Kandy Municipal Area	JICA
3	Wastewater Disposal for Ratmalana/ Moratuwa & Ja-Ela/ Ekala	SIDA
4	Colombo Sewerage Rehabilitation - Southern Catchment	Austrian

* Project formulation stage

● Water Supply Project ● Sewerage Projects

FOREIGN FUNDED WATER SUPPLY PROJECT

Projects undertaken with JICA assistance

1. Kalu Ganga Water Supply Project Phase I Stage II

The Kalu Ganga Water Supply Project Phase I Stage I was completed in 2008. The detailed designs of Phase I Stage II commenced in 2008 and completed in 2009.

The objective of this project is to meet the increasing demand for drinking water in the Southern part of Greater Colombo. 250,000 people living in Kesbewa, Piliyandala, Jamburaliya, Kumbuke and surrounding areas will be the beneficiaries.

The project inputs and the scope;

- Water treatment Plant at Kandana - Horana of capacity 60,000 cu.m./day.
- 1,000/ 800 mm dia and 15 km long DI transmission main and 450/400 mm dia 7 km long secondary mains.
- Non-revenue Water reduction in Colombo City by the rehabilitation of distribution pipe lines in Pettah, Hulftsdorf and parts of Kotahena and Maradana in Colombo. Total length is 57 km.
- Construction of water towers at Kesbewa, Jamburaliya and Kumbuke (awarded).

The contract for the supply of DI Pipes, fittings is in progress and supply of PVC pipes and fittings is completed. Both supplies are for the distribution system. Physical and financial progress as at the end of the year 2010 are 15% and 7% respectively.

Construction of Kesbewa Water Tower

2. Greater Colombo Water Rehabilitation Project

This rehabilitation project is intended to upgrade the service level of safe drinking water supply in Colombo area.

This is one of the major projects planned with a view for achieving the Millennium Development Goals among many such capital projects. This project is a step forward to the NWSDB's long term strategy for the Non Revenue Water Reduction Programme in Greater Colombo area. The project period is from 2007 to 2012. Total cost estimate is Rs. 5,380 million which includes funds from JICA. It is planned to rehabilitate and enhance the water supply systems of CMC and Kotikawatta -Mulleriyawa area. The Project comprises of four packages.

i. Construction of a new office building at Maligakanda
ii. Supply and laying of distribution network in Kotikawatta- Mulleriyawa area
iii. Major civil, electrical and mechanical works; Transmission main in Kotikawatta- Mulleriyawa area. Construction of Maligakanda reservoir, Elli House new reservoir and Gothatuwa Tower.
iv. Water supply improvement to low income settlements providing 1,000 water connections for 8 - 10 tenement gardens in Colombo City. JICA concurrence was received for several works.

Physical progress of the project is 28%.

3. Towns North of Colombo Water Supply Project Stage II

This project is designed to extend water supply services to the northern part of Greater Colombo. After the full implementation of the proposed project, transmission and distribution facilities will be provided for the areas of Ja - Ela, Kandana, Ragama, Welisara, Ekala, Mahara, Ganemulla and Biyagama targeting to serve a population of 500,000 by 2025. The Stage I of this project was completed in November 2006. The total cost estimate of Stage II of the project is Rs. 6,487 million. From that Rs. 4,869 million from JICA and rest is from GOSL. Counterpart funding was the critical factor at the peek stage of controls. The physical and financial progress are 62% and 48% respectively.

4. Greater Kandy Water Supply Project Phase I Stage II

The objective of this project is to improve the service level of 231,000 consumers and provide 30,000 new connections in Greater Kandy, which includes the Kandy Municipal Council (KMC) area, Ampitiya, Rajapihilla, Kulugammana, Nugawela, Heerassagala, Meekanuwa, Mullepihilla, Elhena, Gohagoda, Kondadeniya and Thelambugahawatta. The TCE for stage II is Rs. 4,164 million. It is expected to complete the project in 2012.

Five contract packages are in progress where two are completed. Five contract packages were deleted due to funding constraints. The physical and financial progress are 42% and 84%.

5. *Eastern Province Water Supply Development Project*

This project is to serve about 110,000 people in Ampara area. Water resources are Mahaweli River, Konduwattuwana and Rambukkan Oya reservoir. Total cost estimate is Rs. 7,703 million. Sub projects included in the project as priority basis are transmission main from Konduwattuwana to Kalmunai distribution system for Pottuvil, Water Supply Schemes for Tsunami Housing Schemes at Uhana, Damana and Hingurana.

Soil investigations and topographical surveys have been completed and a balance payment for that work was yet to be made. The procurement process was on schedule. Physical progress was about 20%.

6. *Supply Equipments for the Provision of Safe Water and Construction of Septage Treatment Plant for IDP Welfare Centres at Vavuniya (2KR)*

Main activities are construction of septage treatment plant at Pompemadu, procurement of equipment to strengthen activities for drinking water facilities to Internally Displaced Persons (IDPs) and procurement of equipment and instruments for groundwater investigation and related activities at resettlement phase. Total estimated cost is Rs. 302.8 million.

Construction of septage treatment plant was completed in the 1st quarter of this year and is now functioning satisfactorily. Most of the equipments have been already delivered to Vavuniya and being utilized fully for operation and maintenance activities of the existing and IDP WSSs. These equipments are highly instrumental for water supply activities in this area. Funds have not been allocated for 2011 for the procurement of balance equipment.

Physical progress was about 70% and it is expected to complete the project in 2011.

7. Capacity Development for NRW Reduction in Colombo City

Main objective of this project is capacity development for NRW reduction in Colombo City. Two pilot zones, Borella and Kotahena have been selected and equipments required to establish NRW in the two zones have been received. System improvements to reduce NRW in the two selected zones such as pipe replacement, valve and meter repairs or replacement, remove illegal connections etc. will be carried out. This project is to benefit 267,000 people in the area. The estimated cost is Rs. 200 million.

JICA consultants are being reviewed in the Colombo City Distribution System together with the NRW Unit of the NWSDB. Overall progress is about 25% and it is expected to complete the project in 2011.

Projects undertaken with DANIDA assistance

1. *Towns South of Kandy Water Supply Project*

The objective of this project is to provide safe drinking water to Kandy South area by the integration and expansion of the existing schemes.

The project period is from May 2006 to 2010. Water sources are the Mahaweli river, raw water from Paradeka stream and Ulapane Oya with full treatment while from intake wells at Mahaweli river bank at Elpitiya with disinfection only. The effluent from the treatment plants will be directed to sludge treatment systems, and discharged into natural water ways. The revised total cost estimate is Rs. 9,626 million.

The main contractor of this project is MTHojgaard A/S of Denmark. All the project activities are handled by the main contractor whereas a specialized local sub contractor assists him for designs and a foreign contractor for treatment plant design and construction. Local manpower, materials and equipment are used for project activities.

The total water production expected by this project is 68,000 cu.m./day including the augmentation of existing systems and the target is to serve around 350,000 people by the design year 2025 in Peradeniya, Pilimatalawa, Kadugannawa, Murutalawa, Danture, Gampola, Ulapane and Welamboda.

The main features of the project includes new technologies such as the use of High Density Poly Ethylene pipes for water transmission and automation of the headworks using the SCADA system. It also addresses improved system management through the provision of 19,000 service connections in parallel with distribution pipe laying so that consumers will immediately benefit upon the commissioning of the scheme. Reduction of water wastage using above techniques is a main feature of the project. The projects is almost completed and physical and financial progress of the project as at the end of 2010 are 99% and 88% respectively.

Meewathura Water Treatment Plant

2. *Nuwara Eliya District Group Water Supply Project*

This project was designed to provide safe drinking water to 96,000 (in 2025) people at six major towns namely Rikillagaskada, Ginigathhena, Walapane - Nildandahinna, Maskeliya, Ragala and Hatton - Dikoya. Water sources are Mul Oya, Lonach stream, Kurundu Oya, Mahaneluwa Oya, Halgran Oya and Sanchimale Oya. The respective treatment plant capacities are 4,000, 3,000, 3,000, 2,500, 1,500 and 4,000 cu.m./day. Full treatment will be carried out in all 6 WTPs. Hatton WSS is an augmentation while the other 5 WSSs are new. The project period is from 2006 to 2010. The total cost estimate is Rs. 4,462 million. The physical and financial progress as at the end of 2010 are 100% and 89% respectively.

3. *Kelani Right Bank Water Treatment Plant*

This is a high priority water supply project which was launched with the objective of improving water supply situation in Gampaha and Colombo Districts. It is intended to feed the distribution network laid under the Towns North of Colombo Project funded by JICA. The project comprises a 40 MGD intake and a water treatment plant of 40 MGD capacity to be constructed on the right bank of the Kelani River at Pattivila, Ambatale. The total estimated cost is Rs. 8,100 million. The physical and financial progress as at the end of 2010 are 71% and 27% respectively. The salinity barrier will be constructed by the same Contractor, as a variation in 2011.

Proposed Location for the Salinity Barrier at Kelani River

Projects undertaken with Asian Development Bank assistance

1. *Secondary Towns and Rural Community-Based Water Supply and Sanitation Project (ADB Fourth Project)*

The project aims to provide safe water to 969,000 people and sanitation to 171,500 by 2025 in four urban centres, Batticaloa, Hambantota, Muttur and Polonnaruwa and the rural area of North Central province and capacity building of water sector institutions in providing safe water to the equivalent community.

The TCE is Rs. 19,272 million which includes Rs. 13,241 million as the ADB component and is met through the original loan and two supplementary loans. The scheduled project completion is in December 2010, but extended up to 2012 due to procurement delays in urban contracts. ADB concurrence was awarded for award of Muttur head works, transmission main and Treatment Plant.

Sludge handling area of Hambanthota WTP

The overall physical progress and financial progress as at the end of 2010 are 84% and 100% respectively.

Progress on Urban Water Component; Out of the 16 contracts ten contracts have been completed by the end of 2010. Progress on Urban Water Supply and Sanitation, Rural Water Supply and capacity building are 82%, 95% and 72% respectively.

2. *Tsunami Affected Area Rebuilding Project (ADB/ TAARF)*

The objective of the project is the well being of significant number of people in Tsunami affected areas through improving their living conditions rapidly by restoring the basic social infrastructure, community and public services and livelihood. This project includes the construction of new WSSs and rehabilitation/ augmentation of existing WSSs in Tsunami affected areas. The project period is from April 2005 to 2010. The number of beneficiaries are 83,000 in Hambantota, 73,325 in Batticaloa and 5,393 in Trincomalee (Muttur) Districts.

There are several sub projects in these three districts. Some of the schemes are small schemes and their main water sources are boreholes and dug wells. Other schemes are extensions of the existing schemes. The total cost estimate is Rs. 1,230 million from ADB (grant) and Rs. 220 million from GOSL. Out of 23 sub projects, 11 in Hambantota, 3 in Batticaloa and 2 in Muttur were completed and others were in progress with 80% overall physical progress at the end of 2010. Delays were due to awarding Kalawanchikudy contracts. Project period was extended up to March 2011.

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

The NWSDB is in the process of implementing a project for Water Supply & Sanitation improvements in the North Western and Northern provinces of Sri Lanka. Under the above initiative Puttalam, Chillaw, Vavuniya and Mannar towns will be provided with enhanced water supply facilities and sewage treatment facilities. The project will initially provide water to 206,000 people in the above four towns. The total cost of the project is Rs. 13,030 million and ADB will provide about 75% of the project cost while Netherlands will provide a grant of Rs. 230 million. Project period will be five years. Physical progress is 11% up to end of 2010.

Projects undertaken with Austrian assistance

1. *Implementation of Hambantota, Ambalantota, Weligama, Kataragama Water Supply Projects and Badulla-Bandarawela Integrated Feasibility Studies (UNIHA)*

This is an augmentation project started in November 2004. The main objective of this Austrian funded project is the provision of 28,000 new connections and service level improvements of a population of 150,000, presently served by WSSs in Hambantota, Ambalantota, Weligama and Kataragama. Water sources are Walawe Ganga (for both Ambalantota and Hambantota), Pollathumodara and Menik Ganga. Major activities are; the construction of new treatment plants having capacities of 5,000 cu.m./day for Weligama and Kataragama and 7,500 cu.m./day for Ambalantota.

Water Sump in Weligama Water Treatment Plant

Supply and laying of a pumping main from Kataragama to Sella Kataragama had been identified as an extension of the original project with funding from the Austrian Govt. Improvement to existing distribution system of Sella Kataragama had been identified under GOSL funds too. Additional work identified for the project will be completed by December 2011. The total cost estimate for the project is Rs. 2,126 million. Additional work identified for Kataragama is under design stage. Physical and financial progress are on schedule according to the extended programme.

2. *Kirindi Oya Water Supply Project*

This is a rehabilitation and augmentation project, targeting 50,000 people in Lunugamvehera, Pannegamuwa, Weerawila, Beralihela, Mattala and Devramvehera towns. The water source is Lunugamvehera irrigation tank and the water undergoes full treatment in a WTP of capacity 6,500 cu.m./day. The total cost estimate is Euro 10 million plus Rs. 401 million funded by Austria and GOSL respectively. Kirindi Oya WSS was originally constructed for the settlers under the Kirindi Oya Irrigation project in 1989. The existing capacity of 5,900 cu.m./day is hardly enough to manage the present demand. This project will accomplish the need of rehabilitation and augmentation of the existing scheme. M-U-T GmbH, Austria is the contractor. The WTP was commissioned in December 2010. The physical progress is 99%.

Construction of Ground Sump of Kirindi Oya WSP

Projects undertaken with KfW assistance

1. *Water Supply Rehabilitation and Augmentation Project in Tsunami Affected Areas (Galle District)*

This project is to augment the water treatment facilities and thereby expand the water served area in Ambalangoda during the period June 2006 to March 2010 (which includes Phase I & II). About 194,000 people in the PS areas of Balapitiya South, Ambalangoda, Hikkaduwa and Rathgama and Urban Council area of Ambalangoda are to be served. The water source is Ginganga tapped at Kiribathawila in Baddegama and the capacity is augmented to 36,000 cu.m./day with conventional water treatment. The system will comprise of aeration, coagulation/ flocculation, rectangular sedimentation basins fitted with tube settlers and Rapid sand filters. Presently the sludge and the filter backwash water are discharged to an abandoned paddy field. However, after augmentation the filter backwash will be recovered and the resultant sludge will be diverted to drying beds. The TCE is Rs. 4,202 million including of Rs. 3,393 million grant from KfW and Rs. 809 million from

GOSL.

This project materialized after the Tsunami where the German Government provided a grant of Euro 22 million to the GOSL through the KfW for immediate and medium term measures for water supply rehabilitation in the Galle district, which comprised of two phases,

I. Phase-I Immediate measures and reconstruction (Euro 7 million agreed in January 2005),

ii. Phase-II Medium term measures by rehabilitation and extension of water treatment infrastructure in Baddegama and water transmission, storage and distribution networks (Euro 15 million agreed in July 2005).

Baddegama Water Treatment Plant-

The Project area extends along the south-west coast from Kosgoda to Rathgama. All the work for water treatment upgrading in Baddegama to satisfy water demands in 2025 was not possible within the available funds. The priorities concerned for the project are as follows.

- Tsunami affected coastal zones and areas of salinity intrusion to shallow wells,
- Resettlement zones,
- Areas having potential for future growth.

The project is completed by the end of 2010.

2. *Augmentation of Ampara, Nawalapitiya and Koggala Water Supply Schemes*

Ampara - The Ampara existing water supply scheme was augmented to provide drinking water facilities to 35,000 people in the Ampara Urban Council area under this project. The estimated cost is Rs. 982 million. Water source is Konduwatuwana tank and treatment capacity is 6,500 cu.m./day. Treatment process is full treatment. Leak detection work, rectification of Rapid Sand Filters, construction of Valve Chambers and rehabilitation of water towers at Gamunupura and Saddatissapura were carried out during the year. Commissioning of treatment plant and balance leak detection work to be completed. Technical issues that arose during the commissioning of filters were being attended to.

Nawalapitiya - About 22,000 people in Nawalapitiya UC area to be served with this new project. Water source is Hangaran Oya (a tributary of Mahaweli River) and treatment capacity is 4,500 cu.m./day. Treatment process consists of Upward Flow Roughing Filters, Slow Sand Filters and Chlorination. TCE is Rs. 1,151 million. Laying of pipes for the requested extensions in the distribution system, supplying and placing of balance filter media and landscaping were carried out during the year. The construction work was completed except placing of filter media in 5th filter and some landscaping work. The scheme was commissioned in December 2007. Delays in supply of filter media due to various environmental regulations for sand and pebble mining in rivers and strict regulation in transporting.

Koggala - Augmentation of Koggala WSS increases number of beneficiaries to 37,000 including 17,000 employees of Koggala Export Processing Zone and others in Habaraduwa PS area. Water source is Gin Ganga through Greater Galle WTP and water demand is 7,300 cu.m./day. Total cost estimate is Rs. 531 million. This project was completed in 2008 and it was in contract liability period during 2009.

The project is completed by the end of 2010. The Ministry of Water Supply & Drainage liaised with the Treasury to increase local allocation of funds.

Project undertaken with assistance from Netherlands

Negombo Water Supply and Optimization Project

This is a rehabilitation and augmentation project of 3 years duration. Water sources are Maha Oya and Kelani River with full treatment. The TCE is Rs. 7,288 million from the Netherlands. 54% of the foreign component is a grant and 46% is a loan. The present piped water coverage in the Negombo Municipal Council area is about 59% and the water supply to most of the area is restricted daily from 8.00 am to 3.00 pm due to the inadequacy of water and transmission infrastructure.

The objective of the project is to enhance the service level of safe water supply by providing 24 hour service to 100% of the population within the service area. The area includes Kochchikade and Duwa-Pitipana in addition to the Negombo Municipal Council area. The population benefitted will be 198,000 by 2011 and 215,000 by 2025. The project scope includes construction of a 12,500 cu.m./day capacity new water treatment plant in Bambukuliya, laying of a 600 mm dia 14 km long transmission main from Ja Ela to Negombo to transmit 21,000 cu.m./day treated water from the proposed Kelani Right Bank plant, upgrading of existing pumping mains (6 km) to 350 mm DI, upgrading of electro mechanical equipment, 200 km long new distribution system and establishment of a modern water asset management system. The physical and financial progress as at the end of 2010 are 66% and 62% respectively.

Projects undertaken with Red Cross assistance

Water Supply Rehabilitation and Augmentation Project in Tsunami Affected Areas

After the tsunami, the Sri Lanka Red Cross in association with the International Federation of Red Cross Societies and Red Crescent Societies agreed to provide a series of assistance for the improvement in water and sanitation sector. Number of projects were implemented in the Southern and Eastern provinces. They include expansion of distribution areas, improvements to treatment plants, replacing of corroded pipe lines, water supply to new settlement sites of tsunami victims etc. The project was started in 2005 and expected to be completed in next year. The TCE for Red Cross assisted project is about Rs. 3,750 million. The physical progress was 75%.

Water supply improvements in Matara District

IFRC assisted following projects were fully completed during 2009 and handed over to the NWSDB.

- Pipe line extensions to Tsunami housing schemes and improvement of distribution system in Matara group WSS
- Improvement of Kudawella WSS
- Laying of pumping main from Dickwella Reservoir to Nadugala water tower
- Construction of water tower at Samudrathera area in Kamburugamuwa
- Automation of Matara WSS

Total cost of above project was Rs. 170 million.

IFRC also provided assistance for improvements in Weligama WSS at a total cost of Rs. 300 million. By the end of the year about 90% of construction activities were completed and balance to be completed by mid of 2010.

Water Supply improvements in Galle district

Eight small scale rural water supply projects constructed for the benefit of Tsunami victims who were settled in interior areas in Galle District were commissioned and handed over to respective CBO for operation and maintenance. Cost of the above project was Rs. 90 million and it was provided by IFRC. RSC facilitated the process by coordinating and providing training for CBOs.

A new project was initiated to lay a new transmission main from Wakwella WTP to Beekka Reservoir with IFRC assistance. Total cost of the project is Rs. 300 million.

Project undertaken with French assistance

Greater Trincomalee Integrated Water Supply Project

Construction of new intake at Allai Kantale

The objective of this project is to increase the production capacity of the Kantale water-treatment plant to 12 MGD and thereby increasing the service level in the entire Trincomalee integrated WSS. The project scope is to rehabilitate and upgrade the

existing Trincomalee WSS and construction of new schemes at Pulmoddai and Echchilampattu. About 330,000 people in the Trincomalee town and gravets, Kantale, Thambalagamam, Kinniya, Kuchchaveli and Eachchilampattu DS divisions will benefit from this project. The total cost estimate is Rs. 4,200 million out of which Euro 10 million is from the French Development Agency (AFD), Euro 10 million from the French Ministry of Finance (RPE) and Rs. 1,003 million from the GOSL. The water source is Mahaweli river with conventional treatment.

Project components in brief

- Construction of new intake and pump-house at Alle Kantale bridge
- Laying a new raw-water main
- Laying a new transmission main
- Distribution system improvements
- Rehabilitation and augmentation of Kantale WTP and service reservoirs
- Introduction of a SCADA system
- Construction of new WSSs at Pulmoddai and Echchilampattu

A consultancy firm was appointed in 2006. At present, contracts for the construction of Intakes, Pump House and Reservoirs have been awarded. Other procurements are in progress. It is expected to complete this project in 2011.

Projects undertaken with UNICEF assistance

Water Supply Rehabilitation and Augmentation Project in Tsunami Affected Areas

After the tsunami disaster, UNICEF agreed to provide assistance for the following major activities.

(a) Augmentation of Tangalle Water Supply Scheme

Under the above project existing Tangalle and Beliatta WSSs were integrated and its capacity was improved from 6,500 cu.m./day to 15,000 cu.m./day. The cost of improvement was Rs. 1,000 million and Rs. 800 million was provided by UNICEF as a grant. The scheme will provide water to 52,000 people when running at full capacity. Augmentation of Tangalle WSS was completed and commissioned in August 2008.

(b) New Water Supply Scheme for Thirukkovil

This scheme will provide water for 30,000 people fulfilling a long left need of the area. The cost of the scheme is Rs. 1,100 million. While UNICEF has agreed to provide Rs. 900 million as a grant, GOSL provides the balance. This WSS was partially commissioned in December 2009 and completed in December 2010.

(c) Augmentation of Puttalam Water Supply Scheme

Existing Puttalam WSS was improved to provide water to Internally Displaced Persons (IDPs) living in the area. The cost of improvement is Rs. 180 million. UNICEF intended to provide water for 2,000 IDPs through the project. The augmentation was completed in August 2009.

Project undertaken with Spanish assistance

Project to Construct Water Treatment Plants at Ambatale and Negombo

The Spanish Government extended a concessionary credit facility to the Government of Sri Lanka to finance reconstruction and rehabilitation of Public utilities destroyed due to the Tsunami. This fund is being used to construct water supply facilities to Tsunami affected communities in Moratuwa, Panadura and Negombo. Construction of a full treatment plant in Ambatale having a capacity of 50,000 cu.m./day to provide safe water for Moratuwa and Panadura and construction of a desalination (Reverse Osmosis - RO) plant of capacity 3,000 cu.m./day for Negombo has been awarded to a Spanish company.

The project has been in progress since June 2008.

The project consists of 80% of plant and equipment imported from Spain and the treatment plants are prefabricated and assemble at site. The physical and financial progress are 99% and 100% respectively.

Negombo RO Water Treatment Plant

FOREIGN FUNDED SEWERAGE PROJECTS

Projects undertaken with Asian Development Bank assistance

Greater Colombo Wastewater Management Project

The project encompasses the rehabilitation of wastewater pump stations at Kolonnawa, Dehiwala and Mt. Lavinia. It serves 838,000 people in Kolonnawa, Dehiwala and Mt. Lavinia areas. TCE is Rs. 13.3 billion. Project period is from 2010 to 2014. Physical work will be started in 2010. It is planned to map existing sewer connections with extensions jointly with Mapping Section.

Projects undertaken with Swedish assistance

Wastewater Disposal Systems for Ratmalana/Moratuwa & Ja - Ela/Ekala Areas

This project is implemented under grant. The project components are as follows;

- Construction of wastewater disposal systems for Ratmalana/Moratuwa & Ja - Ela/Ekala areas (works contract) - US$ 91 million - under SIDA grant.
- Supervision contract - Swedish Krona 28 million - under SIDA grant.
- Study for House Connection & off-network Sanitary Solutions - Estimated cost US$ 2 million - World Bank funds.
- Ecological Sanitation Pilot Project - estimated cost US$ 0.2 million - under SIDA grant.

The work contract was commenced in February 2008 and completion will be in January 2013 including the O&M period of 18 months. The work contract is a design & build contract which comprises laying of Sewer Network, force mains, Pump Stations & Treatment Plants for both areas. Treated wastewater will be discharged to the sea near Lunawa lagoon in Ratmalana/ Moratuwa area and to the Dandugam Oya in Ja - Ela/ Ekala area.

Construction of Sea Outfall near Lunawa Lagoon

Projects undertaken with JICA assistance

Kandy City Wastewater Management Project

The indiscriminate disposal of wastewater in the Kandy City causes pollution of the Kandy Lake, Meda Ela and finally Mahaweli river, the main drinking water source to Kandy and Matale districts. In order to find a permanent solution to this, NWSDB has proposed to implement a wastewater disposal system for the Kandy City. The proposed project intends to collect wastewater in 732 hectares of the city and then divert to a treatment plant of capacity 14,000 cu.m./day through a network of 94 km long pipe lines.

This new project was started in 2007 and completion will be in 2017. About 55,000 resident population and 150,000 migrant population in Kandy will be benefitted from this project.

Effluent discharged details are as follows;
Biological Oxygen Demand (in 5 days at 20 ^{0}C) should be less than 20 mg/l, total suspended solids should be less than 20 mg/l, Chemical Oxygen Demand 250 mg/l, total Kjeldahl Nitrogen should be less than 50 mg/l and Fecal Coliform (Most Probable Number per 100 ml) should be less than 40.

Treatment process is oxidation ditch and TCE is Rs. 21,982 million. Physical progress of the project at end of 2010 is about 58%.

Among important achievements are;

- Planning committee which approves the building plans in KMC area was made aware about the SLS code of practice for designing of septic tanks and soakage pits. Guidance was given to them to follow those standards in approving process of the building applications.
- A software was developed to design septic tanks and soakage pits using SLS code of practice and introduced it to Technical Officers and Public Health Inspectors of KMC and to the registered Architects and Draughtsman of KMC who produce house plans for approval.
- Standard drawings of plumbing systems to collect domestic sewer to proposed sewer network are being prepared.
- Amended KMC By-Laws on wastewater disposal in English, Sinhala and Tamil were handed over to Attorney General's Department for legal drafting and for their comments.

Projects undertaken with Austrian assistance

Colombo Sewerage (Southern Catchment) Rehabilitation Project

This project is for rehabilitation of existing sewer system with project period from 2007 to 2010. About 180,000 people of Southern part of the Colombo City will benefit from this project and 25,920 cu.m./day is the handling capacity. TCE is Rs. 2,222 million.

The objective of the project is to improve the collection and removal efficiency of wastewater generated in the Southern catchment of Colombo city. The entire project is being executed by M/s. Angerlehner Hoch-und Tiefbau Gasellschaft mBH through a contract on design and build basis.

The main scopes covered under this project are rehabilitation of two main sewer lines approximately 8 km in length, leading to Wellawatte pumping station and construction of new pump house at Wellawatte. Status of the project at the end of 2010 were; almost 8 km sewer lines have been rehabilitated along Galle Road, Duplication Road, Havelock Road, Devos Avenue, Kirullapone Road, Ridgeway Road, Rajasinghe Lane, Vivekananda Mawatha, Kelani Road and Vajira Road and five out of the seven sections to be rehabilitated, have been handed over back to the CMC for operations, Manhole rehabilitation has been completed, Wellawatta pump house has been completed and is ready to be handed over to the CMC. Physical and financial progress at the end of 2010 were 100% and 79% respectively.

Completed Wellawatte Sewerage Pump Station

GOSL FUNDED SMALL AND MEDIUM SCALE WATER SUPPLY PROJECTS

Central Province

Kundasale Water Supply Project

This is an augmentation of 2 years to serve about 100,000 people in Kundasale, Balagolla, Digana, Arattana and Wawinna areas. Water source is Mahaweli River/ Huluganga with full treatment and capacity of 20,000 cu.m./day. TCE is Rs. 1,250 million. Presently a production of 13,000 cu.m./day is obtained from Arattana WTP. Immediate improvements are underway to cater the increased demand in the area under this project. The overall progress at the end of 2010 was 75%.

Palapathwela Water Supply Project

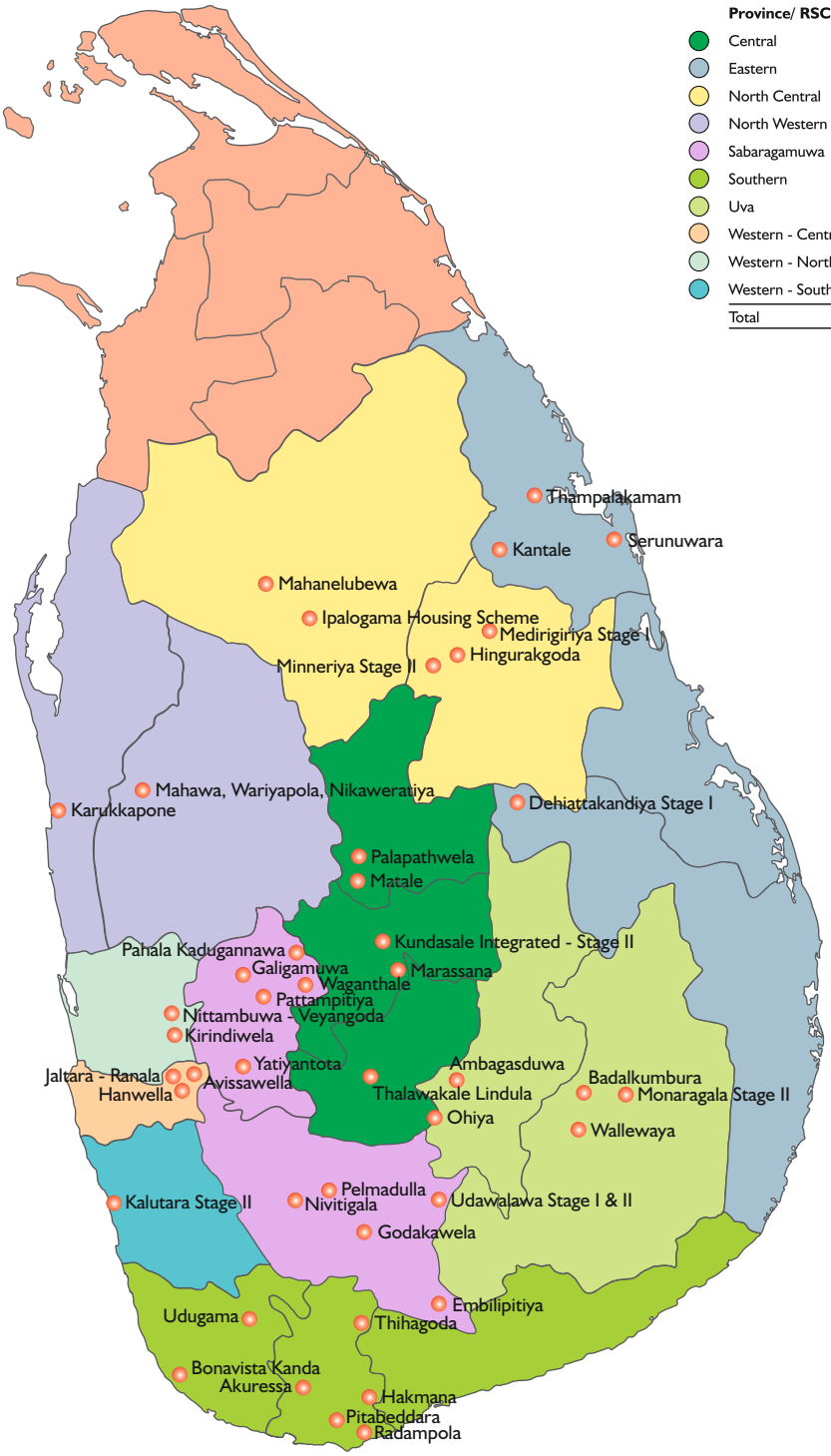
This is an augmentation plan to serve 22,000 people in Palapathwela and Kottegoda areas. Water source is Suduganga with full treatment of capacity 4,000 cu.m./day. TCE is Rs. 150 million. Treated water is pumped to a ground reservoir located at Palapathwela and distribution is planned through a 8 km long pumping main. Intake capacity is proposed to increase by 4,000 cu.m./day and necessary modifications are in progress. Laying of distribution system and pumping main Is in progress, while the construction of pump house has been completed. Overall progress at the end of 2010 was 80%.

Matale Water Supply Project

This is a rehabilitation of the existing WSS to serve 15,000 people in Matale town area and suburbs. Project period is 4 years. Water source is Suduganga with full treatment having existing capacity 12,000 cu.m./day. Total cost estimate is Rs. 385 million. It is proposed to improve the capacity up to 16,000 cu.m./day under this improvement through construction of a new intake sump and pump house, treatment plant augmentation, pumping and distribution system improvements. Flocculator construction and filter rehabilitation were left behind schedule due to lack of funds. The overall progress as at end of 2010 is 75%.

GOSL FUNDED SMALL AND MEDIUM SCALE WATER SUPPLY PROJECTS

Location Map of Projects under Construction/ Augmentation During 2010 Funded by the Government of Sri Lanka



Marassana Water Supply Project

This is an augmentation to serve 25,000 new beneficiaries in Marassana town and suburbs. Water source is Ma-oya with full treatment with a capacity of 5,000 cu.m./day. Revised TCE is Rs. 222 million. Present production of 2,200 cu.m./day capacity is not enough to cater the rapidly growing, water demand of the area. All together there are about 3,500 service connections and zoning method is used in distribution. Lack of funds and land matters were the constraints for the progress of the project. The overall progress as at end of 2010 is 79%.

Thalawakale Lindula Water Supply Project

This is an augmentation of the existing scheme to serve 15,000 people in Thalawakale and Lindula areas. Water sources are Great Western and Nanuoya. TCE is Rs. 172 million and funding sources are GOSL and Ceylon Electricity Board (rechargeable). The existing WTP (of partial treatment) having capacity of 1,650 cu.m./day is being augmented by increasing the production capacity up to 2,500 cu.m./day. It includes intake improvements and adding the components aerator, flocculator, sedimentation and pressure filters to the WTP. In addition it is expected to expand the existing distribution system to resettled areas of Upper Kotmale hydro-power project. Overall progress at the end of 2009 was 15%.

North Central Province

Medirigiriya Water Supply Project - Stage I

Water Source of Medirigiriya WSS

This is a new scheme planned to serve about 60,000 beneficiaries in Medirigiriya Divisiona Secretary area. Water source is Kaudulla tank with treatment having flocculation, sedimentation, rapid sand filters and disinfection for 9,000 cu.m./day. Sludge thickener and sludge drying beds are also proposed for treatment of sludge and backwash water. Total cost estimate is Rs. 1890 million. This scheme aims to provide safe drinking water from Kaudulla Tank. This project consists of intake, raw water pumping system, WTP, storage facilities, transmission system and distribution system. Limited fund allocation was the major constraint for progress of the project. Physical progress at the end of 2010 was 35%.

Minneriya Hingurakgoda Water Supply Project - Stage II

This is an augmentation of the existing scheme to serve 60,000 people in Minneriya, Girithale and Hingurakgoda area. The project period is 3 years. Water source is Minneriya tank and existing treatment process consists of rapid sand filters and disinfection system of 10,900 cu.m./day capacity. TCE is Rs. 100 million. Minneriya & Hingurakgoda water supply schemes are functioning from Minneriya WTP which is the only WTP available for the entire DS area. The scope of the project includes upgrading the intake capacity to 13,600 cu.m./day, augmentation of the existing Minneriya WTP and improving the storage capacities of both Minneriya & Hingurakgoda schemes. The physical progress at the end of 2010 was 35%.

Ipalogama Water Supply Project

This is a new scheme intended to serve 18,000 beneficiaries in Ipalogama Ranaviru village including 4 GN divisions in Ipalogama PS. The treatment plant and the intake are common to both Ipalogama and Kekirawa existing water supply schemes. The source is Kalawewa with full treatment and 4,500 cu.m./day capacity. The total length of raw water pumping main is 4 km and the length of transmission main is 4 km. TCE is Rs. 798 million under GOSL funds. Physical and financial progress at the end of 2010 were 75% and 90% respectively.

Aerator of Ipalogama WSS

Eastern Province

Kantale (Agbopura) Water Supply Project

This project is planned for 1,100 beneficiaries in Trincomalee District. The associated TEC is Rs. 275 million. The physical and financial progress as at the end of 2010 are 86% and 66% respectively.

Thampagamuwa Water Supply Project

This project is intended to provide safe drinking water facilities to 30,000 beneficiaries in Trincomalee District. The TCE is Rs. 95 million. The physical and financial progress at end of 2010 are 76% and 76% respectively.

Serunuwara Water Supply Project

This is a new project proposed to serve 9,500 beneficiaries in Serunuwara, Kallaru and suburbs. The TCE is Rs. 110 million. Physical progress at the end of 2010 was 70%.

Dehiattakandiya Water Supply Project - Stage I

This project intends to extend the safe water supply in Dehiattakandiya to 16,000 new beneficiaries. This is a project of TCE Rs. 300 million. The financial progress at the end of 2010 is 56%.

North Western Province

Mahawa Nikaweratiya Integrated Water Supply Project

This is a new project planned to serve 9,000 families in Nikaweratiya, Mahawa, Wariyapola and suburbs. Water Source is Magalle and the WTP of Nikawaratiya WSS with full treatment is of capacity 6,500 cu.m./day. Revised TCE is Rs. 996 million. Treatment Plant, distribution system and storage tanks of Nikawaratiya WSS have been completed and to be commissioned in January. 4.5 km length of 12 km long pumping main has to be laid and Mahawa WSS can be commissioned at the end of 2011. Treatment Plant of Wariyapola WSS is under design stage. The overall physical and financial progress is 75% and 68% respectively.

Karukkapone Water Supply Scheme

This project intends to provide safe drinking water to 2,500 beneficiaries in Karukkapone area in Puttalam District. The TCE is Rs. 51 million. Physical and financial progress are 80% and 53% respectively at the end of 2010.

Sabaragamuwa Province

Embilipitiya Water Supply Project

This is an augmentation of existing scheme with a treatment plant intended for 84,000 beneficiaries. Construction of the treatment plant has been completed. TCE is Rs. 363 million out of GOSL. The financial progress at the end of 2010 was 86% of the original TCE. Approval is pending for a revision of the TCE.

Udawalawa Water Supply Project - Stage I & II

This is an augmentation of existing WSS. TCE is Rs. 974 million. Construction of treatment plant and intake were completed during 2009. The distribution system has to be completed. Cabinet approval for revised TCE has to be received for completing balance work. The financial progress at the end of 2010 was 49%.

Godakawela Water Supply Project

This new project intends to provide safe drinking water to 22,500 beneficiaries in Godakawela, Kosnathota, Rideewela and suburbs. The water source is Rakwana Ganga and water is treated by flocculation, sedimentation, filtration and chlorination in a WTP of capacity 4,500 cu.m./day. The project components are WTP, Caretaker quarters, gas chlorinators and back wash pumps. TCE is Rs. 289 million. The project was completed and commissioned in 2010.

Part of the Godakawela WTP

Galigamuwa Water Supply Project

At present there is no pipe borne water supply in Galigamuwa Town. This project includes construction of new intake (5,000 cu.m./day) at Alawwa, Conventional WTP with capacity 5,000 cu.m./day, construction of ground reservoirs (225 cu.m. and 1800 cu.m.), pump house, supply & laying of 12 km, DI pumping mains, improvement for the existing distribution network & installation of pumps. TCE is Rs. 841 million and 30,800 people are to be benefitted in Galigamuwa town area. This is a new project and the period is 3 years. The financial progress at the end of 2010 was 10%.

Nivithigala Water Supply Project

This project intends to provide safe drinking water to 9,400 beneficiaries in Nivithigala area in the Ratnapura District. TCE is Rs. 99 million. The financial progress at the end of 2010 was 56% of the original TCE. Approval is pending for a revision of the TCE.

Pelmadulla Water Supply Project

This projects intends to supply safe drinking water to 14,500 beneficiaries in Pelmadulla area in Ratnapura District. The TCE is Rs. 195 million. The financial progress at the end of 2010 was 107% of the original TCE. Approval is pending for a revision of the TCE.

Yatiyanthota Water Supply Project

This project intends to supply safe drinking water for 6,700 beneficiaries in Kegalle District. The revised TCE is Rs. 166 million. The project was partially commissioned in early 2009. The financial progress at the end of 2010 was 91%.

Intake of Yatiyanthota WSS

Southern Province

Akuressa Water Supply Project

This scheme will provide water to about 15,000 people living in Akuressa and Athuraliya DS divisions. Water extracted from Nilwala River will be fully treated before distribution. The scheme has a capacity of 3,150 cu.m./day and the cost of the project was Rs. 338 million. Construction activities were delayed due to the change of location of water treatment plant and change of source. The Project was fully completed and commissioned in 2010.

Sedimentation Tank of Akuressa WSS

Hakmana Water Supply Project

Under the proposed Hakmana WSS, it is intended to supply safe drinking water to 10,000 beneficiaries in the Hakmana area. The project is to be implemented during the period from 2010 - 2012. The water source is a bore hole and water goes under partial treatment at a water treatment plant of capacity 1,800 cu.m./day. The major project components are intake improvements, new WTP, transmission and distribution pipe lines and supply & installation of pumps. The original TCE of the project is Rs. 140 million and approval is pending for a revision of the TCE. Construction activities commenced in January 2010.

Thihagoda Water Supply Project

Slow Sand Filter of Thihagoda WSS

This project was planned to meet the demand due to developments in Thihagoda and suburbs and it will serve about 6,500 people. The water source is two bore holes and the water under goes partial treatment in a WTP of 1,000 cu.m./day capacity. The total cost of the project is Rs. 162 million. The scarcity of filter media and legal action taken by the contractor seriously affected the progress. The Project was fully completed and commissioned in 2010.

Pitabeddera Water Supply Project

Proposed water supply scheme intends to provide water to 6,000 people in Pitabeddara town area. The scheme consists of a conventional treatment of capacity 1,200 cu.m./day and will use two bore holes as the water source. The Total Estimated Cost of the project was recently revised to Rs. 130 million. Although construction activities were started in year 2007, progress was very slow due to the non availability of funds and poor performances of the contractor. Contract for balance work of treatment plant is in awarding stage. Supply and installation of pumps contract is under evaluation stage. The physical progress at the end of 2010 was 28%.

Udugama Water Supply Project

Construction of this scheme commenced in 2004 to meet the water demand of 6,000 people in Udugama and its immediate suburbs. The total estimated cost of the project is Rs. 145 million. Ground water extracted through three tube wells will be fully treated in a conventional treatment plant of capacity 1,200 cu.m./day. Contractor's poor performance and scarcity of filter media were the main reasons for the delay of the project. Water treatment plant was constructed and filter media was supplied in 2009. This project will be completed within 2011.

Rough Filter of the Udugama WSS

Radampola Water Supply Project

This is a new scheme planned for the benefit of people living in Radampola and its immediate suburbs. The scheme will cater for a population of 13,000. The capacity of the scheme is 1,800 cu.m./day and it will have partial treatment facilities. Two tube wells are used as the water source. The total cost estimate of the scheme was Rs. 133 million. Project was completed and commissioned in October 2009.

Uva Province

Ohiya Water Supply Project

Part of the Ohiya WTP

This is a new scheme of 3 year period intended to serve 10,000 people in Welimada town and suburbs. Water source is Uma Oya with full treatment, of capacity 2,000 cu.m./day. The TCE is Rs. 189 million and physical and financial progress at the end of 2010 were about 80% and 90% respectively. Fund restrictions are delaying the progress of the project.

Monaragala Water Supply Project Stage II

This is an augmentation of the existing scheme to serve about 10,000 people in Monaragala town and suburbs. Project period is 2 years. Water source is a stream through G-Lon estate with partial treatment of capacity of 3,500 cu.m./day. The TCE is Rs. 154 million and the financial progress at the end of 2010 was about 82%.

Ambagasdowa Water Supply Project

This is an augmentation scheme to serve 6,000 people in Ambagasdowa and suburbs. Water source is Bomburu Ella with full treatment and a capacity of 3,000 cu.m./day. Total cost estimate is Rs. 185 million. The financial progress at the end of 2010 was about 83%.

Wellawaya Water Supply Project

This project is intended to provide safe drinking water to 6,000 beneficiaries in Monaragala District. The TCE is Rs. 250 million and the financial progress at the end of 2010 was about 4%.

Badalkumbura Water Supply Project

This project intends to provide water to 22,000 beneficiaries in Badalkumbura area in Monaragala District. The TCE is Rs. 124 million. The physical and financial progress of the project was about 35% and 36% as at the end of 2010, respectively.

Western Province

Kirindiwela Water Supply Project

This is a new project planned to serve 8,000 people in Kirindiwela area. The project period is 5 years. Water source is Kelani River with full treatment and effluent is discharged to inland water canal. The TCE is Rs. 198 million. The new treatment plant which can supply 2,750 cu.m./day will be constructed in the existing treatment plant site at Pugoda. Overall progress as at end of 2010 was about 75%.

Nittambuwa - Veyangoda Water Supply Project

This is a new/ augmentation project intended to serve 12,000 beneficiaries in Nittambuwa, Thihariya, Warana and Kalagedihena. The water will be extracted from Attanagalu Oya. Water will undergo full treatment in a WTP of capacity 3,000 cu.m./day. The TCE for the project is Rs. 211 million. During the year 2009 PVC pipe line was laid up to Warana Temple road and the overall progress up to the end 2010 was 85%.

Kalutara Integrated Water Supply Project - Stage II

This scheme was designed in order to extend water supply to Payagala, Maggona, Beruwala, Dharga Town, Bentota and Aluthgama areas to serve 210,000 people. Project period was started in 2006. Water Source is Kalu Ganga with full treatment and capacity is 56,250 cu.m./day. The revised TCE is Rs. 1,366 million.

The main objective of stage II is to improve the distribution system to Southern areas of Kalutara. Work is in progress on Laying of DI pipes and fittings for Transmission Main from Central Junction to Maggona. The 2nd stage of the above Transmission Main from Maggona to Beruwela has been scheduled for tendering during 2011. The physical progress as at end of 2010 was 34%.

Katunayake - Seeduwa Water Supply Project

About 29,000 people in Katunayake, Seeduwa and Raddolugama will benefit from this project which is of capacity 4,500 cu.m./day. Water source is Dandugam Oya and water requirement will be obtained from augmented Raddolugama WTP. The TCE was revised to Rs. 470 million. Augmentation of the existing Raddolugama WTP was commenced and part of the distribution system has to be laid. The progress of the project was delayed due to RDA issues and non availability of funds. The financial progress at the end of 2010 was about 36%.

Jaltara Ranala Water Supply Project - Phase I Stage I

This project has been phased out and then again phase I, is staged out due to financial constrains. Phase I Stage I covers Jaltara and Henpita GNDs. Phase I Stage II covers Atigala East, Atigala West, Panaluwa and Batawala GNDs. Another 27 GNDs of Kaduwela and Homagama DSDs are to be covered under Phase II. It was expected to serve a population of 7,646 under Phase I Stage I, 10,273 under Phase I Stage II and 92,118 Under Phase II in 2030. Phase I project area is serving by taking a branch off at Embulugama Junction on low level road from the existing transmission main which supplies water to Colombo from Labugama WTP. Phase I Stage I of this project was completed in 2010. The TCE of Phase I Stage I was Rs. 103 million. Design and procurement of Phase I Stage II are already completed but due to non availability of funds, it cannot be implemented. The TCE for Phase I Stage II is Rs 114 million. Phase II is also held up due to non availability of funds. Population and road surveys were completed within the areas identified under Phase II. The TCE for Phase II is Rs. 1,513 million.

Avissawella New Town Water Supply Project

This WS includes construction of a 2,500 cu.m. capacity new WTP at Penrith Estate, WS connection to the existing distribution system and laying of new distribution pipelines. The water source is Seethawaka River and intake capacity is 9,000 cu.m. The present capacity of the WTP was not adequate to supply the total water demand in the area in 2010. Therefore, it has been proposed to increase the WTP capacity up to 4,500 cu.m./day. The TCE for this arrangement is about Rs. 30 million. Though it was planned to implement this arrangement before the end of 2010, it could not be performed due to non availability of funds. In addition to this WTP augmentation, a new conventional WTP of capacity 4,500 cu.m./day is proposed to construct at Penrith Estate before 2018, in order to supply the future requirements. It is also proposed to replace the existing chlorination system at Avissawella (old) WSS with a new conventional WTP of 3,000 cu.m./day capacity in 2018. Future improvement works related to Avissawella scheme has been identified to be carried out in two phases. Phase I of the project will be executed during 2012 - 2014 with TCE of Rs. 1,228 million. PAC approval was obtained for Phase I while Phase II is designed to cater the 2030 demands. Implementation of both phases of the project will benefit about 65,000 in 2030.

Hanwella Water Supply Project

This is an augmentation project intended to serve 20,000 people in Hanwella area. Water for this scheme is from Labugama - Kalatuwawa System. Total cost estimate is Rs. 47 million. It is proposed to augment the existing water supply scheme to expand the distribution net work. Total length of new distribution is 15 km out of which 9 km had been completed except along RDA roads. The physical progress is 60%. Rs. 29 million is required to complete the rest of the work being the major constraint for the project.

Inter-Provincial Projects

Waganthale Water Supply Project

This is a new project intended to serve 5,000 beneficiaries in the Waganthale and suburbs. The water source is Ma Oya. The project components include construction of 225 cu.m. ground reservoir and an access road. The TCE is Rs. 30 million.

Pahala Kadugannawa Water Supply Project

This is a new project intended to serve 5,000 beneficiaries in Pahala Kadugannawa and suburbs. The project period is 2010 to 2012. The water source is a spring located at Kadugannawa and water under goes treatment including disinfection in a WTP of capacity 1,000 cu.m./day. The TCE is Rs. 30 million.

Projects to Commence Physical Works in 2011

Rehabilitation & Augmentation of Labugama - Kalatuwawa WTP (Hungary)

The project includes the rehabilitation and augmentation of Labugama and Kalatuwawa WTPs to improve the quality of treated water and operational efficiency of the plants. It serves Colomo City, Kaduwela and Hanwella areas. Total cost estimate is Rs. 6,800 million and funding is from Hungarian Government. Loan and Contract agreements have been signed.

Greater Ratnapura Integrated Water Supply Project - Phase I (Spanish)

This phase will improve the services presently provided to the existing consumers as well as extend the WS to new areas. About 160,000 people in Ratnapura, Kuruwita and suburban areas will be benefited in 2025. Main components of this phase are 13,000 cu.m./day capacity WTP, intake at Kuru Ganga at Kuruwita, transmission and part of the distribution. The existing WTP will continue to serve the present consumers at 6,500 cu.m./day. The TCE is Rs. 9,928 million. Commercial contract agreement was signed and loan agreement is to be signed.

Jaffna Peninsula Water Supply & Sanitation (ADB)

This project is to improve drinking WS of about 689,000 people in Jaffna city, suburbs and several townships in the Peninsula. It is expected to extract water from Iranamadu tank located in Kilinochchi to supplement the Ground Water sources. Implementation is to be done in two stages. The TCEs for Stage I & II are Rs. 12 & 8 billion respectively.

Kolonna and Balangoda Water Supply (Belgium)

Main components are 7,700 cu.m./day capacity WTP, intake, ground reservoirs, (1,000 cu.m.), water tanks (1,500 cu.m.), 25 km long DI transmission and distribution network. About 117,500 people in Aereporuwa, Kolonna, Maduwanwela, Nandanagama, Balangoda and Samanalawewa area will be benefited from this project. The TCE is Rs. 4,956 million. The Contract Agreement was signed.

Ruhunupura WS Development (Korea)

This new project will serve 112,000 people in Ruhunupura and Hambantota areas in 2025. Water source is Ridiyagama tank. Funding source is the Korean Government. This project is proposed to be implemented in two stages. The TCEs of Stage I & II are Rs. 9,742 & 3,760 million respectively. Delays in signing the Contract Agreement has affected the starting of physical work. Acquisition of lands for the project is also in progress.

Eastern Coastal Towns of Ampara District (ECTAD) WS Phase III (Australia)

Main components are 12,000 cu.m./day capacity WTP, ground sump (22,250 cu.m.), elevated towers, pump houses and transmission and distribution mains. About 150,000 people in Ampara area will benefit from this project. The water source is Himadurava Tank. The TCE is Rs. 18,012 million. Contract agreement was signed in 2010. Advance payment was made for which supplementary provision was obtained.

Energy Conservation Project at Ambatale WTP (German)

NWSDB carried out Energy Conservation Strategies in Ambatale WTP under two Energy Audits which has revealed that there is a potential for reducing the energy cost by 31% and substantial savings have been worked out to Rs. 10 million per month. The project consists of carrying out comprehensive Energy Audits, replacement of major transmission systems from Ambatale to Colombo to conserve energy, rearrange the pipe connections and rearrange and replace pumping units. Pumping arrangements are to be efficient to conserve energy. The TCE is Rs. 7,302 million. Contract and Loan agreements have to be signed and Project preparation work is ongoing.

Increasing Household Sewerage Connections and Off Network Sanitary Solutions in Greater Colombo (World Bank funded)

The Global Partnership on Output-Based Aid (GPOBA) Project is to increase the household access to safe sanitation in Dehiwala / Mount Lavinia and Moratuwa Municipal Councils and Kolonnawa and Ja-Ela Pradeshiya Sabha areas. The project will benefit 15,275 poor households (76,400 people) who currently rely on unsatisfactory pit latrines, non functioning septic tanks or have no sanitary facilities at all. This will include about 11,247 direct connections, conventional and simplified short sewer network extensions and connections to small networks with decentralised treatment systems and 4,028 households gaining access to improved on-site sanitation with proper disposal services. The TCE is Rs. 797 million which consists of Rs. 354 million from the World Bank, Rs. 345 million from GoSL and the balance Rs. 46 million will be charged from the beneficiaries. Feasibility study has been completed by the World Bank.

Projects in Pipeline

Greater Kurunegala WS & Sanitation (Chinese)

This project consists of water supply and sewerage packages. The water supply component of this project covers the Kurunegala municipal area and a part of the PS area. Expansion of water supply capacity from 6500 cu.m./day to 14,000 cu.m./day is to serve a population of 66,450 within 28 square km area. The estimated cost is Rs. 8,283 million. Alternative source of funding has been identified after withdrawal of DANIDA assistance. A design and build proposal has been submitted by a Chinese Contractor and negotiation is in progress.

Greater Dambulla Water Supply Scheme

The project scope includes to construct 30,000 cu.m./day capacity WTP and supply and laying of distribution and transmission mains. About 60,000 people living in Dambulla Town and suburban areas will benefit from this project. The project period is 3 years and the TCE is Rs. 10,629 million. Evaluation of the project proposal was completed and contract agreement has to be finalized.

Badulla, Haliela and Ella Integrated WSS

The project scope includes construction of WTP (15,000 cu.m./day), pump house and rehabilitation of existing system. About 109,036 people living in Badulla, Haliela and Ella areas will benefit from this project. The project period is 4 years. The TCE is Rs. 8,707 million. NPD clearance is available for the project. Unsolicited proposal is under evaluation.

Gampaha, Attanagalla and Minuwangoda Integrated WS

The project scope includes construction of Basnagoda reservoir, WTP (22,500 cu.m./day) and supply and laying of transmission main and the distribution system. About 250,000 people living in Veyangoda, Attanagalla, Urapola, Gampaha, Yakkala and Nittabuwa areas will benefit from this project. The project period is 250,000 and the TCE is Rs. 10,674 million. NPD clearance is available for the project. Unsolicited proposal is under evaluation.

Kalutara Water Supply Augmentation - Stage III

The project scope includes supply and laying pipes, construction of towers and ground reservoirs. About 400,000 people living in Kalutara, Dharga Town, Beruwala and Wadduwa areas will benefit from this project. The project period is 3 years. The TCE is Rs. 1,367 million. NPD clearance is available. EOI was received and recommended by PSC.

Greater Matale WS

Proposed project will be planned to improve treatment plant capacity to 38,500 cu.m./day and construction of 4 ground reservoirs (capacity 3,200 cu.m. each). About 150,000 people living in Ukuwela, Matale, Yatawatta, Pallepola and Rattota areas will benefit from this project. The project period is 3 years. The TCE is Rs. 8,000 million. NPD clearance was obtained for the project. EOI was received and recommended by PSC.

Alawwa - Polgahawela Integrated WS

The project planned to construct of 12,000 cu.m./day intake structure, 8,000 cu.m./day full treatment plant, distribution network of 35 km and 450 cu.m. elevated water tower. About 250,000 people living in Polgahawela and Alawwa areas will benefit from this project. The project period is 4 years. The TCE is Rs. 11,807 million. The project is in NPD appraisal stage. EOI was received and recommended by the PSC.

Badalkubura Alupotha Integrated WS

The project scope includes construction of 3,300 cu.m./day capacity WTP, two ground reservoirs, supply and laying of 18 km long raw water main and distribution mains. About 26,000 people living in Piessa Ella and Milla Ella areas will benefit from this project. The project period is 2 years. The TCE is Rs. 1,400 million. NPD clearance is available and funding commitment was not available.

Warakapola WS

The project planned to construct 16,000 cu.m./day intake, pump house, supply and laying of transmission main and distribution mains and supply and installation of electro and mechanical equipments. About 25,000 people living in Warakapola, Alawwa, Galigamuwa and Ruwanwella areas will benefit from this project. The project period is 3 years. The TCE is Rs. 3,442 million. NPD and EOI clearances were received.

Integrated Monaragala - Buttala WS

The project scope includes construction of WTP (3,500 cu.m./day), Intake (4,800 cu.m./day), supply and laying of transmission and distribution network, installation of pumps. About 26,000 people living in Badalkumbura, Buttala, Wellawaya, Monaragala, Madulla areas will benefit from this project. The project period is 2 years. The TCE is Rs. 1,955 million. NPD clearance is available. EOI received and recommended by the PSC.

Planning and Design

WATER SUPPLY PROJECTS

The need for new (or the augmentation of) water supply projects is first realised by the Officers-in-Charge of water supply schemes. Other mega projects to be implemented in the area also necessitate water supply projects to meet the drinking water needs. Accordingly, proposals for WSSs are initiated in RSCs for the estimated demand for piped WS. A pre feasibility study is carried out to ascertain the financial and technical viability of the proposed project. Then a preliminary project proposal is prepared and forwarded to the Project Appraisal Committee (PAC) for approval.

New projects are ranked, province and island-wise yearly, based on selected criteria for sector planning purposes and the prioritization is used for approvals, funding inquiries and implementation.

Major designs and feasibility studies of projects to be implemented are carried out by the Planning and Design Section of the Head Office. This Section is specifically in charge of reviewing the designs relating to projects being implemented using foreign funds, while carrying out detail designs of some foreign as well as GOSL funded projects. The following paragraphs describe a summary of such activities.

The total construction value of Planning & Design work carried out during 2010 was Rs 3,101.7 million while the total operational expenditure of the Section was Rs. 103.7 million. The above mentioned construction value of work, does not include the major inputs provided for the design review of large-scale foreign funded design-build projects and for planning/feasibility work.

Planning Works carried out during 2010 are:

Towns East of Colombo WS, Gampaha, Attanagalla and Minuwangoda Integrated WS, Improvement of Colombo WS Distribution System, Jalthara-Ranala WS - Phase II, Kalutara WS Augmentation - Stage III, Kelani Right Bank WS Project - Stage II, Analysis of Transmission System in Greater Colombo Area and Distribution System in Colombo City, Wee Oya Reservoir (11 million cum capacity in the upstream side of Kelani River, Adampan, Vidaththaltivu and Thevanpiddy WS under the World Bank assisted Emergency Northern Rehabilitation Project (ENReP), Point Pedro WS under the ADB Assisted Conflict Affected Region Emergency (CARE) Project, Mullaitivu, Mankulam and Kilinochchi WS Projects.

Design Review Work carried out during 2010 are;

- Review of structural, hydraulic, distribution and transmission systems and process designs of Greater Colombo Water Rehabilitation project, augmentation of Negombo WSP, Kelani Right Bank WTP Project, Kirindi Oya WSP, Eastern Coastal Towns of Ampara District WSP – Phase III, Greater Trincomalee Integrated WSP and Polonnaruwa WS under the ADB 4th Project.
- Review of Mechanical, Electrical and Automation Designs of projects mentioned in the above paragraph, excluding Polonnaruwa WS but including ADB Assisted Dry Zone Urban WSP.

Some detailed Designs carried out during 2010 are:

- Re-routing and shifting of Kalatuwawa- Dehiwala transmission (N33) pipeline at Makumbura to accommodate the Outer Circular Road, Water Supply to Diyagama Township Development including the Mahinda Rajapaksha International Sports Complex and Provision of Water Supply facilities to the IT Park at Malabe in the Western Province.

Re-routing of N33 Main at Makumbura

- River bank protection at the intake of Yatiyantota WSS, New intake structure and Access Bridge in the Chandrika Wewa for Embilipitiya WS and Echchilampattu WS under the CAREP in the Southern/Eastern Zone.

Location of Intake for Echchilampattu WS

Proposed Intake Location for Ruhunupura WSP in the Canal from Ridiyagama Tank

- Adampan, Vidathalthivu and Thevanpiddy WS under the ENReP, Point Pedro WS under the CAREP, Murunkan - Mannar Transmission Main under the ADB Assisted Dry Zone Urban WSP in the Northern/Central Zone.

Murunkan Well Field - Source for Mannar WS and starting point of new raw water transmission main from Verugal River

Some energy saving efforts during 2010 are:

- Design of Variable Speed Device drives connected to direct pumping distribution systems in Uhana, Damana and HIngurana WSSs under the JICA funded Eastern Province Water Supply Development Project
- Initiating a feasibility study for Towns East of Colombo Water Supply Project to utilize the available gravity water supply option from Kalatuwawa and Labugama
- Preparing a Transmission model for a gravity system to Colombo, to optimize the available energy in the Kalatuwawa and Labugama system.
- Design a new transmission line from Ambatale to Maligakanda via the proposed Kolonnawa reservoir to reduce energy costs as well as the water conveying costs.

General issues for planning and design of piped WS systems are:

- Reviewing designs of un-solicited Design-Build projects, require experienced design engineers due to the complexity of work and the very short time period granted. The present trend of most new projects are design-build type, therefore engineers and other experts do not gain any hands on experience in designing, while very few projects are involved with detailed designs.
- Project Consultants are reluctant to accept changes proposed by the NWSDB staff. Delay in submission of complete drawing sets and complete design reports by the designers and the deterioration of the quality of work done by the consultants.
- Lack of local funds to carry out investigations and other preliminary work to finalize planning works and commence detailed designs for approved projects.
- Delay and difficulty in obtaining approval for raw water abstraction.
- Lack of expertise to plan and design water resources improvement, including new impounding reservoirs and improving raw water storage.
- Locating and timely acquisition of suitable lands for ground reservoirs, towers and treatment plants.
- Obtaining RDA/PRDA approval for laying pipes on roads.

Some new focus in 2011 will be:

- Initiating new strategies for project financing to ensure more detailed design works. Some identified strategies are to negotiate with un-solicited proponents for NWSDB to carry out detailed designs at an agreed cost and to explore the possibilities to obtain funds from local banks for projects.
- Improve the quality of outputs (Procurement documents, detail drawings, BOQs, Cost Estimates)
- Secure funding and engage necessary resources for the updating of remaining Design Manuals and Procedure Manuals.
- Type BOQ to be prepared for all relevant types of works.
- Schedule of Rates based on the work studied to be completed to form a Building Schedule of Rates (BSR) for water supply and sewerage.
- To prepare a Detailing Manual for Draft persons.

SEWERAGE PROJECTS

The design and feasibility studies of all sewerage projects to be implemented are carried out by the Planning and Design Section of the Head Office.

Planning Work carried out during 2010 are;

Cabinet approval was obtained for the Augmentation of Kataragama Sacred City Sewerage and Kattankudy Wastewater Disposal Projects. NPD clearance was received for Sri Jayawardhanapura Kotte Sewerage, Negombo & Galle Wastewater Treatment Systems (WWTSs) and Hambantota WWTS. Feasibility studies completed and project concepts forwarded to the NPD for Ja-Ela/Ekala – Ratmalana/Moratuwa Stage I Phase II and Augmentation of Kataragama Sacred City Wastewater Disposal System (WWDS). The feasibility studies for WWDS for Maharagama and Boralesgamuwa UC Areas, Project for expansion of piped sewerage coverage for Dehiwala/ Mt.Lavinia, Chilaw WWDS and Puttalam WWDS are being carried out.

Design Review Work carried out during 2010 are;

Reviewed detail designs and provided specialist assistance for four foreign funded projects; namely Wastewater Disposal Project for Ja-Ela/Ekala - Ratmalana/Moratuwa and Stage I Phase I, Colombo Sewerage Rehabilitation Project-Southern Catchment, Kandy City Wastewater Disposal and Greater Kurunegala Water Supply and Wastewater Disposal.

Special events that took place on Planning and Design of Sewerage Projects during 2010 are;

- Updated Sanitation Development Plan for the horizon 2010 - 2015.
- Prepared Rate Book for sewerage works for 2010.
- Prepared O&M Manual for Waste Stabilization Pond Systems in Sinhala and Tamil Medium.
- Developed new type drawings for on-site sanitation works.
- Eleven rechargeable projects were carried out for various scopes on sewerage works depending on the technical assistance expected by the clients. More than 75% - 85% of progress was achieved for four projects. The income from rechargeable projects was Rs. 4.4 million in 2010 for the consultancy services provided during the year.
- Contributed towards the organization of the 4th SACOSAN conference to be held in April 2011.

PROJECT PREPARATION

A Procedure / Guideline was developed for handling Unsolicited Proposals in order to streamline the process. Presentations were made to potential Investors / Trade Delegations: Trade Delegation from the Government of Thailand, Korean Engineering Delegation and Malaysia External Trade Development Cooperation Delegation, to promote investment in the Sector.

Secured NPD clearance for the NWSDB approved Projects: Extension of Greater Galle WSS up to Bonawista Kanda area, Jaffna WS and Sanitation Project, Kirama – Katuwana Integrated WSP, Improvement of RWS and Sanitation in Dry Zone Districts, Deduru Oya Integrated WSP, Community drinking water Project using Solar Powered hand pump Tube wells, Valaichenai WSP, Hakmana WSP and Augmentation of Angunakolapalassa WSP.

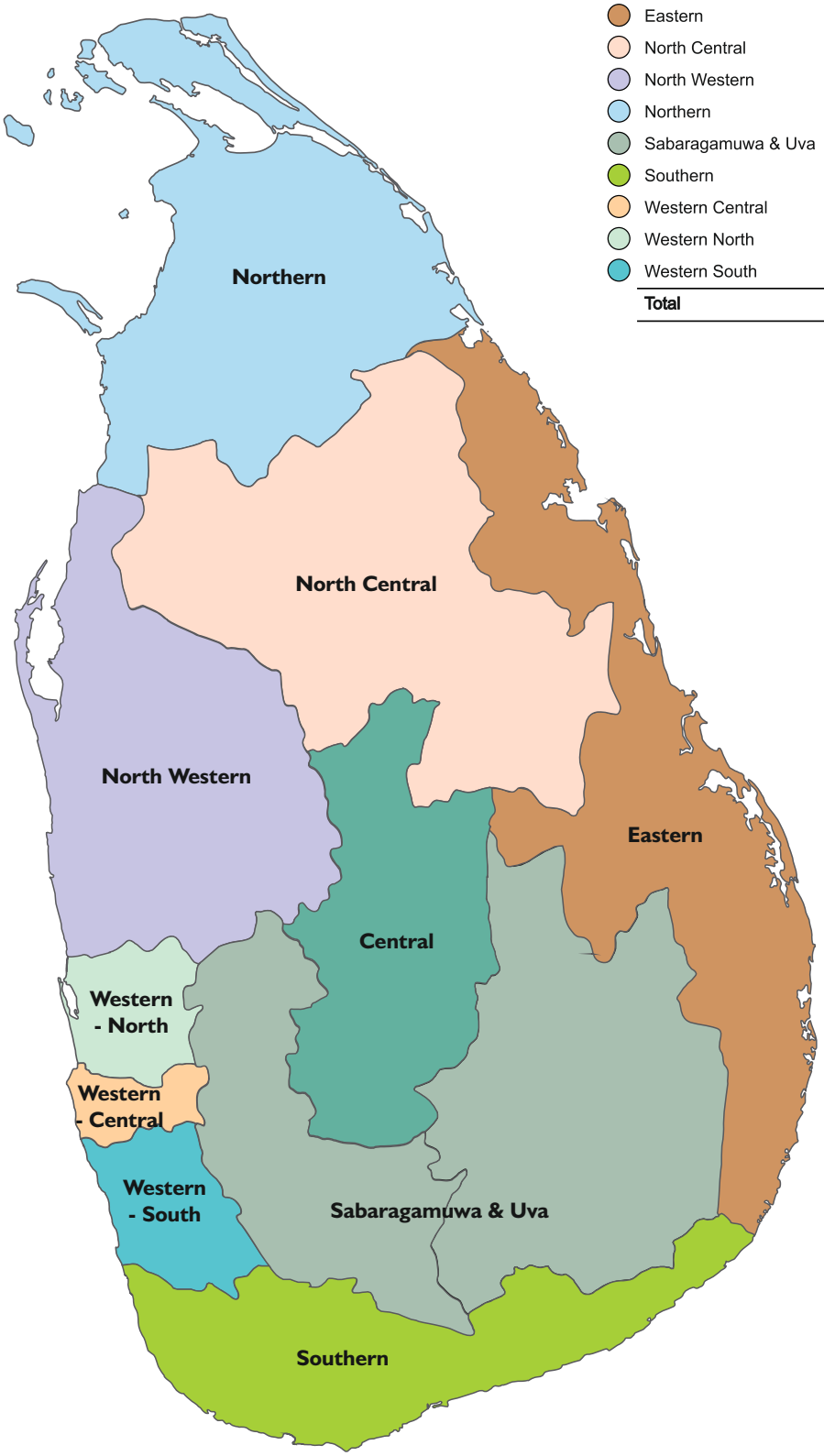
Coordinated and liaised with the Ministry of Finance & Planning for securing donor funding for Multilateral Projects: JICA funded WSP (40th Japanese Yen Loan), ADB 6th - Jaffna and Kilinochchi WS and Sanitation Project and French AFD co– financing for Jaffna – Kilinochchi Project.

The World Bank funded RWS Project for Kurunegala, Badulla, Moneragala and Kilinochchi Districts, Improvement of Partial Treatment WSP, Kilionochchi WSP and Kalutara Stage III WSP for Hungarian funding were among project proposals developed to secure funding. Greater Matale Integrated WSP, Improvement of Partial WTPs, Kaluthara Integrated WSP Stage III and Bentota Distribution System and Moneragala, Buttala Integrated WSP were some project screening reports, which were prepared to screen the experience and eligibility of project proponents.

Subsidiary Loan Agreements of the following projects were finalized; Kelani Right Bank WTP and Salinity Barrier, Rehabilitation and Augmentation of Negombo WSP, Construction of WTPs at Negombo and Ambatale, Rehabilitation and Augmentation of Kirindi Oya WSP, Water Sector Development Project II – Kaluganga WS Phase I Stage II and NRW reduction in Colombo City (JICA) and Rehabilitation of WS in Galle District, Phase II. Commercial Contracts were finalized after coordination and Liaison with the Attorney General's Department: Ruhunupura WSP, Kolonna – Balangoda WSP, Rehabilitation of Labugama and Kalatuwawa WTPs and Energy Conservation at Ambatale WTP.

Regional Support Centres

Province/RSC	Number of WS Connections
Central	164,259
Eastern	95,169
North Central	62,579
North Western	40,947
Northern	6,456
Sabaragamuwa & Uva	126,035
Southern	203,820
Western Central	349,372
Western North	141,601
Western South	163,335
Total	**1,353,573**



REGIONAL SUPPORT CENTRES

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

Western - Central

Some system improvements carried out with rehabilitation funds are in progress. They are; Descaling work at Colombo City, CI Pipe Line Replacement at Beddegana, Distribution Improvement at Kaduwela, Ratnarama road and Moragasmulla. Preparation and demand calculation of the model of Colombo City Pipe Network which would be used for Water CAD analysis are in progress. Four new proposals initiated for system improvements are at preliminary stage. Extensions / Infillings of distribution pipelines at Hanwella and Jalthara – Ranala by roads, using community participation for pipe trench excavation and backfilling were completed, 100% and 65% respectively. Four rechargeable works were undertaken while two were completed and other two are in progress.

A general issue for O&M in Colombo City is that delay in issuing road excavation permit by relevant authorities for urgent leak repair works.

Western - South

Around 16.5 km and 26 km Extensions / Infillings of various diameters of distribution pipelines have been laid in Kalutara and Panadura-Horana regions, respectively. 21 rechargeable works for pipeline extensions out of 33 were completed and others are in progress. Several stores improvements were completed spending Rs. 12.9 million and some were in progress amounting to Rs. 15.2 million, under stores rehabilitation funds.

Western - North

A new project proposal was prepared for Katana Water Supply for the which PAC approval was obtained. Rehabilitation funds were need for system improvements such as;

- Pipe replacement at Nuge Road and Dutugemunu Mawatha costing Rs. 23.6 million and
- Construction of 100 cu.m. capacity warer storage sump at the Divulapitiya WSS

Three rechargeable works undertaken from RDA for shifting of water pipe lines were completed. Pipe line extensions were carried out at Biyagama with District Council Funds and Kelaniya, Mahara, Wattala, and Ja-ela with Provincial Council Funds. About 26 km pipe laying was completed with Ran Aruna funds.

Southern

The Southern RSC has carried out 8 feasibility studies and prepared proposals, out of which 6 have been approved. These six WSPs are in planning stage and funding is to be identified. Six rechargeable projects were carried out and three were completed. 14 awareness programmes on water conservation, water treatment processes, cost of water treatment, conservation of water sources and sanitation practices were conducted for school children.

North Central

Eleven new WSPs for Anuradhapura District were under preparation in various stages. Padaviya WSP is for 42,000 people in Padaviya and Siripura area, Anuradhapura North integrated WSP for 201,599 people, Anuradhapura South (Phase II) integrated project for 280,956 people and Bottle Water Project is for 142,000 people in Madawachchiya, Kebithigollewa and Padaviya area were in final stage of formulation. Similarly, ten new WSPs for Polonnaruwa District were under preparation in various stages. Among those, Lakpura WSP for 60,000 people in Lakpura DSD is in final stage of formulation and six projects were for small towns such as Pimburattewa, Kalukale, Senapura, Manampitiya, Welikanda and Dimbulagala for which preparation of Pre feasibility reports was in progress.

Special events during the year are; Commencement of Thirappane WSS. Celebration of Water Week in December 2010 including a walk for public awareness on Water Conservation with the participation of RSC staff, CBOs of the North Central Province and other relevant organizations such as Plan Sri Lanka, etc.

Part of the walk conducted for water conservation week

North Western

Udappuwa WSS was partially commissioned in October, 2010 while Mawathagama WSS was taken over from the Provincial Council in December, 2010. Six new projects are in planning stage out of which funding source was identified and negotiation with the project proponent was completed for Greater Kurunegala WS. All materials were purchased and 50% of fabrication was completed in Polgahawela Package Treatment Plant under UIDE funds. 13 and 8 Extensions / Infillings of distribution pipelines have been laid in Kurunagala and Puttalam Districts, respectively. 8 pipeline extensions and Water Supply to Lunuwila Coconut Research Institute were undertaken as rechargeable works. System improvements of 9 WSSs were carried out with rehabilitation funds.

Central

Some special events during the year are; Ceremonially opening of Gampola WSS, Implementation of water meter repairing and testing unit, Participation for "Deyatakirula" Exhibition and won the 4th place of the stall competition among the organizations, Providing drinking water for the Security personnel (Police, Army, PSD) and supplying of water tanks, Bowser supply and continuous water supply to all schools (approximately 5,000 occupants) occupied by the police for Deyatakirula Exhibition in February 2010 and for Dalada Perahera in August 2010.

Water Meter Repairing and Testing Unit

NWSDB Stall in "Deyatakirula" 2010

Sabaragamuwa and Uva

Among planning works feasibility studies for Warakapola and Ruwanwella WSSs and WS to Sabaragamuwa University were in progress. Extensions / Infillings of distribution pipelines were laid in Embilipitiya, Pelmadulla, Ratnapura, Udawalawa, Balangoda, Monaragala and Badulla WSSs (27, 3, 1.3, 0.3, 10, 48.5 and 5.5 km respectively). Construction of Deewela/Pallegama and Algama/Warakapola small WSS and Kegalle rain WSS and WS to Pinnawala Zoo were other rechargeable projects

Special events during the year are; Opening of Godakawela WSS, Reserved 200 acres as the catchment area of Kirindiella, the water source of Pelmadulla WSS and planted over 2,500 tree plants in that area, Opening of Sabaragamuwa and Uva RSC office, Pirith Chanting and Alms Giving at Monaragala Regional office and 5 months duration special project to improve capacity and water quality of Buttala WSS for "Deyata Kirula 2011".

Northern

Commissioning of Kaithady WSS in Jaffna District and completion of Cheddikulam WSS in Vavuniya District was significant among improvements under UNICEF funds. Nine new WSSs under Emergency North Recovery Project (ENReP) funding through Ministry of Economic Development for Jaffna, Mannar, Vavuniya and Mullaithivu Districts were in procurement stage and about Rs. 32 million was spent during 2010. Pallimunai WSS in Adampan DSD of Mannar District, under ADB funding through Ministry of Economic Development was completed. Point Pedro WS in Jaffna District under ADB funded CARE project was in procurement stage and about Rs. 1 million was spent during 2010. Rehabilitation of Kilinochchi WSS under JICA funds was in project preparation stage. About Rs. 22 million of the NWSDB funds was spent for extensions and improvements of existing WSSs in Jaffna District and O&M of WS and sanitation activities of IDP camps in Menik Farm, during 2010.

Eastern

Some special events during the year are; completion of Hingurana WSS (TCE is Rs. 10 million) by direct labour, Completion of 250 km distribution extension at coastal area funded under IFRC, Commencing of Kaluwanchikudy WS funded under ADB, Supply of fully treated water to Uhana WSS (TCE is Rs. 3 million), Improvement of Valathapitiya WSS (TCE is Rs. 12 million), constructing a ground sump under IFRC fund, Reduction of NRW at Ampara from 36% to 32%, using direct pumping to water tower and Establishment of Manager (O&M) Office at Batticaloa and shifting of Eastern RSC Office to Trincomalee.

Report of the Audit and Management Committee

"During the year under review the Audit & Management Committee introduced audit guidelines to the NWSDB"

The Audit and Management Committee functioned to extend its assistance to the Board of Directors even during the year under review in terms of Public Finance Circular No. PF/PE/4 dated 11.01.2000. During the year under review, the Committee consisted of the following Members:

01.	Mr. A.K. Seneviratne Board Member	- Chairman
02.	Mr. K.D. Gamini Gunaratne Vice Chairman	- Member
03.	Mr. K.L.L. Premanath General Manager	- Member
04.	Mr. H. Ariyasena DGM (Personnel & Administration)	- Member
05.	Mr. D. Thotawatte DGM (Finance)	- Member
06.	Mr. W.A.J. Weerasinghe Chief Internal Auditor	- Member
07.	Mr. K.K. Chandrasiri Secretary to the Board	- Secretary

The Audit & Management Committee, comprising the above Members, assembled at the office of the National Water Supply & Drainage Board on 23rd July, 2010 and deliberated along the items set out in the scope of the Committee. This report is submitted in compliance with the last item (items) described in the scope of the Committee, which would includes, amongst others, the following:

The Committee considered the Auditor General's comments on previous year's Final Accounts of the NWSDB and decided to minimize long outstanding un-reconciled ledger balances. The Committee considered this as high priority area and decided to recruit a retired Chief Accountant for a period of 06 months on contract basis to assign the above task. He had done part of the above work and had left office. Now the Deputy General Manager (Finance) personally handles the above task, together with his staff. The Committee could be satisfied with his achievement and target to complete the task as far as possible, at the end of 2010.

During the year under review the Audit & Management Committee introduced audit guidelines to the NWSDB. Project Accounts were audited but some Projects have not prepared their final accounts due to lack of accounting staff. The Committee directed to prepare final accounts of particular projects and submit same to the Auditor General. Now this issue had been finalized and Projects accounts were submitted on scheduled times.

The Committee checked the possibility of streamlining the Internal Audit Section and recommended the Board of Management to increase the cadre and provide more training opportunities to the Internal Audit staff. In the meantime, the Committee had taken action to rectify system weaknesses and introduced proper procedures. Internal audits have been carried out by Internal Audit Division of the Board during the year, in accordance with the Annual Internal Audit Programme, which was improved, giving more weight-age to core functions as advised by the Committee. As a result, system deficiencies which hinder the performance of the Board have been detected and reported to the top management.

Financial Statements

66 Income Statement

67 Balance Sheet

68 Cash Flow Statement

69 Statement of Changes in Equity

70 Segmental Gross Profit - 31st December 2010

71 Notes to the Financial Statements

84 Auditor General's Report for the year ended 31st December 2010

Income Statement

For the year ended	Notes	Budget 2010 Rs.	**Actual 2010 Rs.**	Actual 2009 Rs.
Sale of Water	3	11,301,290,000	10,744,059,534	9,669,975,867
Less: Direct Operating Expenses	4	(7,332,102,367)	(7,061,727,544)	(6,321,949,712)
Operating Profit on Sale of Water		3,969,187,633	3,682,331,990	3,348,026,155
Other Operating Income	5	2,021,050,000	1,566,297,797	1,397,317,115
Administration Overheads	6	(2,391,787,633)	(2,564,857,342)	(2,062,268,144)
Depreciation	7	(1,400,000,000)	(3,258,762,679)	(1,409,852,073)
Revalution Deficit	7	-	(3,684,342,399)	-
Other Operating Expenses	7	(356,580,000)	(268,745,918)	(1,089,308,312)
Profit/(Loss) from Operating Activities		1,841,870,000	(4,528,078,550)	183,914,742
Finance Cost	8	(1,426,000,000)	(1,419,459,214)	(1,568,941,934)
Non-Operating Income	9	100,000,000	97,644,018	48,782,302
Profit/(Loss) from Ordinary Activities before Tax		515,870,000	(5,849,893,746)	(1,336,244,891)
Taxation	10	(120,000,000)	(105,273,966)	(89,009,061)
Net Profit/(Loss) for the year		395,870,000	(5,955,167,712)	(1,425,253,952)

The accounting policies and notes on pages 71 to 83 form an integral part of the financial statements.

Colombo
22nd December 2011

Balance Sheet

As at 31st December		2010	2009
		Rs.	Rs.
ASSETS			
Non-Current Assets	Notes		
Property, Plant & Equipment, Net - At Cost	A	73,665,875,928	63,086,406,877
Capital Work in Progress	11	75,479,132,299	72,814,706,861
Investments	13	65,483,233	76,886,680
		149,210,491,460	135,978,000,418
Current Assets			
Non-Operating Assets	12	186,528,287	158,650,039
Inventories	14	3,282,670,013	3,305,965,042
Trade & Other Receivables	15	4,163,963,700	4,300,728,729
Deposits and Advances	16	5,577,524,742	4,765,970,605
Investments	17	612,324,887	303,704,405
Cash & Cash Equivalents	18	1,160,749,233	624,867,296
		14,983,760,862	13,459,886,117
Total Assets		164,194,252,322	149,437,886,535
EQUITY AND LIABILITIES			
Capital and Reserves			
Assets taken over from Government Dept.		185,480,387	185,480,387
Equity Capital		62,617,514,691	58,445,824,673
Capital Grants	19	78,619,983,625	67,189,901,163
Capital Recovery Fund	20	2,532,250,115	2,150,618,551
Staff Welfare Fund		13,468,272	13,116,170
Revaluation Reserve		-	309,763,136
Accumulated Profit/(Loss)		(15,587,624,913)	(9,560,236,671)
		128,381,072,178	118,734,467,409
Non-Current Liabilities			
Loan Payable	21	23,070,625,176	20,136,678,223
Other Deferred Liabilities	22	3,404,692,303	3,187,709,705
		26,475,317,479	23,324,387,929
Current Liabilities			
Creditors	23	2,344,883,758	2,173,439,944
Loan Capital Payable	24	2,362,323,996	2,255,632,238
Loan Interest Payable		3,157,126,784	1,895,510,466
Non Operating Liabilities	12	161,145,829	115,455,778
Other Payable	25	1,312,382,299	938,992,770
		9,337,862,666	7,379,031,197
Total Equity and Liabilities		164,194,252,322	149,437,886,535

The Board of Directors is responsible for the preparation and presentation of these financial statements.

K. Hettiarachchi
Chairman

K. L. L. Premanath
General Manager

D. Thotawatte
DGM (Finance)

Colombo

22nd December 2011

The accounting policies and notes on pages 71 to 83 form an integral part of the financial statements.

Cash Flow Statement

As at 31st December	Notes		2010 Rs.	2009 Rs.
Cash Flows from/(used) in Operating Activities				
Net Profit/(Loss) before Tax			(5,849,893,746)	(1,336,244,891)
Adjustments for				
Interest Income			(97,644,018)	(48,782,302)
Profit on Disposal of Fixed Assets			(2,867,528)	(12,696,209)
Depreciation	7		3,258,762,679	1,409,852,073
Revaluation Loss			3,684,342,399	-
Retiring Gratuity Provision			220,195,945	1,012,860,343
Interest Expense	8		1,419,459,214	1,568,941,934
Operating Profit before Working Capital Changes			2,632,354,945	2,593,930,949
(Increase)/ Decrease in Inventories			23,295,029	(224,677,483)
(Increase)/ Decrease in Debtors, Receivable & Deposits			(706,620,578)	1,637,695,135
Increase/ (Decrease) in Creditors & Provisions			738,484,038	907,386,833
Cash Generated from Operations			2,687,513,434	4,914,335,433
Tax Paid	10		(105,273,966)	(89,009,061)
Disallowed VAT paid to Inland Revenue			(1,365,488,646)	(1,197,517,236)
Gratuity Paid	22.1		(151,173,991)	(121,242,157)
Net Cash from Operating Activities			1,065,576,831	3,506,566,978
Cash Flows from/ (used in) Investing Activities				
Investments in Fixed Assets			(19,739,047,979)	(21,768,367,550)
Sale proceeds for disposal assets			3,025,100	13,489,207
Investment Income			101,597,240	48,655,482
(Investment)/ Withdrawal of Investments			(297,217,034)	133,399,170
Net Cash Flows used in Investing Activities			(19,931,642,673)	(21,572,823,691)
Cash Flows from/ (used in) Financing Activities				
Equity Capital during the Period - Net		4,171,690,019		3,885,627,990
- Vat disallowed		1,365,488,646		1,197,517,236
- set off against F/ assets		-	5,537,178,665	663,936
Foreign Grant during the period - Net	19	11,430,082,462		11,047,765,748
- set off against F/ assets		-	11,430,082,462	472,331,634
New Loans			3,891,224,155	2,885,522,745
Loan Repayments			(850,585,445)	(17,163,337)
Loan Interest Paid			(605,952,057)	(1,603,813,597)
			19,401,947,780	17,868,452,354
Net Increase in Cash & Cash Equivalents			535,881,937	(197,804,358)
Cash & Cash Equivalents at the beginning of the year			624,867,296	822,671,654
Cash & Cash Equivalents at the end of the period			1,160,749,233	624,867,296

The accounting policies and notes on pages 71 to 83 form an integral part of the financial statement.
22nd December 2011

Statement of Changes in Equity

As at 31st December 2010

	Assets from Department Rs.	Capital & Grants Rs.	Capital Recovery Fund Rs.	Revaluation Reserve Rs.	Staff Welfare Fund Rs.	Accumulated Profit/Loss Rs.	Total Rs.
Balance at 01.01.2009	185,480,387	110,702,332,099	1,818,551,822	309,763,136	14,696,842	(7,804,496,662)	105,226,327,623
Grant received during the year	-	14,933,393,737	-	-	-	-	14,933,393,737
Net Profit/(Loss) for the year	-	-	-	-	-	(1,425,253,952)	(1,425,253,952)
Transfers to/(from) during the year	-	-	332,066,729	-	(1,580,672)	(330,486,057)	-
Balance at 31.12.2009	**185,480,387**	**125,635,725,836**	**2,150,618,551**	**309,763,136**	**13,116,170**	**(9,560,236,671)**	**118,734,467,408**
Grant received during the period	-	15,601,772,480	-	-	-	-	15,601,772,480
	185,480,387	141,237,498,316	2,150,618,551	309,763,136	13,116,170	(9,560,236,671)	134,336,239,888
Net Profit/(Loss) for the period	-	-	-	-	-	(5,955,167,712)	(5,955,167,712)
Transfers to/(from) during the period	-	-	381,631,564	(309,763,136)	352,102	(72,220,530)	-
Balance at 31.12.2010	**185,480,387**	**141,237,498,316**	**2,532,250,115**	**-**	**13,468,272**	**(15,587,624,913)**	**128,381,072,178**

The accounting policies and notes on pages 71 to 83 form an integral part of the financial statements.

Colombo
22nd December 2011

Segmental Gross Profit - 31st December 2010

Sources / Activities	Water Service	Sewerage	Ground Water	Total
GROSS INCOME	Rs.	Rs.	Rs.	Rs.
Sale of Water -				
Metered Sale	10,746,736,885	-	-	
Bulk Sales	149,369,059	-	-	
Bowser Supply	40,610,465	-	-	
	10,936,716,409	-	-	
Less: Rebates	(193,367,026)	-	-	
	10,743,349,383	-	-	
Other Income	419,338,082	103,949,459	6,974,656	
	11,162,687,465	103,949,459	6,974,656	11,273,611,580
Less: Direct Cost				
Personnel Cost -				
Permanent	3,073,231,919	135,214,383	98,754,332	
Casual	38,019,503	1,521,234	115,990	
	3,111,251,422	136,735,617	98,870,323	3,346,857,362
Pumping Cost	2,078,759,938	20,829,685	3,987,078	2,103,576,701
Chemical Cost	404,544,744	7,670,838	720,065	412,935,647
Repairs & Maintenance	532,441,913	13,480,007	14,354,963	560,276,883
Establishment Expenses	225,892,599	8,130,012	14,948,354	248,970,965
Rent, Rates, Taxes, etc.	370,839,699	15,529,050	2,716,238	389,084,987
	6,723,730,314	202,375,210	134,876,955	
Gross Profit for the year	**4,438,957,151**	**(98,425,751)**	**(127,902,300)**	**4,211,909,036**

Notes to the Financial Statements

1. Corporate Information

1.1 General

National Water Supply & Drainage Board is a statutory board enacted by the Parliament under the National Water Supply & Drainage Board Law No. 2 of 1974. The registered office of the Board is located at Galle Road, Ratmalana, and the principal place of business is situated at the same location.

National Water Supply & Drainage Board is an institution that is under the purview of Ministry of Water Supply & Drainage.

1.2 Principal Activities and Nature of Operations

During the year, the principal activity of the Board was to be produced and sell treated drinking water to the community.

1.3 Number of Employees

The number of permanent and contract employees, as at the end of the year were 9025 (2009 - 2010). The number consists of those who were paid salaries as at 31st December 2010.

2. Summary of Significant Accounting Policies

2.1 General Accounting Policies

2.1.1 Statement of Compliance

The Financial Statements of NWSDB have been prepared in accordance with Sri Lanka Accounting Standards (SLAS), adopted by the Institute of Chartered Accountants of Sri Lanka.

2.1.2 Basis of Preparation

The financial statements are presented in Sri Lankan Rupees and prepared on the historical cost basis and the accounting policies are consistent with those used in the previous years.

The Board of Directors has made an assessment of the ability of NWSDB to continue as a going concern in the foreseeable future.

2.1.3 Event after the Balance Sheet Data (SLAS 12)

All material events occurring after the Balance Sheet date have been considered and where necessary adjustments made in these financial statements.

Two frauds were reported during the year 2006 at two regional offices of the NWSDB. According to the investigations so far carried out frauds amounting to Rs. 56.49 million and Rs. 171.94 million were reported at Kelaniya and Trincomalee Regional Offices. Legal action has been instituted against above frauds and investigations are in progress.

2.2 Valuation of Assets and their Measurement Bases

2.2.1 Property, Plant & Equipment (SLAS 18)

i. Cost

Cost of Property, Plant & Equipment is the cost of acquisition or construction together with any expenses incurred in bringing the assets to its work in condition for it's intended use. Where an item comprises major components having different useful lives, they are accounted for as separate items of property, plant & equipment. This accounting treatment covers the grant-funded project and other projects too.

a. Assets as at 31st December 2007 are revalued by the Valuation Department.

Valuation arrived for Lands are "Fair Value" as stated in the SLAS. Methodology adopted to value Plant and Machinery. Furniture and Fittings, Building, Structure and Infrastructure is "Cost Approach". Certain Plant and Machinery such as electricity, water supply to buildings, air conditioners, ventilators and lift etc. are valued along with buildings.

Valuation is on the assumption that the entity is a going concern. Revaluation loss of Rs. 3,684,342,399 is charged to Profit and Loss account for one year ended 31.12.2010.

ii. Leasehold Assets (SLAS 19)

Leasehold land is amortized over the period of lease and the amortized amount is charged to Income Statement for the relevant period.

The Board has purchased 08 no. of motor vehicles under the finance lease agreement. Assets and liabilities on that transaction have been declared according to the SLAS 19.

iii. Subsequent Expenditure Incurred on Assets

Expenditure incurred to replace the component of an item of property, plant & equipment that is accounted for separately, incurring major inspection and overall expenditure. Other subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the item of property, plant & equipment. All other expenditure is recognized in the Income Statement as an expense as included.

iv. Restoration Costs

Expenditure incurred on repairs and maintenance of Property, Plant & Equipment in order to restore or maintain the future economic benefits expected from originally assessed standards of performance is recognized as an expense when incurred.

v. Depreciation (SLAS 8)

The provision of depreciation is calculated by using a straight line method on the cost of all Property, Plant & Equipment other than freehold land, in order to write off such amounts over the estimated useful lives by equal installments. The principal rates used are as follows:

Infrastructure	-	2.00 %
Buildings	-	2.00 %
Structures	-	1.67 %
Treatment Plant Equipment	-	5.00 %
Transmission Plant Equipment	-	1.67 %
Survey Equipment	-	10.00 %
Laboratory Equipment	-	10.00 %
Furniture, Fittings & Other Equipments	-	10.00 %
Passenger Vehicles	-	14.30 %
Heavy Vehicles	-	10.00 %
Service & Bulk Meters	-	10.00 %

No depreciation has been provided on freehold land. Depreciation is calculated on the basis, where no depreciation is calculated for the month of purchase and full monthly provision was done for the month of disposal.

vi. Rehabilitation Costs

Expenditure incurred on augmentation and rehabilitation of property, Plant & Equipment in order to enhance the future economic benefits expected from originally assessed standards of performance is recognized as capital expenditure.

vii. Government Grants (SLAS 24)

These grants are used to build up assets. Amount of Depreciation of the assets is charged to relevant Grant accounts on systematic basis over the useful lives of the related assets.

Amount in VAT receivable A/C should be setoff against the VAT output, but Inland Revenue is not allowed to setoff the same. Therefore, it was setoff against the Government grants. In the year 2010 it is Rs. 735,576,162.83.

2.2.2 Inventories (SLAS 5)

Inventories mainly consist of materials that are held for use in the production of water and materials that are required to maintain water supply schemes. The inventories are shown at cost and cost is arrived by using weighted average method.

2.2.3 Trade and Other Receivables (SLAS 15)

Trade receivables are stated at the amounts they are estimated to realize net of provisions for bad and doubtful debts. Other receivables and dues from Related Parties are recognized at cost less provision for bad and doubtful receivables. The allowance for bad and doubtful debts is based on specific debtors who are considered as non-recoverable.

2.2.4 Cash and Cash Equivalents (SLAS 9)

Cash and Cash equivalents are defined as cash in hand, cash in transit and current account balances in banks.

2.3 Investments (SLAS 22)

Investments are stated at cost of acquisition. Income is recognized on accrual basis for interest/ yield deriving investments and to the extent of distribution from dividend bearing investments.

(a) Long Term Investment

Long Term Investments are the investments made in relation to more than one year period. Then investments have been disclosed as notes to the accounts number 13.

(b) Short Term Investment

Short Term Investments are the investments made for short-term period for the purpose of organizational activities.

2.4 Liabilities and Provisions

Liability

Liabilities are classified as current liabilities on the balance sheet date are those which fall and due for within one year from the Balance Sheet Date. Non-current liabilities are those balances that fall due for payments later than one year from balance sheet date.

All known liabilities have been accounted for in preparation of financial statements.

2.4.1 Retirement Benefit Obligations (SLAS 16)

a) Defined Benefit Plan - Gratuity

Provision has been made for retiring gratuities from the first year of service for all employees, in conformity with Sri Lanka Accounting Standard No. 16 (SLAS 16).

b) Retirement Benefit Cost

However, under the payment of gratuities Act No. 12 of 1983, the liability to an employee arises only on completion of 5 years of continued service. Gratuity is defined benefit plan. The advice of an actuary has not been obtained in accounting for defined benefit plan. The resulting difference between brought forward provision at the beginning of the year and the carried forward provision at the end of a year is dealt within the income statement.

c) Defined Contribution Plans - EPF & ETF

Employees are eligible for Employees' Provident Fund Contributions and Employees' Trust Fund Contributions in line with respective Statutes and Regulations. The Board contributes 12% and 3% of gross emoluments of employees to EPF and ETF respectively. Total Contribution of the Board for the period, EPF - Rs. 812,393,560.00 and
ETF - Rs. 121,859,044.05.

d) Arbitration

In respect of integrated WSS for the Eastern Coastal Towns of the Ampara District - Stage II Project, five disputed are being processed through International Chamber of Commerce. The possible outcomes of those are not assessable at this stage when we prepare the accounts.

2.4.2 Provision

Provision is recognized in the Balance Sheet when the Board has the legal or constructive obligation as a result of past event and it is probable that an out flow of economic benefits will be required to settle the obligations.

(a) Provision for Bad Debts

Following percentages are applied for provision of bad debts.

5%	-	Arrears over 2 - 12 months
15%	-	Stand post Arrears
	-	Disconnected Arrears
	-	Arrears over 1 year
	-	Sewerage Arrears
20%	-	CMC Debtors
25%	-	Debtors Account 219

Other than the above percentages 10% applied as general provision for water debtors.

(b) Contingent Liabilities & Commitments

Following cases are under litigation and the assessable liability of these are stated below.

Law Case	Court	Value
5584/Cash	District Court - Mt. Lavinia	1,000,000
7599/M	District Court - Galle	100,000
7298/L	District Court - Kegalle	1,000,000
525/2008	Supreme Court	50,000,000
73, 74, 75, 77, 78, 79, 80, 82, 83, 84, 85	LT - Batticaloa (Appeal Court)	1,100,000

© Irrecoverable Staff Loans

A Provision has been increased to write off irrecoverable staff loans to employees who expire whilst in service by Rs. 1,762,215.00

2.5 Trade and Other Payables (SLAS 15)

Trade and other payables are stated at the cost.

2.6 Income Statement

2.6.1 Revenue Recognition (SLAS 29)

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Board and the revenue and associated costs incurred or to be incurred can be reliably measured. Revenue is measured at the fair value of the consideration received or receivable net of rebates. The following specifics are used for the purpose of recognition of income.

a) Sale of Water (Normal Water Sales)

Revenue from sale of water is recognized according to the number of consumed unit within 30 days of time by the consumer, when the meters are read and when bills are processed within the system.

b) Other operating Income

Other operating income including new connection income is recognized on cash basis.

The revenue and expenses of the construction contracts are recognized by reference to the stage of completion of the contract activities at the balance sheet date. (SLAS 13)

c) Interest Income

Interest income is recognized as the interest/yield accrues unless the collectibles is in doubt.

d) Dividends

Dividend income is recognized on cash basis.

e) Rechargeable Works

Revenue from fixed price construction contracts is recognized on the percentage of completion method, measured by the work done of the contract.

2.6.2 *Expenditure Recognition*

a) Expenses are recognized in the income statement on the basis of a direct association between the cost incurred and the earning of specific items of income. All expenditure incurred in the running of the business and in maintaining the property, plant & equipment in a state of efficiency has been charged to income in arriving at the profit of the year.

   Repairs and renewals are charged to Income Statement in the year in which the expenditure is incurred.

(b) Borrowing Costs (SLAS 20)

Borrowing costs are recognized as an expense in the period in which they are incurred. The borrowing costs on the fund specifically obtain for ongoing capital projects have been capitalized and included in the carrying amount of the projects.

(c) Finance cost

The finance cost comprises interest payable on borrowings other than borrowing cost capitalized ongoing projects.

(d) Taxation

Economic Service Charge and Income Tax paid during the year as per Inland Revenue Act No. 38 of 2000 have been charged under taxation.

		2010 Rs.	31.12.2009 Rs.
3.	**Sale of Water**		
	Metered Sales	10,747,447,037	9,549,004,592
	Bulk Sales	149,369,059	139,875,613
	Bowser Supply	40,610,465	37,985,243
	Less: Rebates	(193,367,026)	(56,889,581)
		10,744,059,534	9,669,975,867
4.	**Direct Operating Expenses**		
	Personnel Cost	3,346,857,362	2,830,486,142
	Pumping Cost	2,103,576,701	2,025,805,684
	Chemicals	412,960,647	421,702,108
	Repairs & Maintenance	560,276,883	485,572,435
	Establishment Expenses	248,970,965	229,811,749
	Rent, Rates, Taxes, Security & Other Expenses	389,084,987	328,571,593
		7,061,727,544	6,321,949,712
5.	**Other Operating Income**		
	Capital Recovery Charges	381,631,564	332,066,729
	New Connection Income (Net)	360,228,281	315,880,823
	Fees & Other Charges	878,780,128	778,480,783
	Revenue Grants	(54,342,175)	(29,111,219)
		1,566,297,797	1,397,317,115
6.	**Administration Overheads**		
	Personnel Cost	1,895,652,327	1,501,223,118
	Repairs & Maintenance	111,424,296	88,397,353
	Establishment Expenses	347,104,027	293,280,628
	Rent, Rates, Taxes, Security & Other Expenses	210,676,692	179,367,044
		2,564,857,342	2,062,268,144
7.	**Other Operating Expenses**		
	Depreciation		
	Infrastructures	87,329,948	13,771,302
	Buildings	268,162,740	126,582,833
	Water Supply Scheme Structures	929,680,335	232,520,421
	Plant & Machinery - Pumping & Treatment	699,773,601	622,090,749
	Service/ Bulk Meters	14,251,366	8,546,779
	Plant & Equipments - Distribution & Transmission	848,923,368	531,963,473
	Mobile Equipments	19,052,905	7,671,201
	Survey Equipments	161,712	608,270
	Laboratory & Other Equipments	93,529,359	10,664,376
	Furniture Fittings & Office Equipments	53,974,161	138,433,421
	Passenger Cars	36,511,634	6,919,412
	Van, Buses & Jeeps	151,026,099	8,839,250
	Lorries & Trucks	186,973,548	49,886,212

	31.12.2010	31.12.2009
	Rs.	Rs.
Tractors & Trailors	21,574,186	2,511,891
Water Bowsers & Heavy Vehicles	80,136,831	120,642,430
Motor Cycles	2,439,264	998,995
Lease Vehicles	3,242,007	-
	3,496,743,064	1,882,651,015
Amortization of Leasehold Land	-	196,628
Total Depreciation	3,496,743,064	1,882,847,643
Less: Depreciation for Grant Funded Assets	237,980,385	(472,995,570)
	3,258,762,679	1,409,852,073
Revaluation Deficit	3,684,342,399	-
	6,943,105,078	1,409,852,073
Bad & Doubtful Debts	23,264,041	77,696,461
Provision for Irrecoverable Staff Loans	1,762,215	3,192,315
Provision for Obsolete Stock	23,523,717	(4,440,808)
Retiring Gratuity	220,195,945	1,012,860,343
	7,211,850,996	2,499,160,384
8. Finance Cost		
Loan Description		
IDA 1700	41,470,868	54,202,068
IDA 1041	18,655,249	21,368,740
French - Trinco	1,852,722	2,006,896
French - Negombo I	605,395	819,713
French - Negombo II	788,796	1,042,121
Negombo Augmentation	67,132,267	42,980,182
French - Kurunegala	1,243,077	1,592,559
French - Badulla	1,472,192	1,891,246
French - Ambatale	22,320,384	27,834,872
ADB 817	54,028,148	70,633,804
ODA	493,103	602,239
ADB 1235	69,847,266	91,921,638
ADB 1575	116,547,681	144,029,095
USAID	559,845	577,282
ODA Matara - Nilambe	30,091,044	39,378,404
OECF SLP 19	25,861,801	31,656,429
OECF SLP 37	78,197,411	102,634,102
OECF SLP 49	188,786,981	248,407,989
OECF SLP 55	377,919,027	466,323,825
OECF SLP 71	72,053,539	82,346,902
OECF SLP 66	7,278,652	8,296,490
Kalmunai	1,141,068	1,394,807
KFW Nawalapitiya/ Ampara/ Koggala	39,133,806	45,766,719
EDCF - Greater Galle Korean I	42,247,791	52,132,690
EDCF - Greater Galle Korean II	28,173,946	35,261,528
ADB 1757	4,011,148	4,955,634
ADB 1993	175,613,522	165,210,846

		31.12.2010	31.12.2009
		Rs.	Rs.
	Nuwara Eliya - DANIDA	36,587,450	79,669,218
	Kandy South - DANIDA	88,386,216	34,060,497
	Greater Trincomalee	26,361,144	5,529,629
	Ambalangoda/ Weligama/ Kataragama	11,497,394	14,371,742
	Ambatale Remote Loan	9,009,724	11,051,180
	Ambatale Refurbishment	7,567,323	9,872,537
	Towns North of Colombo	15,555,224	1,763,940
	Greater Colombo Rehabilitation	10,370,867	3,587,861
	Kirindi Oya	9,318,928	7,023,184
	Greater Kandy Stage II SLP - 90	17,838,246	2,265,918
	Kelani Right Bank	121,939,394	83,430,597
	Kalu Ganga Stage II	3,979,568	-
	Local Loans	6,538,980	2,844,009
	Colombo North	5,338,420	6,589,613
	French - Anuradhapura	29,752,767	36,768,334
		1,867,568,375	2,044,097,076
	Less: Capitalized Interest on Construction Projects		
	Kalu Ganga Stage II	(3,979,568)	(35,261,528)
	ADB 1993	(175,613,522)	(165,210,846)
	Nuwara Eliya - DANIDA	-	(79,669,218)
	Kandy South - DANIDA	-	(34,060,497)
	Greater Trincomalee	(26,361,144)	(5,529,629)
	Ambalangoda/ Weligama/ Kataragama	-	(14,371,742)
	Towns North of Colombo	(15,555,224)	(1,763,940)
	Greater Colombo Rehabilitation	(10,370,867)	(3,587,861)
	Kirindi Oya	(9,318,928)	(7,023,184)
	Greater Kandy Stage II SLP - 90	(17,838,246)	(2,265,918)
	Kelani Right Bank	(121,939,394)	(83,430,597)
	Negombo Augmentation	(67,132,267)	(42,980,182)
		1,419,459,214	**1,568,941,934**
9.	**Other Non-Operating Income**		
	Investment Income	97,644,018	48,782,302
10.	**Taxation**		
	Economic Service Charge	105,273,966	89,009,061
	Income Tax	-	-
		105,273,966	89,009,061
11.	**Capital Work in Progress**		
	Construction work	50,180,850,647	51,007,831,186
	Rehabilitation	25,298,281,653	21,806,875,674
		75,479,132,299	72,814,706,861

NATIONAL WATER SUPPLY & DRAINAGE BOARD
9A - SCHEDULE OF FIXED ASSETS AS AT 31.12.2010

A

Code	Description	Rate of Dep:	Cost of Fixed Assets AS AT 01.01.2010 (A)	Addition During the year (B)	Trans/ Adju (C)	Disposals (D)	Cost of Fixed Assets As At 31.12.2010 (E) (A+B-C-D)	Fully Dep: Items (F)	Depreciable Assets (G) (E-F)	Depreciation 01.01.2010 (H)	Depreciation for disposals/ Adj.for depreciation (I)	Depreciation for Year 2010 (J) (GXRate)	Depreciation AS AT 31.12.2010 (K) (H-I+J)	Amortisation for Year 2010 (L)	Fixed Assets Written Down value 31.12.2010 (E-K-L)
101	Land Freehold		7,635,716,862	137,148,291			7,772,865,153		7,772,865,153			-			7,772,865,152.82
102	Land Leasehold		435,269,646	279,000			435,548,646		435,548,646			-			435,548,646.00
105	Infrastructure	2%	1,460,308,517	1,363,972,772			2,824,281,290		2,824,281,290	37,120,008	31,092,551	87,329,948	93,357,406		2,730,923,883.95
106	Building - Freehold	2%	4,872,264,512	419,386,657			5,291,651,169		5,291,651,169	1,322,626,259	1,318,160,629	268,162,740	272,628,370		5,019,022,799.03
108	Structures	1.67%	19,438,385,764	1,116,469,696			20,554,855,460		20,554,855,460	1,745,833,180	1,728,452,278	929,680,335	947,061,237		19,607,794,222.72
111	Plant & eq: pumping treatment	5%	6,698,336,077	1,521,877,868			8,220,213,945		8,220,213,945	4,886,564,766	4,890,337,849	699,773,601	696,000,518		7,524,213,426.53
113	Service meter	10%	597,254	30,000			627,254		627,254			62,725	62,725		564,528.97
114	Bulk water meter	10%	66,401,981	20,083,214			86,485,195		86,485,195	64,471,307	65,945,231	14,188,641	12,714,717		73,770,477.45
115	Plant & Eq: trans & dist:	1.67%	22,888,910,032	6,246,568,876			29,135,478,908		29,135,478,908	4,452,555,703	4,321,159,627	848,923,368	980,319,444		28,155,159,464.79
116	Mobile Eq:	10%	60,691,572	79,566,630			140,258,202		140,258,202	128,301,252	137,132,426	19,052,905	10,221,731		130,036,470.50
117	Survey Eq:	10%	847,216	14,900			862,116		862,116	6,962,633	6,710,129	161,712	414,216		447,899.75
118	Laboratory	10%	199,968,736	28,089,656			228,058,391		228,058,391	70,492,330	70,654,493	48,115,121	47,952,958		180,105,433.20
119	Other Equipment	10%	257,354,948	90,682,785			348,037,732		348,037,732	993,944,523	1,031,414,943	45,414,238	7,943,818		340,093,914.76
131/132/133	Furniture & fittings	10%	273,805,942	36,505,870			310,311,812		310,311,812	345,546,889	346,073,436	53,974,161	53,447,614		256,864,197.28
141	Motor vehicles cars	14.3%	96,732,709			379,100	96,353,609		96,353,609	55,507,526	64,941,548	36,511,634	27,077,611		69,275,997.64
142	Van busses & jeeps	14.3%	360,726,564			1,310,001	359,416,563		359,416,563	134,047,060	157,336,215	151,026,099	127,736,944		231,679,619.05
143/144	Lorries & trucks	10%	824,921,581	8,940,000		4,580,099	829,281,482		829,281,482	457,042,256	470,779,940	186,973,548	173,235,864		656,045,617.86
145	Tractors & trailers	10%	88,586,860	1,233,000		298,400	89,521,460		89,521,460	19,700,794	22,071,245	21,574,186	19,203,735		70,317,724.88
146/148	Water bowsers,Heavy veh:	10%	493,579,858			3,810,553	489,769,305		489,769,305	755,906,097	722,771,695	80,136,831	113,271,233		376,498,072.40
147	Motor cycles	14.3%	16,792,659	273,129		8,000	17,057,788		17,057,788	6,920,251	7,520,735	2,439,264	1,838,779		15,219,008.93
149	Lease vehicales	14%	17,003,532	5,667,844			22,671,376		22,671,376			3,242,007	3,242,007		19,429,369.23
					0										
	TOTAL		**66,187,202,821**	**11,076,790,188**	**0**	**10,386,153**	**77,253,606,856**	**0**	**77,253,606,856**	**15,483,542,834**	**15,392,554,969**	**3,496,743,064**	**3,587,730,928**	**-**	**73,665,875,927.74**

		31.12.2010	31.12.2009
		Rs.	Rs.
12. Non-Operating Assets		186,528,287	158,650,039
Non-Operating Liabilities		(161,145,829)	115,455,778
		25,382,458	43,194,261

Note: Non-Operating balances consists of aggregate of balances which are outstanding for a long period of time. The assignment to reconcile these balances have been awarded to an Accountancy firm in January 2004, and report has been submitted. This report is reviewed by an Audit and Management Committee and direct to do a reconciliation by the employee's with an incentive scheme.

13. Investments			
HDFC Shares		-	208,742
HDFC Investment for Staff Housing Loans		64,541,010	74,139,609
Bank of Ceylon Saving - I		-	1,655,075
Bank of Ceylon Saving - II		942,223	883,254
		65,483,233	76,886,680
14. Inventories			
Stock at Main Stores		179,426,440	213,247,142
Stock at Site Stores		3,067,082,627	3,078,020,128
Goods in Transit		72,629,229	2,035,788
Stock Adjustment		29,028,765	54,635,314
		3,348,167,061	3,347,938,373
Provision for Obsolete Stock		(65,497,048)	(41,973,331)
Total Inventories at Cost		3,282,670,013	3,305,965,042
15. Trade & Other Receivables			
Advance to Staff - Traveling		1,443,290	1,865,166
Advance to Staff - Salaries		3,009,915	2,575,747
HDFC Receivable		24,270	29,770
Festival Advances		10,749,904	10,943,704
Loans to Employee's - Distress		1,361,943,018	1,196,195,476
Loans to Employee's - Vehicle		14,838,288	18,532,294
Loans to Employee's - Special Advance		81,184	122,604
Loans to Employee's - Tsunami		91,730	1,686,480
Special Incentive Advances		25,049,581	27,855,183
VAT Receivable		1,445,442	458,763,913
WHT Receivable		1,310,065	40,005
Trade Debtors - Water	2,719,393,716		2,628,712,930
CMC Debtors	28,789,241		28,519,949
Sewerage Debtors	76,716,118		97,606,077
Other Debtors	61,505,759		62,820,334
	2,886,404,833		
Less: Provision for Bad Debts	(439,992,424)	2,446,412,409	(419,828,578)

	31.12.2010 Rs.	31.12.2009 Rs.
Debtors Collection Control	231,404,538	165,495,718
Suspense Debtors	72,992	72,992
Receivable on Interest & Others	4,424,718	8,377,940
Installment Debtors - New Connection	60,975,040	47,012,170
Installment Debtors - N/C (Low Income)	687,315	(36,671,146)
	4,163,963,700	4,300,728,728
16. Deposits and Advances		
Rechargeable Project Work	406,295,088	395,985,044
Advance to Suppliers	35,328,829	44,757,378
Advance to Contractors	73,057,383	74,490,859
Cash Advances Head Office	1,554,586	1,196,472
Cash Advances Regions	1,201,163	1,784,691
Other Advances	6,450,000	6,450,000
Advance to Contractors (Local Contract)	1,590,238,105	2,343,305,184
Advance to Contractors (Special Projects)	3,226,366,168	1,650,273,294
Pre Payments	870,000	1,468,299
Special Dollar Account	133,722,027	133,722,027
Other Short Term Deposits	91,286,467	101,558,033
Employees Security Deposits	2,117,714	2,757,461
Electricity Deposits	9,008,446	8,155,597
Telephone Deposits	28,767	66,267
	5,577,524,742	4,765,970,605
17. Investment		
Treasury Bills	357,413,810	100,000,000
Fixed Deposits	68,500,000	53,286,694
Savings Account with People's Bank - Ratmalana	57,142	46,058
Savings Account with Bank of Ceylon - Ratmalana	53,908	51,798
Savings Account with Bank of Ceylon - Dehiwala	15,683,082	12,009,223
Savings Account with Bank of Ceylon - Dehiwala	170,616,944	138,310,633
	612,324,887	303,704,405

			31.12.2010	31.12.2009
			Rs.	Rs.
18.	**Cash & Cash Equivalents**			
	Main Current Accounts		856,970,717	174,002,326
	New Connection Accounts		46,427,141	43,896,138
	Main Collection Account		226,116,259	302,330,046
	Internal Cash Transfer Account		3,301,488	5,113,855
	Cash Imprest Head Office		1,290,678	156,629
	Sub Collection Accounts		13,354,270	16,375,184
	Cash Imprests Regions		248,425	6,906,777
	Cash in Transit		6,010,768	47,973,458
	Cash Balance at the End		1,153,719,747	596,754,413
	Adjust:			
	New Connection Control Account		2,360,436	3,309,017
	Water Bill Collection Control Account		4,669,051	24,803,865
	Cash & Cash Equivalents		1,160,749,233	624,867,296
19.	**Capital Grants**			
	Foreign Grants		78,149,764,416	66,851,379,463
	Local Grants		470,219,209	338,521,700
			78,619,983,625	67,189,901,163
20.	**Capital Recovery Fund**			
	Balance at beginning of the year		2,150,618,551	1,818,551,822
	Amount appropriated during the year		381,631,564	332,066,729
			2,532,250,115	2,150,618,551
21.	**Loan Payable**			
	Foreign Loans through Treasury		22,451,615,595	19,517,083,197
	Local Loans		124,274,006	124,859,451
	Interest Payable		494,735,575	494,735,575
			23,070,625,176	20,136,678,223
22.	**Other Deferred Liabilities**			
	Retiring Gratuity Provision		2,402,977,185	2,333,955,232
	Customer and Employee Security Deposits		1,001,715,117	853,754,473
			3,404,692,303	3,187,709,705
	22.1 Movement of Retiring Gratuity Provision			
	Balance at the beginning of the period		2,333,955,232	1,442,337,046
	Add provision for the period		220,195,945	1,012,860,343
			2,554,151,177	2,455,197,389
	Less: Gratuity Payments during the period		(151,173,991)	(121,242,157)
			2,402,977,185	2,333,955,232
23.	**Creditors**			
	Rechargeable Work Customer Advances		1,264,869,393	1,072,039,002
	Contractors Retention		1,060,004,822	1,084,803,972
	Lease Hold Creditors	29,615,417		27,476,516
	Less: Interest in Suspense	(9,605,875)	20,009,542	(10,879,546)
			2,344,883,758	2,173,439,944

	31.12.2010	31.12.2009
	Rs.	Rs.
24. Loan Capital Payable in 2010		
IDA 1041	141,065,865	163,678,288
French - Trinco	20,556,464	20,556,464
French - Negombo I	5,037,467	5,037,467
French - Negombo II	4,490,036	4,490,036
French - Kurunegala	3,097,060	3,097,060
French - Badulla	4,080,480	4,080,480
French - Ambatale	49,479,984	56,321,059
ADB 817	131,404,027	155,799,463
IDA 1700	96,646,476	114,853,524
OECF - SLP 19	54,943,550	68,359,998
Kalmunai (Australia)	2,522,312	3,152,890
USAID	6,974,972	6,974,972
ADB (1235)	89,688,575	111,653,123
SLP 37	217,215,035	244,366,915
UDA - ADB III	132,440,547	132,440,547
OECF - SLP 49	220,772,759	275,974,534
OECF - SLP 66	33,473,280	27,894,400
Greater Galle I	81,245,753	67,704,794
Greater Galle II	14,673,930	-
Kandy - DANIDA	68,680,800	-
Nwara Eliya - DANIDA	26,004,210	-
UNIHA	7,185,871	-
ODA Hill Country	3,732,138	6,163,782
ADB 1757	6,996,189	5,830,157
OECF SLP 55	728,995,055	593,015,856
Matara/ Nilambe (ODA)	49,532,586	61,915,731
Ambatale Remote Loan	24,939,249	20,788,431
Ambatale Refurbishment Loan	21,722,729	18,102,275
Colombo North WSP	6,673,026	6,673,026
French - Anuradhapura	43,708,070	33,809,964
KFW Project Ampara	64,345,499	42,897,000
	2,362,323,996	2,255,632,239

	31.12.2010	31.12.2009
	Rs.	Rs.
25. Other Payables		
Creditors Control	125,883,574	139,058,407
VAT Payable	41,814,353	53,365,762
Security Deposit	2,108,742	623,931
Other Creditors	41,687,764	21,907,747
Refundable Tender Deposit	29,382,854	26,286,492
Salary Payables	112,258,613	100,773,472
With Holding Tax	1,420,225	2,075,584
VAT Payable to Inland Revenue	761,037,716	418,944,559
With Holding CIGF	172,716	1,080,577
With Holding VAT	16,983,344	4,135,047
Accrued Expenses	176,826,595	167,935,386
Provision for Cash Losses	1,075,000	1,075,000
Other Payables	1,730,805	1,730,805
	1,312,382,299	938,992,770

26. Capital Commitments

The committed Capital Expenditure for 2010 is Rs. 29,000 million for which the Government of Sri Lanka has allocated funds in the National Estimate or budget.

27. Directors Interests in Contracts

No director of the Board has a direct or indirect interest in the contracts of the Board.

28. Comparative Information

Prior years figures have been restated where necessary to confirm to the current year's presentation.

29. Directors Responsibility

The Directors take responsibility for the preparation and presentation of Financial Statements.

Auditor General's Report for the year ended 31st December 2010

Report of the Auditor General on the Financial Statements of the National Water Supply and Drainage Board for the year ended 31 December 2010, in terms of Section 14 (2) (c) of the Finance Act, No 38 of 1971

The audit of financial statements of the National Water Supply and Drainage Board (NWS&DB) for the year ended 31 December 2010, was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13 (1) of the Finance Act, No 38 of 1971. My comments and observations which I consider should be published with the annual report of the Board in terms of Section 14 (2) (c) of the Finance Act, appear in this report. A detailed report in terms of Section 13 (7) (a) of the Finance Act will be furnished to the Chairman of the Board in due course.

1.2 Responsibility of the Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Accounting Standards. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatements, whether due to fraud or error selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

1.3 Scope of Audit and Basis of Opinion

My responsibility is to express an opinion on these financial statements based on my audit. Audit opinion, comments and findings in this report are based on review of the financial statements presented to audit and substantive tests of samples of transactions. The scope and extent of such review and tests were such as to enable as wide audit coverage as possible within the limitations of staff, other resources and time available to me. The audit was carried out in accordance with Sri Lanka Auditing Standards to obtain reasonable assurance as to whether the financial statements are free from material misstatements. The audit include the examination on a test basis of evidence supporting the amounts and disclosures in financial statements and assessment of accounting policies used and significant estimates made by the management in the preparation of financial statements as well as evaluating their overall presentation. I have obtained sufficient information and explanations which to the best of my knowledge and belief were necessary for the purposes of my audit. I therefore, believe that my audit provides a reasonable basis for my opinion. 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.

2. Financial Statements

2.1 Opinion

So far as appears from my examination and to the best of information and according to the explanations given to me, I am of opinion that the National Water Supply and Drainage Board had maintained proper books of accounts for the year ended 31 December 2010 and except for the effects on the financial statements of the matters referred to in paragraph 2.2. of this report, the financial statements have been prepared in

accordance with Sri Lanka Accounting Standards give a true and fair view of the state of affairs of the National Water Supply and Drainage Board as at 31 December 2010 and the financial results of its operation and cash flows for the year then ended.

2.2 Comments on Financial Statements

2.2.1 Sri Lanka Accounting Standards

Instances of non-compliance with the Sri Lanka Accounting Standards (SLAS) observed in audit are given below.

(a) S.L.A.S - 3

A sum of Rs. 444.3 million spent on water supply projects which had been discontinued subsequently had been shown continuously under capital work-in-progress in the financial statements.

(b) S.L.A.S - 5

The stock in hand valued at Rs 3,282,670,013 as at 31 December 2010 had not been classified and shown in the financial statements.

(c) S.L.A.S - 9

Although Cash Flow Statement needs to be prepared to show the manner of generation and utilization of cash and cash equivalents, there was no evidence that actual cash out flows on acquisition of property, plant and equipment had been shown under cash flow from investing activities.

(d) S.L.A.S - 13

Revenue recognition of the construction contracts (Rechargeable work) had not been performed in compliance with Sri Lanka Accounting Standards.

(e) S.L.A.S - 18

(i) When an item of property, plant and equipment was revalued, the useful life had not been considered.

(ii) When an item of property, plant and equipment was revalued, the entire class of property, plant and equipment to which that asset belongs should be revalued. However assets belonging to the Board valued at Rs. 46.8 million in Matara office had not been revalued.

(iii) Property, plant and equipment used for operational activities during the period from 2002 to 2009 had only been capitalized at the end of the year under review. However, depreciation thereon had not been made for the previous years in the accounts.

2.2.2 Accounting Deficiencies

(a) Following observations are made in respect of work in progress amounting to Rs.75,843,711,555 shown in the financial statements for the year under review.

(I) Information relating to items valued at Rs. 979,750,333 shown under work-in-progress in Head office had not been made available to audit although called for.

(ii) Completed water supply projects and capital construction works valued at Rs. 1,749,927,354 had not been capitalized, and the reasons stated as non submission of completion reports, taking over certificates, fixed assets forms etc. Even though these assets had been in use, provision for depreciation had also not been made in the accounts.

(iii) Even though the construction valued at Rs. 114, 790,004 undertaken by the Board from external parties (Rechargeable work) had been completed and handed over to the respected parties, the value had been shown continuously under work in progress without being adjusted in the accounts.

(b) Following deficiencies were observed in respect of stocks amounting to Rs. 3,330,055,379 shown in the financial statements.

(i) Updating of the stock records was not satisfactory and it was observed that debit and credit adjustments amounting to Rs. 550,362,242 and Rs. 521,486,532 respectively had been made in the ledger accounts after the stock verification carried out in October with related to stock movements occurred during the period from January to October 2010.

(ii) Even though stock differences identified annually were transferred to a separate account, action had not been taken by the Board to fix the responsibility to the Officers concerned. This balance as at 31 December 2010 was Rs. 29,028,765.

(iii) Even though a computerized inventory management system had been implemented at a cost of Rs. 3 million at the main stores, the intended objectives could not be achieved due to failure of generating adequate information through the system. Further, differences totaling Rs. 35,860,672 had been observed between the ledger balances and the amounts generated by the computerized inventory system in respect of

main Stores. According to the Chairman of the Board a new computerized inventory system had been implemented by now.

(iv) Stocks in transit amounting to Rs. 1,144,232 had remained in the account for over five years without being adjusted.

(v) Unserviceable and non-moving stocks valued at Rs. 507,626,012 represented 16 per cent of the total inventories were remained idle in the stores for a long period of time.

(vi) Even though physical verification had been carried out in respect of Ambatale stores, the ledger balances had been accounted instead of verified balance and as a result the stock balance had been overstated by Rs. 3,350,532.

(vii) Stocks valued at Rs. 7,635,325 received from the foreign funded projects had not been accounted and further 933 items of chemical had not been valued and brought to the accounts.

(c) Following observations are made in respect of Value Added Tax (VAT).

(i) VAT recoverable aggregating Rs. 28,533,669 in respect of local purchases which had been disallowed by the Commissioner General of Inland Revenue had not been adjusted in the accounts and continuously being shown under current assets in the financial statements.

(ii) A contractor of the Secondary Towns and Rural Water Supply and Sanitation Project had paid Valued Added Tax amounting to Rs. 151,585,173 on behalf of the NWSDB, This amount had later been reimbursed to the contractor by the relevant project. Accordingly it had been brought to account of the project as receivable from the NWSDB, while only a sum of Rs. 72,917,861 had been shown as payable to the project in the accounts of the NWSDB. As a result a sum of Rs. 78,667,312 had been understated in VAT input account and VAT receivable amount of Rs. 151,585,173 had not been brought to the accounts.

(d) Following observations are made in respect of Foreign Loans.

(I) Interest payable on foreign loans for the year under review amounting to Rs. 3,706,802 had not been provided in the accounts.

(ii) As stated in the previous audit reports, no action had been taken to settle the long outstanding interest payable balance of Rs. 494,735,575 shown under long term liabilities since 1999.

(e) Following deficiencies were observed in respect of maintenance of bank accounts.

(i) Bank Reconciliation statements furnished to audit revealed that unidentified debit and credit balances aggregating Rs. 1,999,466 and Rs. 630,744 respectively had been brought forward for several years without being identified.

(ii) Cash and cheques deposits aggregating Rs. 480,498 had not been realized for a long period and continuously shown in bank reconciliation statement in June 2011 without being identified.

(iii) Cash in transit amounting to Rs. 469,424 had been remained unrealized since 1997.

(f) The test of revaluation of assets belonging to the Board had been handed over to the Department of Valuation in the year 2005 and after lapsed of five years the revalued amounts as at 31 December 2007 had been brought to accounts.
The following observations are made in this connection.

(I) Property Plant and Equipment in the Northern and Eastern Provinces amounting to Rs. 8,663,620,800 had not been revalued. Hence accuracy of the amount shown in the accounts could not be satisfactorily verified.

(ii) Twenty Nine vehicles belonging to the NWSDB were misplaced due to Terrorist activities and out of these the book value of 26 vehicles were Rs. 63,633,473. The cost of these vehicles had been accounted as a revaluation loss and removed from the books without being examined.

(iii) It was observed that the cost of property, plant and equipment as at end of the year under review had been understated by Rs. 1,594,655,643 due to calculation error.

2.2.3 Un reconciled Control Accounts

(I) The following control account balances had not been reconciled with the corresponding subsidiary records, schedules etc. as at 31 December 2010.

Description of Control Accounts	Amount as per Control Accounts	Amount as per Subsidiary Records	Difference
	Rs.	Rs.	Rs.
Water debtors Head Office	2,721,022,814	2,637,440,000	83,582,814
VAT payable (12500)	539,437	Nil	539,437
VAT payable new connection	4,409,605	291,123	4,700,728
VAT payable water billing	115,798	7,967,615	7,851,817
VAT payable water billing - Biyagama	6,227,151	2,738,827	8,965,978
VAT payable (12518)	4,722,762	2,357,177	2,365,584
Water debtors (3100)	63,370,100	64,142,256	772,156
Festival advances	10,749,904	10,642,756	107,148
Distress loan (Head Office)	1,235,866,508	1,235,610,664	255,844
Debtors control account (212)	231,404,538	179,436,794	51,967,744
Distress loan (Greater Colombo)	126,076,510	120,298,883	5,777,627

(ii) A proper system had not been introduced by the Board to reconcile the debtor's collection control account balances with individual balances. Hence a sum of Rs. 209,642,090 had been shown as debit balances in five accounts and a sum of Rs. 153,977,666 had been shown as credit balances in four accounts without been reconciled, which was identified as a major system weaknesses and at a test check revealed that the credit and debit balances of Rs. 6,893,441 and Rs. 3,670,621,512 respectively were remained outstanding for over 3 years.

2.2.4 Suspense Balances

(a) Non-Operating Balances .

The aggregate amount of unidentified and un-reconciled account balances carried forward since 1994 was Rs. 602,537,737 and Rs. 577,155,279 respectively due to the reasons such as lack of proper supervision and poor internal control. The continuation of such balances remained as without being reconciled was paved the way to incur losses to the Board through fraudulent transactions. Following observations are made in this regard.

(i) The attempt to reconcile such balances by assigning to the employees of the Board on the basis of incentives had become unsuccessful.

(ii) Although the service of an accounting firm had been obtained to reconcile those accounts at a cost of Rs. 1,035,000, the expenses incurred thereon had become fruitless as the suggestion made by the report had not been accepted by the Board.

(iii) Proper action had not been taken to ensure the security of confidential documents and therefore considerable number of such documents had been misplaced.

(iv) In addition to the aforesaid balances already named as inactive, there were unidentified balances amounting to Rs. 119,846,220 as at the end of the year under review.

(b) Rechargeable Works

Following observations are made.

(i) Although Customer Advances aggregating Rs. 222.9 million had been obtained in 3 years ago at the time of undertaking 50 contracts, details of current position and status of completion on such projects had not been maintained by the Board.

(ii) Out of such advances, a sum of Rs. 7,117,911 had remained as unidentified balances. Even though 19 projects amounting to Rs. 40,412,951 had been completed those balances had not been settled and handed over to the relevant parties. .

(iii) It was observed that in 3 instances, advances amounting to Rs. 9,614,817 had remained unsettled for a long period of time due to non- implementation of construction work.

2.2.5 Accounts Receivable and Payable

Following observations are made.

(i) According to schedules submitted to the audit, water debtors, Sewerage debtors and Colombo Municipal Council debtors as at the end of the year under review amounted to Rs. 1,892 million out of which Rs. 660. million or 35% had remained outstanding for over three years. The Board had not prepared age analysis for the balances outstanding over three years.

(ii) The sewerage and other debtors of the Colombo Municipal Council (CMC) aggregating Rs. 79.6 million had been outstanding for more than 3 years as at the balance sheet date and effective action had not been taken to recover the outstanding balances.

2.2.6 Non-compliance with Laws, Rules, Regulations and Management Decisions

12 Employees and 5 vehicles belonging to the Board had been released to the other institutions and Ministries during the year under review. Further it was observed that Rs. 3,434,862 had been spent by the Board as remuneration of the above employees contrary to Public Enterprises Circular NO :PED/12 of 02 June 2003.

2.2.7 Lack of Evidence for Audit

Following documents were not made available for audit.

No. of Items	Amount Rs.	Evidence not made available
Other Debtors	47,984,264	
Supply Advances	631,463	
Interest Receivable	4,424,718	
Trade Debtors	1,000,918,724	
Colombo Municipal Council Debtors	16,257,771	
Traveling Advances	261,032	Detailed
Bonus Deductible	25,033,581	schedules
Advance to Contractors	837,849	and age
Short-term Deposits	71,615,320	analysis
New Connection Installment Debtors	11,678,324	
Cash Advances to Ministry	6,450,000	
Advance for Petty Cash Purchases	120,290	
Employee Security Deposits	1,817,713	
Sewerage Debtors	6,317,419	
VAT Receivables	283,150	

3. Financial and Operating Review

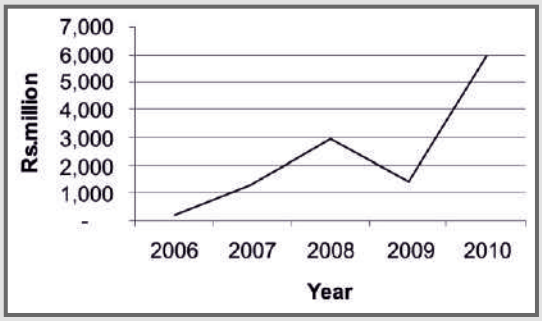
3.1 Financial Review

According to the financial statements presented, the working of the Board for the year ended 31 December 2010 had resulted in a net loss of Rs.5,955 million as compared with the corresponding net loss of Rs.1,425 million for the preceding year thus indicating an increase of loss by Rs.4,530 million mainly due to loss on revaluation of fixed assets charged against revenue. The following table gives a summary of the financial results at various stages.

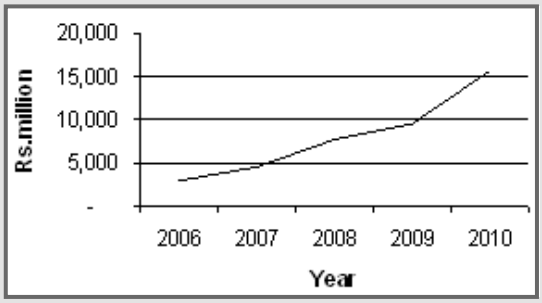
	Year ended 31 December 2010 Rs. million	2009 Rs. million
Profit before charging overheads and other operating expenses	3,682	3,348
Profit / (Loss) from operating Activities	(4,528)	184
Net Loss for the year before Tax	(5,850)	(1,336)
Net Loss for the year after tax	(5,955)	(1,425)
Accumulated Loss	(15,588)	(9,560)

Although particulars relating to previous five years shown that the Board had earned direct operating profits in respect of each unit of production, the accumulated net loss had continued to be increased due to higher amount of overheads as depicted in the following charts.

Financial Losses



Cumulative Loss



3.2 Cash Frauds

The Cash Frauds amounting to Rs. 171.94 million, Rs. 52.46 million Rs. 21.38 million and Rs1.8 million had been committed by certain officers in the Board at Trincomalee, Kelaniya, Ampara Regional Office and Head Office respectively. The Board had paved the way for those frauds due to weaknesses in financial control, non robustness of the internal control systems, non execution of the introduced systems and weaknesses in supervision. Investigations in this connection are being carried out by the Criminal Investigation Department. However a sum of Rs. 1.075 million had been refunded by the officers concerned in respect of the fraud at the Kelaniya Regional Office. Though various actions had been taken to avert this situation at present, it is indicated that the internal control is still weak due to the existence of the following weaknesses.

(a) Controls on approving and validating of journal vouchers were very poor and it was observed that journal vouchers had been validated without considering the authority limits, without attaching supporting documents to the journal vouchers and without giving any narration on the voucher. Therefore validating of bogus vouchers or manipulating figures cannot be ruled out.

(b) Supervision on preparation of Bank Reconciliations were weak.

(c) Control accounts had not been reconciled in time and that leads to cumulating of such balances.

3.3 Operating review

3.3.1 Non Revenue Water (NRW)

Following observations are made.

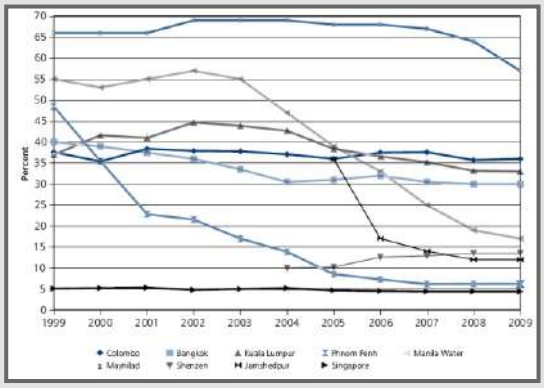
(a) The loss incurred by the Board due to Non-revenue water had not been identified and accounted separately, but it had been brought to account as an ordinary operating loss. Details are given below.

	2010	2009	2008	2007
Water Production (cu.m.)	469.0	449.0	440.2	424.0
Water Consumption (cu.m.)	321.5	309.6	300.9	285.3
Non-Revenue Water (cu.m.)	146.2	139.4	139.3	138.7
Non-Revenue Water (%)	31.17	31.04	31.64	32.71

(b) The Board had failed to achieve the targets on the rate of non-revenue water stated in the Corporate Plan with regard to Colombo Metropolitan as given below.

Year	Target as per Corporate Plan (%)	Actual (%)
2007	50	53.19
2008	49	53.96
2009	48	53.05
2010	47	52.03

The following graph indicates that non-revenue water rate in Colombo city is the second highest as compared with other major Asian cities. It was also observed that almost all the other major cities in the graph had managed to reduce the rate of NRW except Colombo City of which had managed to maintain the same rate for the last twelve years.



Source: Survey conducted by Asian Development Bank - 2009

Following observations are made in this regard

(I) Leakages of water, illegal connections, weakness in administration and water supplied free of charge to estate houses and common stand posts had been the reasons for the increase of non-revenue water rate.

(ii) Even though the measurement of produced water had been done by bulk water meters, significant number of meters were not functioning, thus the production had been computed on estimated basis. As such, the accuracy of these data was questionable. Even though new bulk water meters were installed during the recent time, bulk water meters required for certain areas had not been installed.

(iii) 77 per cent of the water distribution pipe lines in Colombo city were older than 55 years and 97 per cent of this distribution system was consisted with old iron pipes, thus resulted in the increase of leakages. Despite the urgent requirement of laying new pipes line no any long term plan had been prepared and implemented although large scale water supply projects had been commenced by the Board.

(iv) It was observed that water consumers had to incur an additional cost of Rs: 13.14 per each water unit which they consumed in the year 2010 and this additional cost was Rs. 9.27 in the year 2006 which indicate that this amount had increased by 41 percent over the last four years.

3.3.2 Foreign Funded Projects

There were 26 large scale projects and 6 Tsunami rehabilitation projects in operation with funds provided by foreign donor agencies as at the balance sheet date. Following observations are made in this regard.

(a) Even though number of large scale projects had been completed by the Board, no any Benefit Monitoring Evaluation (BME) had been carried out by the Board to identify the extent of outcome targets achieved.

(b) Most of the large scale foreign funded projects had not been completed within the initial project period and owing to project duration being extended enormously and as a result the cost had gone up due to extra work and price escalation.

(c) A sum of Rs. 42 million granted by the Treasury for three specific projects had been utilized for some other projects by the NWSDB without any approval from the Treasury and the relevant Donor Agency.

(d) Separate books of accounts had not been maintained by the Board with regard to certain projects in progress and as a result it was not possible to conduct a comprehensive audit.

3.3.3 Small Scale Local Funded Projects

Although sixteen small-scale projects had been commenced number of years ago, no action had been taken to complete them even after lapse of more than 10 years. It was observed that such duration was unfair in comparison with total amount spent on these projects.

3.3.4 Foreign Loans

Outstanding foreign loan balance as at the balance sheet date aggregating Rs. 25,434 million representing 15.8 per cent of the total assets. The interest on foreign loans for the year under review amounted to Rs. 1,867.5 million and it represented 15 per cent of the total revenue of the Board. Even though the Government had granted a concessionary rate of interest with effect from 2009, a significant amount of loan installments and interest could not be paid due to shortages of funds. The outstanding amounts as at 31 December 2010 compared with previous two years are given below.

	Loan Installment Rs. million	Interest Rs. million	Total amount Rs. million
2008	235.0	235.4	470.4
2009	330.5	1,060.6	1,391.1
2010	840.1	1,861.0	2,701.1
Total	1,405.6	3,157.0	4,562.6

3.4 Production and Distribution of Clean Water

According to the ten year development plan of the Government, now in operation, it is expected to supply adequate water to 80 per cent of the population by the year 2009, 85 per cent by the year 2013 and 90 per cent by the year 2016.

The Board had produced 469 million cubic meters of clean water during the year 2010. Comparison of this production with that of the year 2009 shows an increase of 4 per cent as compared with the increase of 2 per cent over the year 2008. The number of water service connections as at end of the year 2010 were 1,353,573 showing an increase of 6 per cent as compared with that as at end of the previous year. The increase as at end of the year 2009 was 6.6 per cent.

It was also observed that consumers had to wait for long period for water connections due to the vast increase in demand for pipe borne water. At present 39.2 per cent of the population are covered by pipe borne water schemes operated under the Board whilst it is expected to increase the coverage up to 45 per cent by the year 2015. Although, the Board had prepared data relating to the supply of pipe borne water, there was no proper procedure for the collection and preparation of accurate data so as to ensure whether the overall water supply had been made in accordance with the Government ten year Development Plan.

4. Systems and Controls

Weaknesses observed in systems and controls during the coverage of audit were brought to the notice of the Chairman of the Board from time to time. Special attention is needed in respect of following areas of control.

(a) Reconciliation of Control Accounts
(b) Fixed Assets
(c) Stocks
(d) Accounting
(e) Implementation of Projects
(f) Capitalization of completed water supply projects
(h) Internal Audit

H. A. S. Samaraweera
Auditor General

Abbreviations

ADB	- Asian Development Bank
AGM	- Assistant General Manager
BOQ	- Bill of Quantity
BOI	- Board of Investment
CAPC	- Cabinet Appointed Procurement Committee
CBO	- Community Based Organization
CMC	- Colombo Municipal Council
CP	- Corporate Planning
cu.m.	- cubic meter
DANIDA	- Danish International Development Agency
Dev.	- Development
DGM	- Deputy General Manager
DI	- Ductile Iron
DS	- Divisional Secretariat
ERD	- External Resources Department
FFP	- Foreign Funded Project
FIDIC	- International Federation of Consulting Engineers
GM	- General Manager
GN	- Grama Niladari
GOSL	- Government of Sri Lanka
GW	- Ground Water
HSBC	- HongKong and Shanghai Banking Corporation
IA	- Internal Audit
IDP	- Internally Displaced Person
IFRC	- International Federation of Red Cross
IT	- Information Technology
JBIC	- Japan Bank for International Cooperation
JICA	- Japan International Cooperation Agency
KfW	- Credit for Reconstruction
KMC	- Kandy Municipal Council
km	- kilo meter
m	- meter
M&E	- Mechanical & Electrical
MC	- Municipal Council
MD&T	- Manpower Development & Training
mg/l	- mili grams/ liter
MGD	- Million Gallons per Day
MIS	- Management Information System
mm	- mili meter
MOU	- Memorandum of Understanding
N/C	- Northern/ Central
NHDA	- National Housing Development Authority
NPD	- National Planning Department
NRW	- Non-Revenue Water
NWSDB	- National Water Supply & Drainage Board
O&M	- Operation & Maintenance
OIC	- Officer In Charge
P&A	- Personnel & Administration
P&D	- Planning & Designs
PAC	- Project Appraisal Committee
PD	- Project Director
PS	- Pradeshiya Sabha
PSC	- Project Steering Committee
R&D	- Research & Development
RDA	- Road Development Authority
RSC	- Regional Support Centre
RWS	- Rural Water Supply
S/E	- Southern/ Eastern
SACOSAN	- South Asian Conference on Sanitation
SCADA	- Supervisory Control and Data Acquisition
SIDA	- Swedish International Development Agency
SLS	- Sri Lanka Standards
SMS	- Short Message Service
T&C	- Tenders & Contracts
TA	- Technical Assistance
TCE	- Total Cost Estimate
TEC	- Towns East of Colombo
TNC	- Towns North of Colombo
TSC	- Towns South of Colombo
UC	- Urban Council
UDA	- Urban Development Authority
UFW	- Unaccounted For Water
UNICEF	- United Nations International Children's Education Fund
uPVC	- Unplasticised Poly Vinyl Chloride
USA	- United States of America
USAID	- United States Agency for International Development
WATSAN	- Water and Sanitation
WHO	- World Health Organization
WS	- Water Supply
WS&S	- Water Supply & Sanitation
WSP	- Water Supply Project
WSS	- Water Supply Scheme
WTP	- Water Treatment Plant

Corporate Information

Name of the Organization
National Water Supply & Drainage Board (NWSDB)

Legal Form
Government Owned Statutory Board

Date of Establishment
1974.03.01 by Act of Parliament
NWSDB Law, No. 2 of 1974

1992.03.11 the Act was amended
NWSDB (Amendment) Act, No. 13 of 1992

Tax Identification No.
4090 31820

VAT Registration No.
4090 31820 7000

Contact, Head Office
Galle Road, Ratmalana, Sri Lanka
Tel: +94 11 2638999 (hunting),
+94 11 2637194, +94 11 2611589
Fax: +94 11 2636449
Email: gm@waterboard.lk
Web: www.waterboard.lk

Line Ministry
Ministry of Water Supply & Drainage

Call Centre
1939 (24 hours)

Customer Care Unit, Head Office
+94 11 2623623 (During office hours)

Banker
Bank of Ceylon

Auditors
Deputy General Manager (Internal Audits)
Government Audit Unit

Secretary to the Board
Mr. K. K. Chandrasiri

Board of Directors

Eng. Karunasena Hettiarachchi - *Chairman*
Mr. K. D. Gamini Gunaratne - *Vice Chairman*
Mr. N. P. Thibbutumunuwa - *Working Director*
Dr. Y. D. Nihal Jayathilake - *Secretary, Ministry of Local Government & Provincial Councils*
Dr. P. G. Maheepala - *Addl. Secretary (Medical Services), Ministry of Health*
Mr. A. K. Seneviratne - *Director, Department of National Budget*
Eng. Sanath Panawennage - *Director/CEO, Arthur C. Clarke Institute*

Senior Management

Eng. K. L. L. Premanath - *General Manager*
Eng. S. K. Wijetunga - *Addl. GM (Western)*
Eng. B. W. R. Balasuriya - *Addl. GM (Water Supply Projects)*
Eng. G. A. Kumararathna - *Addl. GM (Sewerage)*
Eng. (Mrs.) G. S. Munasinghe - *Addl. GM (Corporate Services)*
Eng. (Mrs.) T. P. Lamabadusuriya - *Addl. GM (Southern/ Eastern)*
Eng. D. N. J. Ferdinando - *Addl. GM (Policy and Planning)*
Eng. (Mrs.) P. N. S. Yapa - *Addl. GM (Northern/ Central)*

Deputy General Managers of Divisions

Eng. (Mrs.) K. T. P. Fernando - *(Project Co-ordination)*
Mr. D. Thotawatte - *(Finance)*
Mr. H. Ariyasena - *(Personnel & Administration)*
Eng. A. W. Gunasekara - *(Commercial)*
Eng. N. M. S. Kalinga - *(Mechanical & Electrical Services)*
Eng. K. T. Karunadasa - *(Information Technology)*
Eng. G. K. Srimal - *(Development)*
Eng. D. S. D. Jayasiriwardene - *(Planning & Designs)*
Eng. R. S. C. George - *(Corporate Planning)*
Mr. W. A. J. Weerasinghe - *(Internal Audit)*

Deputy General Managers of Provinces/ RSCs

Eng. W. B. G. Fernando - *(Western - Central)*
Eng. K. R. Dewasurendra - *(Western - South)*
Eng. (Mrs.) M. K. Bandara - *(Western - North)*
Eng. M. A. M. S. L. Attanayake - *(Central)*
Eng. W. A. N. Wickramathunge - *(Sabaragamuwa/ Uva)*
Eng. L. L. A. Peiris - *(North Central)*
Eng. T. W. S. Perera - *(Southern) - Covering up*
Eng. M.K.Hapuarachchi - *(East)*
Eng. D. F. S. de F. Gunawardene - *(North)*

Deputy General Managers working as Project Directors

Eng. (Mrs.) C. J. D. Perera - *(Kalu Ganga WSP, Phase I - Stage II)*
Eng. J. R. B. Nadurana - *(ADB 5th project)*