



National Water Supply & Drainage Board

Annual Report 2011



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 the subject area of water supply and sewerage separately. The National Water Supply & Drainage Board is the only organization coming under the purview of this Ministry.





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NOTICE OF THE REPORT

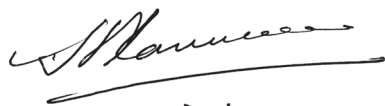
Hon. Minister of Water Supply & Drainage,
Ministry of Water Supply & Drainage,
Lakdiya Medura,
No. 35, Sunil Mawatha,
Pelawatta,
Battaramulla.

Dear Sir,

Annual Report and Financial Statements - 2011
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 2011.

Yours faithfully,



Karunasena Hettiarachchi

Chairman

National Water Supply & Drainage Board

10th October 2013



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



MESSAGE FROM THE SECRETARY, MINISTRY OF WATER SUPPLY & DRAINAGE



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The year 2011 has been a significant year in the performance of the National Water Supply and Drainage Board (NWSDB). The number of water supply connections increased to 1,449,301 and the water supply coverage to 42.4% .

Development activities took place expeditiously during the year and 93.8% of the capital budget allocation was used to implement projects in various parts of the country.

The support given by the NWSDB to shoulder the responsibilities of the National Community Water Trust is commendable. The Rural Water Supply Units of the Districts have effectively liaised with the Community Based Organizations which manage water supply systems for the smooth functioning of the water supply services.

The Ministry coordinated with all the stakeholders in the water and sanitation sector and held discussions on matters of importance.

Water sharing issues were concluded amicably with the Ministry of Irrigation and Water Management. Preparatory action was taken to draw up regulations to prevent sand mining in the vicinity of water intakes and to control excessive ground water extraction from bore holes for industrial or bottling purposes.

I wish success to the staff of the NWSDB in their endeavours to provide high quality services to the community in the ensuing year.

A handwritten signature in black ink, consisting of stylized letters and a long horizontal stroke.

A. Abeygunasekera

Secretary, Ministry of Water Supply & Drainage

CHAIRMAN'S REVIEW

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The National Water Supply & Drainage Board, being the sole authority for drinking water supply in Sri Lanka continued to extend its services in 2011 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 Corporate Plan of the NWSDB for 2007 – 2011 which was strategically spelt out to achieve set targets was successfully implemented for the final year. Members of the Board reviewed the progress of all quarters and had taken crucial decisions to steer through the plan. The next Corporate Plan for 2012 to 2016 has been prepared and will be forwarded for approval of the Members of the Board. Focusing on internally displaced communities in re-settlement areas of the North and East, water supply and sanitation projects were started. Projects with the assistance of foreign donors such as Jaffna Killinochchi Water Supply & Sanitation assisted by the Asian Development Bank and Integrated Water Supply Scheme for the Un-served Areas of Ampara district – Phase III assisted by Australia were commenced.

“A total of Rs. 28.9 billion was originally allocated for the year and Rs. 29.3 billion was expended including supplementary provisions for the work done”

Implementation of ongoing capital projects and preparation of new project proposals for local and foreign funding continued in 2011. Among these, Rehabilitation & Augmentation of Kirindioya water supply project assisted by Austria, Hambantota, Batticaloa water supply schemes and the Tsunami Affected Area Rebuilding Project assisted by Asian Development Bank were completed successfully during 2011. Therefore, I am grateful to our donor agencies and other financiers for their generous and continuous assistance. In addition to that six small and medium water supply projects were completed.

A total of Rs. 28.87 billion was originally allocated for the year and Rs. 29.34 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 2011 without any increase of the water tariff, although we have proposed a tariff revision, which will be taken into consideration in 2012.

Methods by which customers could make their bill payments have been further enhanced. Using Short Message Service (SMS) technology via their mobile phones for bill payment is in progress and it is intended to launch it in 2012. It was possible for customers to register with the NWSDB's web site and thereafter make monthly payments through the web using their Credit Cards as well.

As a new initiative, it has been decided to construct a plant for bottled drinking water, conforming to Sri Lanka Standards in order to cater to 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, such as JICA assisted Capacity Development for NRW Reduction in Colombo City. In addition to that replacing buried valves, bundle pipes, defective meters and detection of unauthorized connections were major activities carried out during the year, in a big scale. Consequently, the island-wide UFW has reduced from 28.55% to 28.13% by the end of the year and the UFW of Colombo City has been reduced from 41.53% to 40.28%.

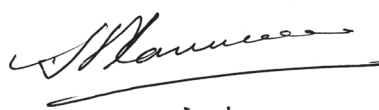
The Mechanical & Electrical services division is fully equipped with energy measuring equipment to carry out energy audits to reduce the high energy cost of operations. Three major energy efficiency improvement projects have been completed during the year which has resulted in Rs. 6 million annual savings.

We are thankful to the multilateral and bilateral agencies and all other donors who assisted us in our development works during the year.

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 roles and responsibilities 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 orderly functioning of the organization.

We believe that the drinking water and sewerage facilities we provide throughout the country will positively contribute towards people's health, social standards and livelihood. We will endeavor to continue this service by simplifying procedures as far as possible. If there were any lapses on our part in providing drinking water or sewerage services, we request customers to bear with us. Meanwhile, we will endeavor to provide better and efficient service to all those who seek our services.



Karunasena Hettiarachchi

Chairman

National Water Supply & Drainage Board

OUR KEY PLAYERS

Board of Directors

01 Eng. Karunasena Hettiarachchi

*B. Sc. Eng. (Hons.), M. Sc. (Leuven)
C.Eng., MIE (SL), MIEPSL*
Chairman, NWSDB

02 Mr. K. D. Gamini Gunaratne

Vice Chairman, NWSDB

03 Mr. N. P. Thibbutumunuwa

LLB, BA

Working Director, NWSDB

04 Dr. Y. D. Nihal Jayatilake

*MBBS (Colombo), M. Sc. (Medical Administration)
Secretary, Ministry of Local Government & Provincial Councils*
Board Member, NWSDB (up to 2011.07.29)

05 Dr. P. G. Maheepala

*MBBS, M. Sc., MD, MBA, DBS, DED, DPM, D (Mgt.)
Additional Secretary (Medical Services) Ministry of Health*
Board Member, NWSDB

06 Mr. A. K. Seneviratne

*B. Sc. (Hons.), PGD (Business and Financial Administration)
Director, Department of National Budget
Ministry of Finance & Planning*
Board Member, NWSDB

07 Eng. Sanath Panawennage

*M. Sc., MBA, C. Eng., MIE (SL), MIET (UK)
Director & CEO, Arthur C. Clarke Institute for Modern
Technologies, Ministry of Science & Technology*
Board Member, NWSDB

08 Mr. W. G. Premalal

*B.L.E
Senior Assistant Secretary
Ministry of Local Government & Provincial Councils*
Board Member, NWSDB (w.e.f. 2011.08.16)

Secretary to the Board

Mr. K. K. Chandrasiri, JP

*B.Sc. (Hons.) Business Administration
PGD (Foreign Affairs), MIM (SL)*

The Board met on 14 occasions during the year 2011.

Senior Management

09 General Manager

Eng. K. L. L. Premanath

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

10 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. Kummarathna (Sewerage)

*B.Sc. Eng. (Hon.), M.Sc. (UK), C.Eng.,
FIE (SL), MICE (Lond.), MIWEM (Lond.)*

Eng. (Mrs.) G. S. Munasinghe
(Corporate Services) (up to 2011.12.28)

*B.Sc. Hon. (Civil Eng.), DSE (Netherlands),
Dip. in Bus. & Fin. Admin, FIE (SL), MICE (Lond.)*

Eng. (Mrs.) T. P. Lamabadusuriya
(Southern/ Eastern) (up to 2011.08.16)

B.Sc. Eng., FIE (SL), M.Sc. in Water & Waste Eng. (UK), C. Eng.

Eng. D. S. D. Jayasiriwardene
(Southern/ Eastern) (w.e.f. 2011.09.01)

B.Sc. (Eng.) Hons., C.Eng., FIE (SL), M.PH. (Univ. of Hawaii)

Eng. D. N. J. Fernando
(Policy and Planning)

B.Sc. Eng. (Hon.), C.Eng., FIE (SL), MCIWEM (UK), MICE (Lond.)

Eng. (Mrs.) P. N. S. Yapa

*(Northern/ Central)
B.Sc. (Eng.) FIE (SL), C.Eng. M.Sc. (Struc. E.), UK*

11. 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. N. M. S. Kalinga (Production - Western)
*B.Sc. Eng. (Hons.), MIE (SL), C.Eng.,
 Dip. Sanitary Eng. (Netherlands)*

Eng. W. A. N. Wickramathunge (M&E)
B.Sc. (Eng.), MIE (SL), C.Eng.

Eng. J. Chandradasa
*(Information Technology) - Covering up
 B.Sc. (Eng.), C.Eng., MIE (SL)*

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)
*(up to 2011.08.31 & covering up afterward)
 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. R. M. A. S. Weerasena (Internal Audit)
B. Com (Sp.), PGDBM (Col.), ACA

12. 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. S. G. J. Rajkumar (**Sabaragamuwa**)
*C.Eng., FIE (SL), M.Sc. in Sanitary Engineering,
 M.Sc. in Environmental Engineering and Management*

Eng. M. I. A. Lathiff (**Uva**)
M.Sc. Eng. (Russia), C.Eng., FIE (SL), MIE (India), PG Dip., BFA (SL)

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

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

Eng. R. H. Ruvinis (**Southern**)
B.Sc. Eng. (Hon.), MBA, FIE (SL), C.Eng.

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

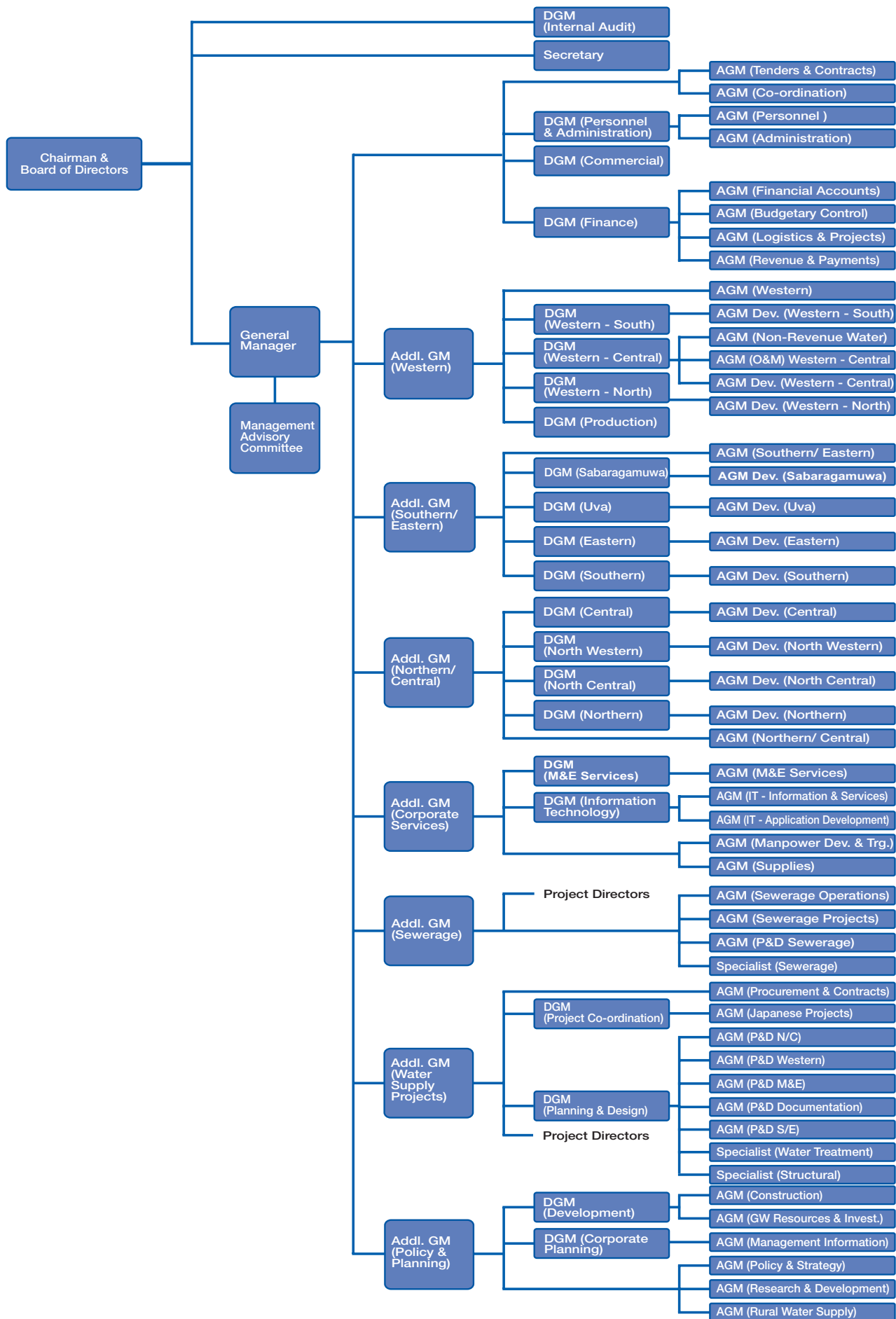
Eng. D. F. S. de F. Gunawardene (**Northern**)
B.Sc. Eng., C. Eng., MIE (SL), M. Eng. IHE (Delft)

13. Deputy General Managers working as Project Directors

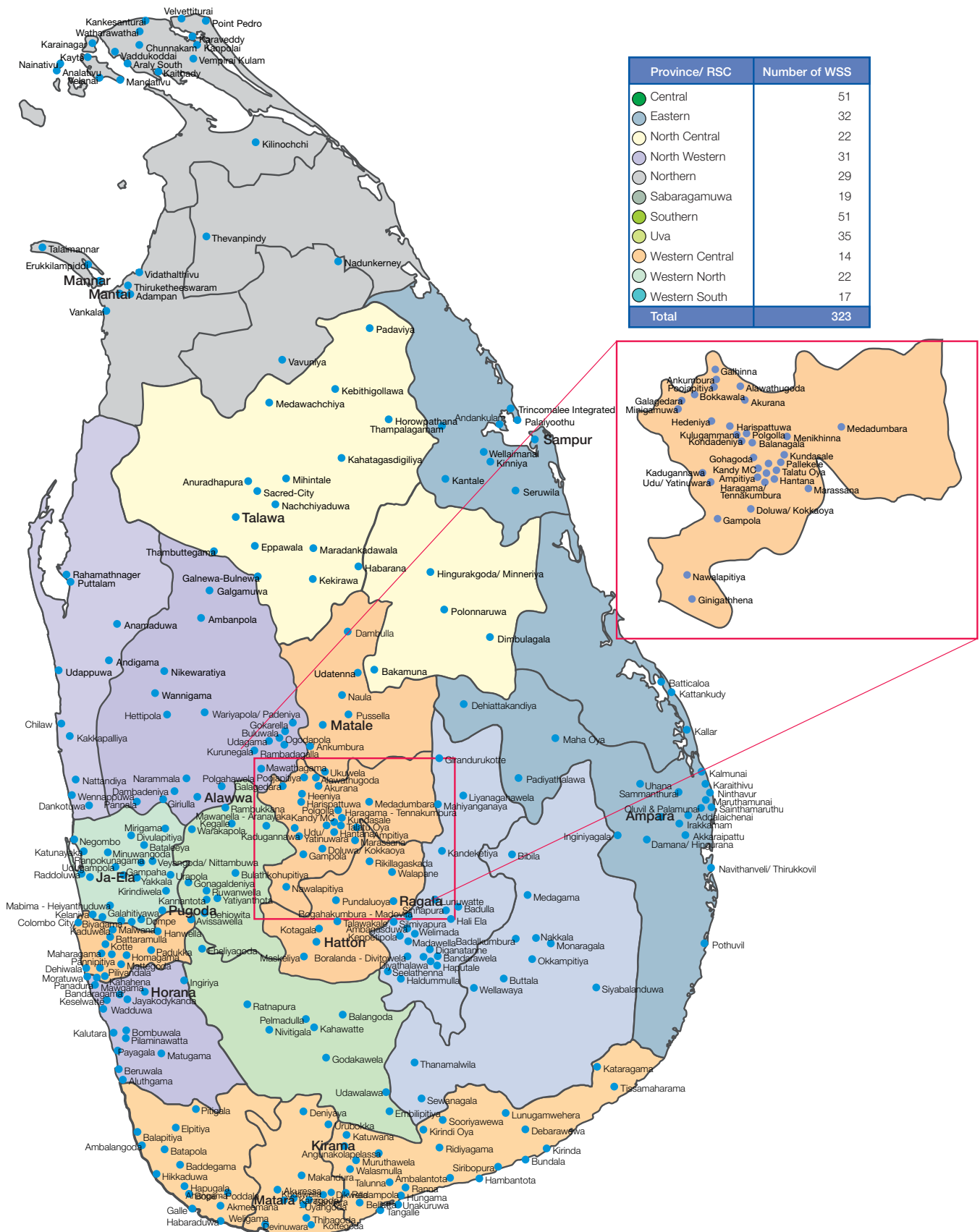
Eng. (Mrs.) C. J. D. Perera (**PD - Kalu Ganga Water Supply Project - Phase I - Stage II**)
*B.Sc. Eng. (Hons.), MIE (SL), C. Eng., Dip. Sanitary Eng.
 (Netherlands), Dip. Environmental Eng. (SL)*

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.*

ORGANISATIONAL CHART



EXISTING WATER SUPPLY SCHEMES



CORPORATE PLANNING

Status of the Corporate Plan Corporate Plan 2007 - 2011

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

The NWSDB continued to work towards the achievement of the goals and objectives set out in the Plan. Special emphasis was given to formulating policy matters, setting procedures and planning items relating to the fifth 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. It was held 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. Quarterly progress on the Corporate Action Plans 2011, was presented to the Members of the Board by every manager responsible for particular goals (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 2011.

Corporate Plan 2012 - 2016

Arrangements were made in 2010 to prepare a new Corporate Plan for another 5 year period. A special committee was appointed for this by the General Manager, comprising of 15 senior managers of the NWSDB. Collection of information from relevant sections such as, forecasts

“The draft Corporate Plan 2012 - 2016 was circulated among the senior managers of the NWSDB and stakeholders...”

for water supply connections, plant capacity for treated water production, staff, expenditure, power consumption, reduction of NRW, investment plan, loan repayment schedule, etc., were completed in 2010.

The committee members worked hard in spite of their busy schedules of work in 2011 and prepared a draft Corporate Plan for 2012 - 2016, holding several meetings. Then the draft Corporate Plan 2012 - 2016 was circulated among the senior managers of the NWSDB and stakeholders for their review and comments. Also the draft Corporate Plan 2012 - 2016 was uploaded to the NWSDB website. A workshop was held on 18th July 2011 with the representation of all the stakeholders, Board Members and senior managers of the NWSDB, to review the draft Corporate Plan 2012-2016. The comments received were incorporated thereafter in the draft document. The Master Action Plan required to implement the Corporate Plan 2012 - 2016 was also discussed by the committee in detail, goal by goal spending considerable time. The draft Corporate Plan and Action Plans for 2012-2016 were being finalized to obtain approval from the Board of Directors.

Progress Towards Stated Goals

Goal	Key Objectives	Target end 2011	Achievement end 2011
1. Increase WS and sanitation coverage	1.1 Total Pipe-borne water supply coverage 1.2 Piped sewerage coverage 1.3 Access to safe drinking water supply coverage 1.4 Total sanitation coverage	40.3% 3.0% 82.7% 86.5%	42.4% 2.3% 82.9%* 85.7%*
2. Improve operational efficiency	2.1 NRW (island-wide) 2.2 Total staff for 1,000 connections 2.3 Expenditure on power to total recurrent cost 2.4 Maintenance expenses to total recurrent cost 2.5 Establishment expenses to total recurrent cost	30.0% 6.8 22.0% 7.0% 10.0%	30.4% 6.4 22.6% 4.9% 10.5%
3. Achieve customer satisfaction	3.1 Public awareness programmes to be carried out (schools/other)	25 Nos.	42 Nos.
4. Increase commercial viability	4.1 Estimated bills to total number of bills 4.2 Collection efficiency 4.3 Accounts receivable from - (a) domestic and commercial institutions (b) Government institutions	5.0% 100.0% 50 days 60 days	2.8% 99.0% 55 days 44 days
5. Ensure greater accountability & Transparency	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 6.2 In-country external training (no. of persons) 6.3 Overseas training (no. of persons)	160 250 80	175 116 125
7. Provide facilities and service support to rural and marginalised communities	7.1 RWS Schemes maintained by CBOs under the the NWSDB backup support	6.0%	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 is available.

KEY PERFORMANCE

There are 323 major, medium and small water supply schemes in operation under the NWSDB's purview. Out of these, 31 schemes cover major cities and 292 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.

95,728 service connections were provided during the year, bringing the population that was covered with piped drinking water supplies by the NWSDB to 32.3%, indicating that the target for total pipe-borne water supply was exceeded by 2.1%.

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 6.4. The NWSDB continued institutional development activities during 2011 too same as in previous years (page 36 for details).

“Significant reduction in NRW in Colombo City during 2011 figured out as 2% (including estimated 0.8% reduction of free water)...”

The last tariff revision for water was made in mid February 2009 after four years. Therefore, the debt service commitment could not be fully met with respect to the years 2009, 2010 and 2011 as the implemented tariff revision in 2009 was not adequate.

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 10% of the water supplied) are excluded, unaccounted for water in Colombo City would be 40%. If the authorized but unbilled water supply in Colombo City is excluded, NRW in the Western Province and nationwide would be 30% and 28% respectively. In general, NRW is being maintaining the same level as in 2010, Island wide.

Significant reduction in NRW in Colombo City during 2011 figured out as 2% (including estimated 0.8% reduction of free water), with the tremendous efforts taken by the appropriate staff responsible, achieving the target fully.



	2010	2011	Variation (%)
KEY STATISTICS: WATER SUPPLY			
No. of Water Supply Systems	315	323	2.2
Piped Water Production (million cu.m.)	469	490	4.5
Piped Water Consumption (million cu.m.)	321	342	6.5
Domestic Connections (Nos.)			
(a) Western Province	599,846	630,157	5.1
(b) Other Provinces	648,330	706,679	9.0
Total Domestic Connections	1,248,176	1,336,836	7.1
Public Stand Posts (Nos.)			
(a) Western Province	4,375	3,940	(9.9)
(b) Other Provinces	2,541	2,436	(4.1)
Total Public Stand Posts	6,916	6,376	(7.8)
Non-Domestic Connections (Nos.)			
(a) Western Province	50,087	57,401	14.6
(b) Other Provinces	48,394	55,064	13.8
Total Non-Domestic Connections	98,481	112,465	14.2
Total No. of Service Connections	1,353,573	1,449,301	7.1
Average Household Monthly Consumption (cu.m. per house connection)			
(a) Western Province	17.14	17.22	0.5
(b) Other Provinces	13.18	13.16	(0.2)
Average Household Bill Value per Month (Rs.)			
(a) Western Province	566.17	573.21	1.2
(b) Other Provinces	310.23	319.03	2.8
Total Revenue (Rs. million)	12,409	13,343	7.5
Total Recurrent Expenditure (Rs. million)	10,537	11,033	4.7
Non-Revenue Water (%)			
(a) Western Province	34.82	34.03	(2.3)
(b) Other Provinces	26.65	25.02	(6.1)
(c) Island-wide	31.55	30.36	(3.8)
O&M Staff/ 1,000 Connections	5.52	5.25	(4.9)
Total Staff/ 1,000 Connections	6.66	6.35	(4.7)
Average Recurrent Cost of Water Production (Rs./cu.m.)	22.42	22.50	0.4
Average Total Cost/ Unit Sold (Rs./cu.m.)	39.80	40.78	2.5
Average Unit Revenue (Billing/ Consumption) (Rs./cu.m.)	38.76	39.07	0.8
Collection Efficiency	1.00	0.99	(1.0)
Deep Wells (Nos.)			
(a) Drilled	299	372	24.4
(b) Successful	243	326	34.2
Development Expenditure (Rs. million)	26,389	29,337	11.2
KEY STATISTICS: SEWERAGE			
Sewerage Connections in Dehiwala-Mt. Lavinia Sewerage System	2,221	2,413	8.6
Sewerage Connections in Kolonnawa Sewerage System	1,488	1,595	7.2
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	4,868	5.1
Total No. of Connections Maintained by Greater Colombo Sewerage Section	10,637	11,173	5.0

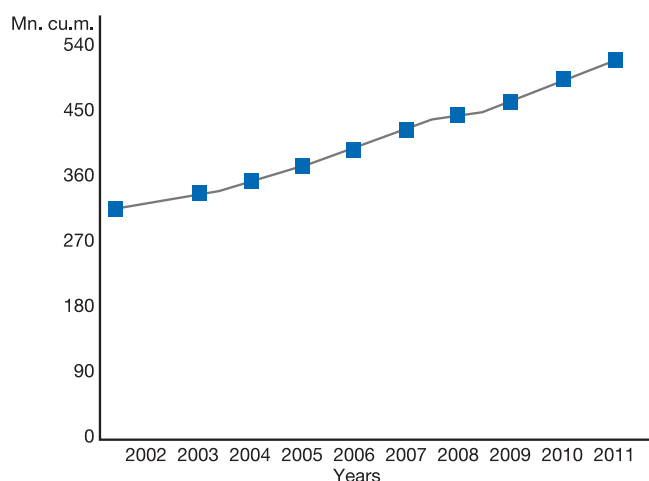
SUMMARY OF OPERATIONS

WATER SUPPLY

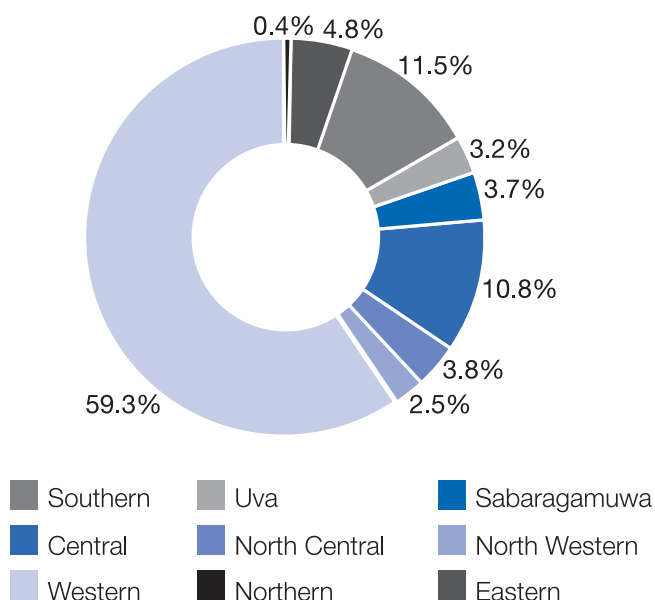
Drinking Water Production

The total quantity of drinking water produced in 2011 was 490 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 59% 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



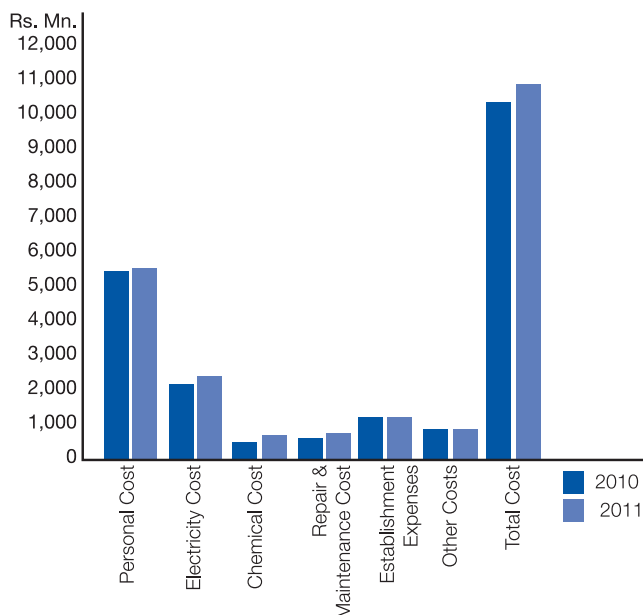
Water Production by Provinces



Cost of Production:

Breakdown of the cost of production (Rs. million) in comparison with 2010 is shown below:

Cost of Production



Cost of Production per m3 (per 1,000 litres)

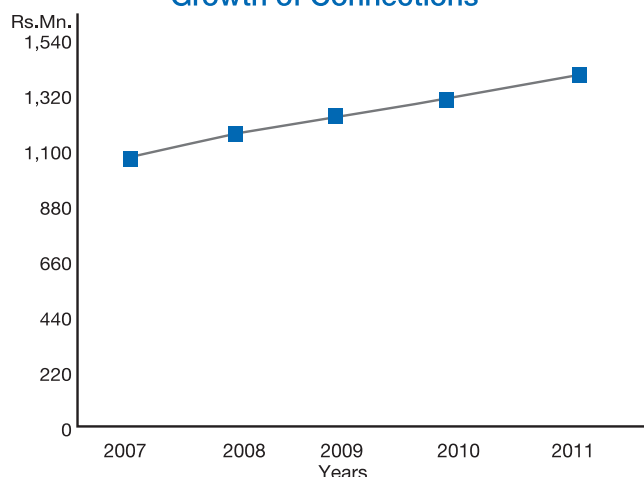
2010	2011
39.80	40.78

Cost of Production = Total Cost / Units Sold
 = (Total Recurrent Cost + Interest on commissioned projects + Depreciation) / (Quantity sold)

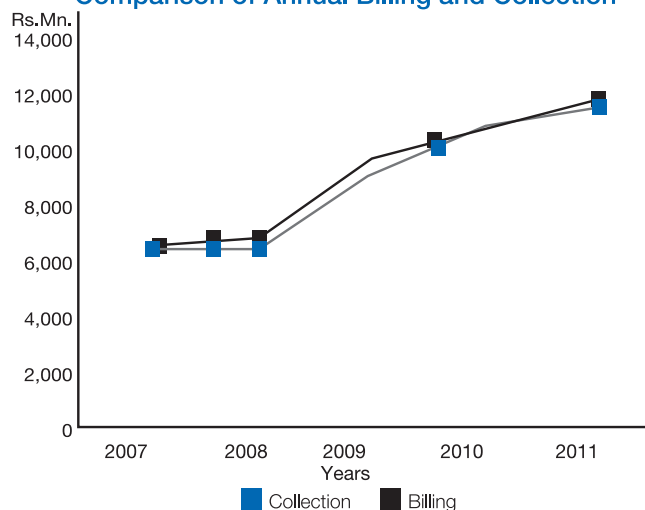
Comparison of Service Connections

Province/ RSC	No. of Connections Province/ RSC-wise			NWSDB Region	No. of Connections Region-wise		
	As at end Dec. 2010	As at end Dec. 2011	Change %		As at end Dec. 2010	As at end Dec. 2011	Change %
Western - Central	349,372	363,664	4.1	Priority	2,747	2,723	(0.9)
				Colombo City	126,613	129,504	2.3
				TEC North	128,862	133,700	3.8
				TEC South	91,150	97,737	7.2
Western - North	141,601	152,628	7.8	TNC	99,616	107,422	7.8
				Gampaha	41,985	45,206	7.7
Western - South	163,335	171,266	4.9	TSC	88,816	91,269	2.8
				Kalutara	43,778	45,520	4.0
				Panadura	30,741	34,477	12.2
Central	164,259	179,688	9.4	Kandy North	64,230	67,108	4.5
				Kandy South	54,122	63,077	16.5
				Kandy East	45,907	49,503	7.8
North Western	40,947	46,686	14.0	Kurunegala	40,947	46,686	14.0
North Central	62,579	67,294	7.5	Anuradhapura	62,579	67,294	7.5
Sabaragamuwa	69,264	73,258	5.8	Ratnapura	30,955	33,287	7.5
				Kegalle	38,309	39,971	4.3
Southern	203,820	222,472	9.2	Hambantota	68,350	74,883	9.6
				Matara	65,922	70,689	7.2
				Galle	69,548	76,900	10.6
Uva	56,771	59,192	4.3	Bandarawela	35,217	36,162	2.7
				Monaragala	21,554	23,030	6.8
Northern	6,456	7,087	9.8	Jaffna	1,058	1,355	28.1
				Mannar	5,398	5,732	6.2
Eastern	95,169	106,066	11.5	Ampara	25,371	21,116	(16.8)
				Trincomalee	29,663	33,662	13.5
				Akkaraipattu	40,135	45,394	13.1
				Batticaloa	-	5,894	-
Total	1,353,573	1,449,301	7.1	Total	1,353,573	1,449,301	7.1

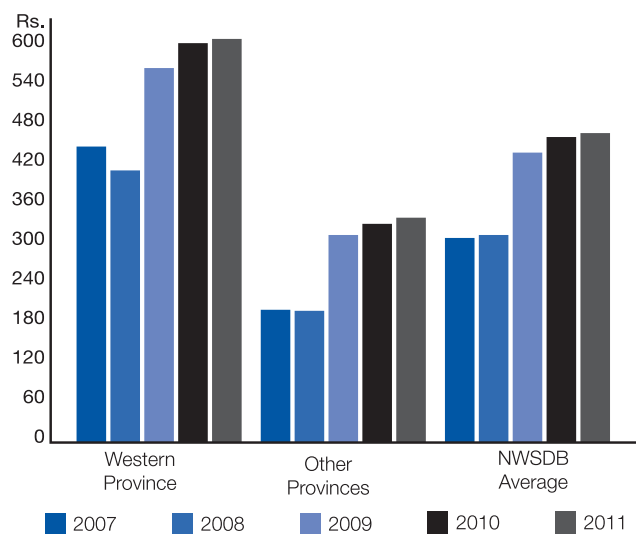
Growth of Connections



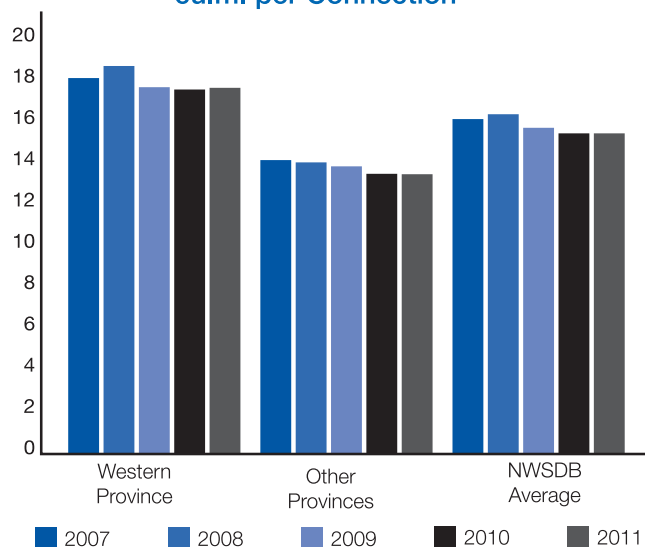
Comparison of Annual Billing and Collection



Average Household Monthly Bill



Average Household Monthly Consumption cu.m. per Connection



Billing Statistics

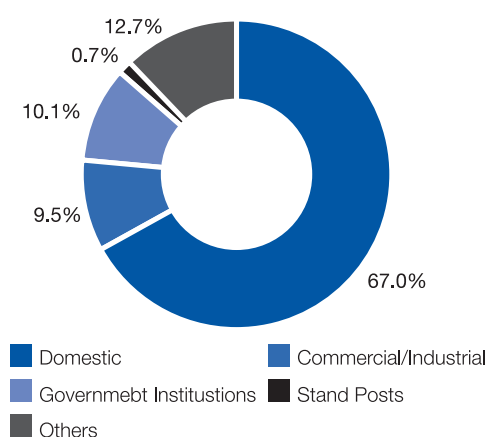
Description (Rs.Mn.)	2010	2011
Billing Target	11,890	13,429
Actual Billing	12,409	13,343
Collection Target	12,658	13,464
Actual Collection	12,453	13,209

Quantity of Water Sold and Revenue by Consumer Categories (2011)

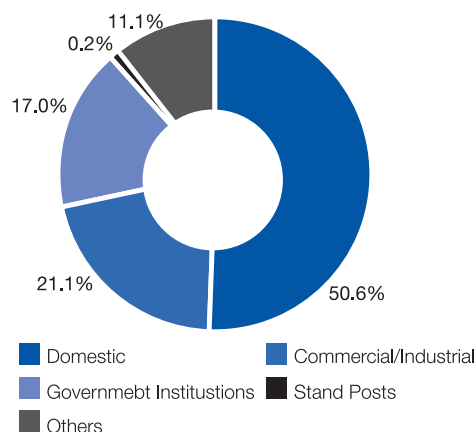
Consumer Category	Quantity sold cu.m '000s	%	Revenue Rs. million	%
Direct billing #	230,697	71.5	6,747	54.4
Schools	4,560	1.4	103	0.8
Tenement gardens	11,123	3.4	285	2.3
Public stand-post supply	2,409	0.7	32	0.3
Government institutions, NWSDB premises	34,895	10.8	2,268	18.3
Commercial and industrial	32,824	10.2	2,815	22.7
Tourist hotels	2,308	0.7	181	1.5
Shipping	172	0.1	78	0.6
Board of Investment	7,387	2.3	445	3.6
Religious premises	4,320	1.3	98	0.8
Subtotal	330,695	96.0	13,052	97.8
Bulk billing	10,738	3.3	189	1.5
Others*	3,157	1.0	102	0.8
Grand Total	344,591	100.0	13,343	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 was imposed for sewerage connections from January 2008. About 86% of sewerage connections outside Colombo Municipality area have been entered for sewerage tariff as at end of 2011 and monthly income in December 2011 was about Rs. 2 million.

Dehiwala-Mt. Lavinia Sewerage Scheme

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 2,397.

Kolonnawa Sewerage Scheme

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 1,595 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 7,158 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 are disposed of via two sea outfalls, one at Wellawatte and the other at Mutwal.

Energy Management

The energy management programme of the NWSDB achieved substantial progress and activities upgraded to a higher level qualitatively and quantitatively.

M&E Services Division is fully equipped with energy measuring equipments to carry out water energy audits for energy management works at NWSDB.

Meanwhile Manpower Development & Training Division has carried out awareness programmes on importance of Energy Saving.

The savings due to the tariff category rectifications, mechanical and electrical capital works and other energy saving projects, which were completed in previous years, were continued during the 2011 and it caused a higher accumulated savings. Energy audits carried out for 28 water supply schemes in 2011 will be encountered estimated annual energy saving of Rs. 20 million for its energy audit recommendations for a estimated investment of Rs. 65 million. A Special project appraisal committee was appointed for Energy Conservation Projects in 2011. Seven energy efficiency improvement projects have been approved by the special PAC with the total investment of Rs. 76 million against the estimated annual savings of Rs. 32 million. The implementations of these 7 projects have been scheduled for 2012 with allocated funds for rehabilitation works for 2012.

Three major energy efficiency improvement projects have been completed during 2011 with total investment of Rs. 29.6 million, caused Rs. 6 million annual saving. This includes improvement of Wakwella (old) intake pump system in Southern region and mechanical and electrical improvements at Ratnapura water supply scheme. The improved Wakwella pumping system saved Rs. 140,000/= per month by saving electricity directly and Rs. 160,000 per month by abandoning the Amugoda pump house. Another major activity done was replacement of old Edirisinghe road pumps at Kotte Jubilee pump house. It caused to save Rs. 76,300 per month from the electricity bill.

Eastern province pumping stations were operated in off peak hours. Electricity billing category of 11 pump stations in Vavuniya WSS was changed according to the request made by NWSDB Vavuniya regional office which reduced the unit price from Rs. 19.50 to Rs. 10.50. CEB enabled six pump stations to lie under industrial category. Eventually Vavuniya region could save Rs. 69,975 in October.

Meanwhile Western North RSC had saved Rs. 10,000 per month by passing Dekatana reservoir for gravity feeding tower.

Stores Management

Stores are an essential part of any supply chain. All organizations hold stocks. Stocks consist of all the goods and materials that are stored by an organization for future use. Therefore the stock gives a buffer between supply and demand. All the items in the stocks are enlisted and it is called as an inventory. Usually deliveries from suppliers are relatively large and infrequent which causes the maintaining a store.

Objects of maintain a store by the NWSDB

- Allow for demands that are larger than expected, or at unexpected times
- Allow for deliveries that are delayed or too small
- Allow for mismatches between the best rate of supply and actual rate of demand
- Decouple adjacent operations
- Avoid delays in passing products to customers
- Take advantage of price discounts on large orders
- Allow the purchase of items when the price is low and expected to rise
- Allow the purchase of items that are going out of production or are difficult to find
- Make full loads for delivery and reduce transport costs
- Give cover for emergencies

The store takes care of materials held in stock until they are needed, so the store makes sure that materials have the right conditions, treatment and packaging to keep them in good condition and are available quickly when needed. Stores Management and Inventory Management are so closely linked, because Inventory Management is the management function associated with decisions about stock, while the Stores Management is the operational function that physically looks after it. Stocks appear as current assets in a company's accounts. It is, therefore important to have an accurate value for stocks, as this affects the overall value and performance of the company. Therefore essential actions had been taken by the NWSDB to fix the responsibility of officers concerned in respect of stocks. Inventory management is the function responsible for all decisions about stock in an organization. It makes decisions for policies, activities and procedures to make sure the right amount of each item is held in stock at any time. Therefore a computerized inventory management system has been implemented at the main stores.

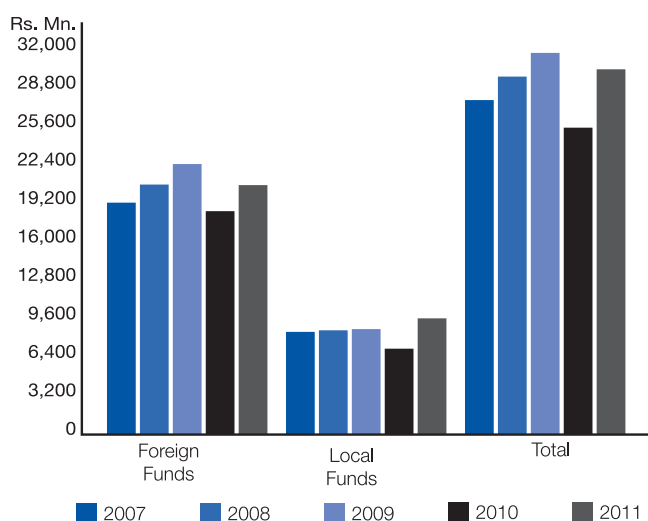
As the first step to stores management, regional support centers have started improving the quality of existing stores such as roof repairs to avoid leakages and apply relevant chemicals to avoid termite attacks in Kotte and Maligakanda stores. To improve stores in Mannar and Vavuniya, NWSDB spent Rs. 1.2 million. In Kegalle and Ratnapura regions Rs. 3.10 million and Rs. 1.03 million were spent respectively. RSC Eastern has awarded several tenders during the year under rehabilitation funds to improve stores conditions which was very poor due to the conflicts prevailed in the area. RSC Western South has newly constructed two stores buildings at Dehiwala and Moratuwa, expending Rs. 1.5 million and Rs. 2.0 million, while western North has designed three stores buildings to Veyangoda, Mahara and Negambo Water Supply Schemes which cost Rs. 4.9, 4.9 and 17.7 million respectively. Rs. 77.8 million was allocated for stores improvements in 2011, under financing minor rehabilitation works using rehabilitation funds. NWSDB has taken steps to maintain only the essential quantity of goods and minimize the quantity of slow moving and non moving items, which is really considered as a stagnation of the capital investments

SUMMARY OF INVESTMENTS

Financial Sources

The NWSDB was provided with Rs. 19,484 million as foreign funds for capital works on water supply and sewerage projects. The GOSL contribution was Rs. 7,148 million as counterpart funds. In addition, Rs. 2,050 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. 881 million in foreign funds and Rs. 275 million in local counterpart funds were provided.

Capital Budget Allocations

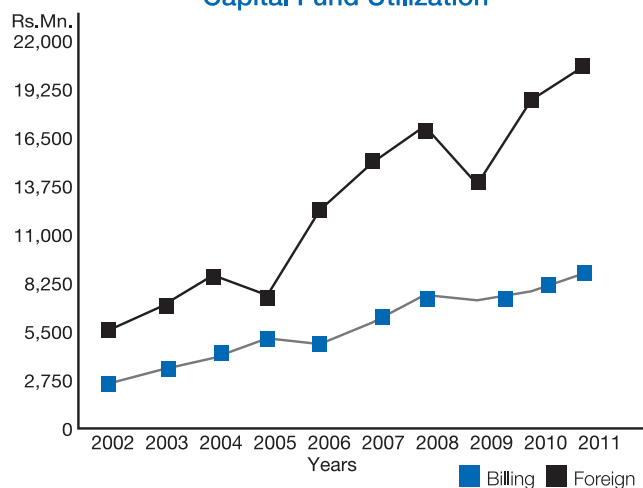


The annual allocation for Water Supply & Sewerage infrastructure had been increasing steadily from Rs.25.6 billion to Rs. 30.9 billion during the period 2006 to 2009. The year 2010 show a significant drop in allocation amounting to Rs. 22.9 billion. This year it has again increased to Rs. 29.8 billion.

Utilization of Capital Funds

Capital fund utilization stood at 98 % in 2011 where as it was 105.6 % in 2010. In this year NWSDB recorded maximum utilization within the budget where as in 2010 the budget was exceeded by 5.6% for which supplementary funds had to be requested.

Capital Fund Utilization

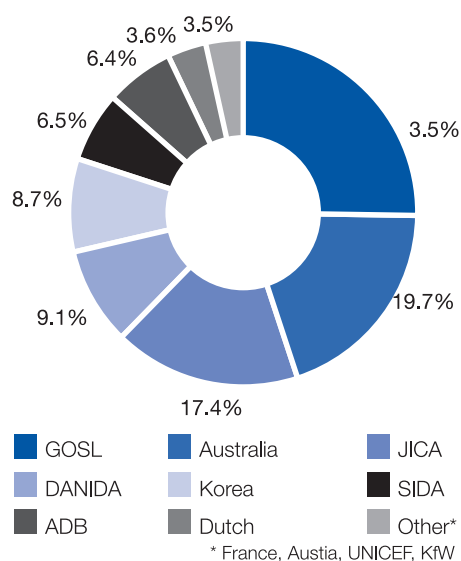


Comparison of Capital Fund Utilization

Description	2010		2011	
Foreign Component (Rs. million)	18,602	103.3%	20,531	101.0%
Foreign Aid Related Domestic Component (Rs. million)	6,410	112.4%	6,927	93.0%
Consolidated Funds for Local Projects (Rs. million)	1,377	105.9%	1,879	92.0%
Total	26,389	105.6%	29,337	98.0%

Some expenditures made and recorded towards the end of the 2011 will be actually paid in 2012. Accordingly excess 1% expenditure in foreign funds will not be an actual exceeding.

Foreign Aid Contribution by Donors and Related GOSL Funds



Rehabilitation and Improvement of Existing Water Supply Schemes

The NWSDB continued to rehabilitate and improve existing water supply schemes using Rs. 922 million of its own finances in 2011. These funds were used to improve the quality and quantity of water supplies, maintain NWSDB assets and undertake related support services in operational activities. That means NWSDB spent Rs. 572 million for rehabilitation, Rs. 214 million for reduction of NRW and Rs. 136 million for pipe line extension, stores improvement, land acquisition & investigation. 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 expended 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, 17 new water supply projects and rehabilitation and augmentation of a further 29 water supply schemes were continued in 2011.

92% of the 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 Total Cost Estimates have increased due 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, which caused a negative effect on contractors' cash flow.

District-wise Capital Works Programme 2011

District	Allocation 2011 Rs.Mn.	No. of Projects with Allocation	Beneficiaries
Ampara	47.6	1	16,000
Anuradhapura	333.0	2	45,540
Badulla	43.7	2	27,750
Colombo	106.2	2	180,420
Galle	52.0	2	6,600
Gampaha	60.0	3	52,000
Kalutara	146.7	1	210,000
Kandy	129.5	3	160,000
Kegalle	83.5	4	52,500
Kurunegala	94.0	1	45,000
Matale	47.2	2	37,000
Matara	66.3	4	38,500
Monaragala	276.3	4	40,600
Nuwara Eliya	9.3	1	15,000
Polonnaruwa	281.3	4	153,000
Puttalam	15.0	1	25,000
Ratnapura	247.5	6	152,200
Trincomalee	11.0	3	64,500
Total	2,050.0	46	1,321,610

Details of Completed Projects

RSC	Project Name	Capacity Increased (cu.m./Day)	Pipe Length Increased (km)
Southern	Rehabilitation & Augmentation of Kirindioya WSS	6,500	91
	Hambantota WSS (<i>Under ADB 4th project</i>)	15,000	205
	Thihagoda (<i>S&M WSP</i>)	1,800	14
	Udugama (<i>S&M WSP</i>)	1,200	14
Sabaragamuwa	Pattampitiya (<i>S&M WSP</i>)	2,000	14
	Wagantale (<i>S&M WSP</i>)	2,000	13
	Kiriella St. I (<i>S&M WSP - balance part, Stage II is ongoing</i>)	2,000	05
North Western	Nikawaratiya (<i>S&M WSP - balance part, Mahawa & Wariyapola are ongoing</i>)	6,195	95
Northern	Mandathivu (<i>UNICEF funded project in addition to the Capital Budget work</i>)	20	9
	Vempirai (<i>UNICEF funded project in addition to the Capital Budget work</i>)	10	10
Eastern	Batticaloa WSS (<i>Under ADB 4th project</i>)	40,000	330
Inter RSCs	Tsunami Affected Area Rebuilding Project (<i>ADB</i>)	2,100	95
	Water Supply Rehabilitation and Augmentation in Tsunami Affected Areas (<i>IFRC</i>)	-	254
	Total	131,780	1,448

EMPLOYEES

Staff Strength

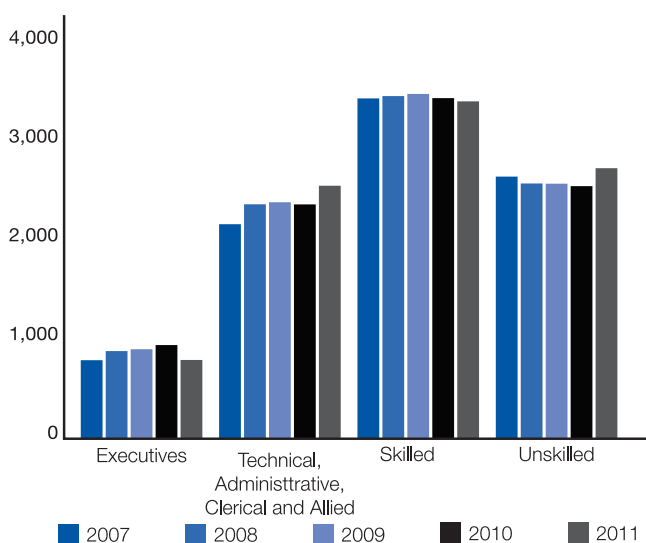
Staff	2010	2011	Variation (%)
(a) Permanent*	8,627	8,509	(1.4)
(b) Casual	202	453	124.3
(c) Contract	119	135	13.4
(d) Plant Technician Apprentice	70	102	45.7
Total	9,018	9,199	2.0

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

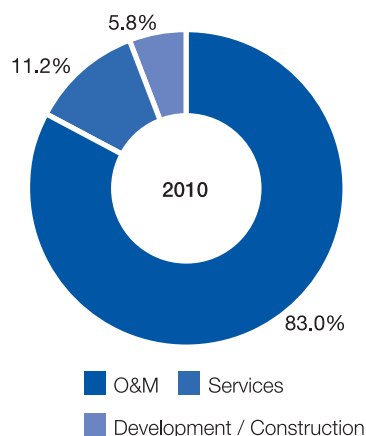
There were 135 contracts, 453 casual and 102 plant technician apprentices in addition to a permanent staff of 8,509 at the end of 2011. Most contract employees were recruited for work on foreign funded projects.

There were 428 permanent, 354 casual, 71 contract and 33 plant technician apprentice recruitments of various staff categories during January to December 2011. In the same period there were 546 permanent, 103 casual, 55 contract and 1 plant technician apprentice terminations which includes retirements, resignations, vacated posts and deaths in different categories of staff. This resulted in an increase of 181. The 102 plant technician apprentices are likely to be made permanent later.

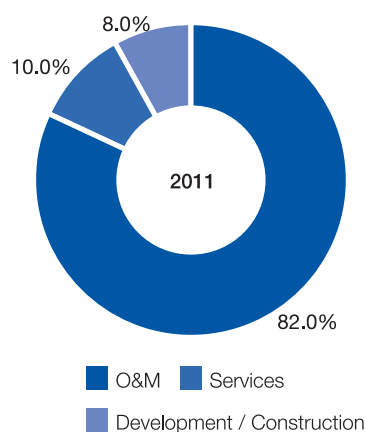
Distribution by Key Job Function



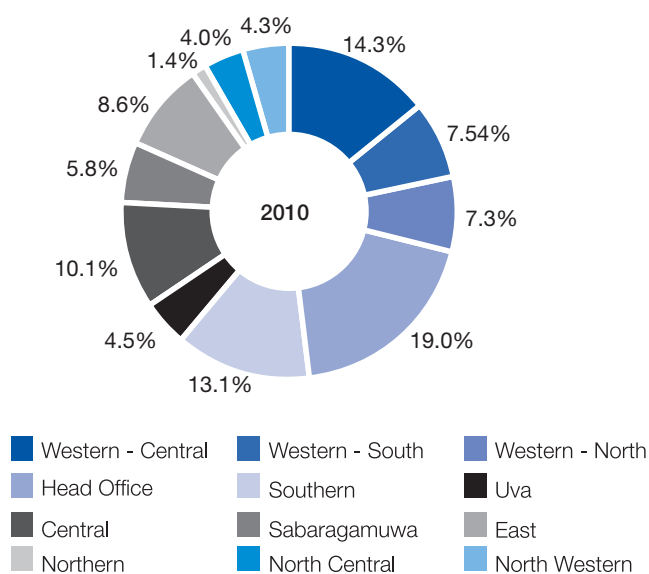
Staff Distribution by Key Job Functions



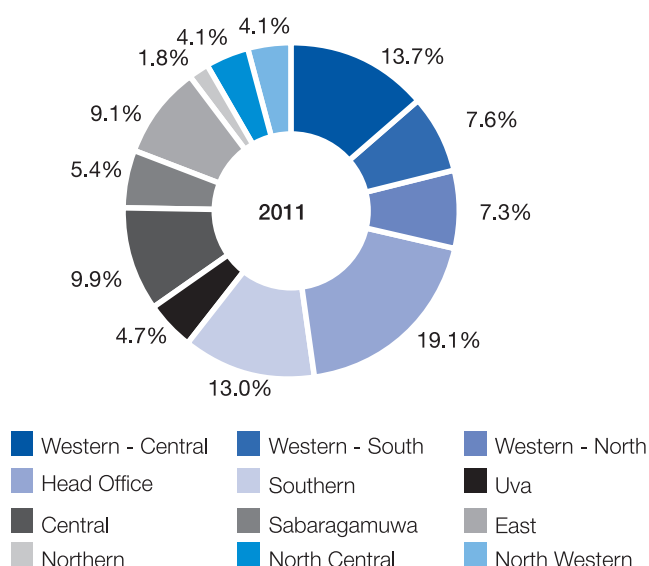
Staff Distribution by Key Job Functions



Staff Distribution by Location



Staff Distribution by Location



Staff Benefits

- An annual bonus of Rs.23,000 inclusive of a productivity incentive was paid.
- Encashment of unused medical leave was continued.
- 2,344 Concessionary Loans [1,931 ten months loan and 413 twelve months loans] (approx. Rs.576,164,101/=) have been disbursed among employees.
- Rs.9,492,881 (approx.) has been spent for medical expenses of employees for in-door and out-door treatments (including family members) & by-pass surgeries.
- 276 casual/contract employees have been made permanent in their posts in 2011.

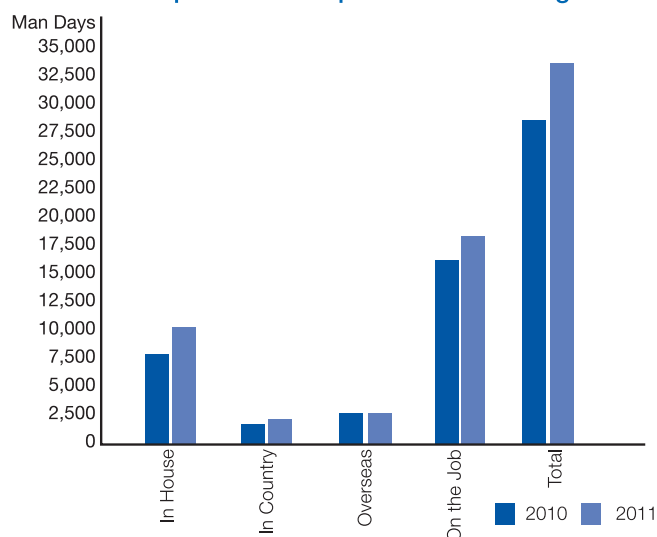
- Death donation for permanent employees.
- Local/ foreign training facilities to employees.
- Tea allowance of Rs. 500 for employees instead of tea being served in office.
- Loan facilities via Government Banks (housing loan from Peoples Bank and vehicle loan from Bank of Ceylon).
- Festival Advance of Rs.5,000 is continuously being paid to employees.
- Transport facilities are made available to the officers at a concessionary rate.
- Payment of Rs.612.25 per month to officers in Board Grade VIII to Board Grade V for reimbursement of mobile telephone bills (including CESS and Telecommunication levies).

STAFF REMUNERATION AND BENEFITS

Comparison of Staff Remuneration in 2010 and 2011

Description	2010 Rs.Mn	2011 Rs.Mn
Salaries	5,258	5,316
Contribution to Employees' Provident Fund	480	487
Contribution to Employees' Trust Fund	120	121
Total	5,858	5,924

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 2011

New Water Treatment Technology for chemists, Traffic Laws and Sign for Drivers, Surge Analysis for Engineer, Tamil Language Programme, Communication skills and

Telephone Etiquette for Telephone Operators, SQL Server 2005 and Oracle 8i, Computer Applications - Microsoft 2007, Excellence in customer care for RSC Western Staff and Autocad Maps.

Formal In-house Training Programmes, Seminars and Workshops

The Manpower Development & Training Division has conducted 175 in-house training programmes, related to the following areas during 2011, where 1,739 Executive Staff 1,230 Supervisors, 900 Clerical and Allied grades, 1,563 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 Wastewater Treatment, Construction Management, preparation of contract and Contract Payments, Leadership, Leak Detection and NRW Reductions, GIS/Arc GIS, Disciplinary Procedures, Administrative procedures, Financial Procedures, Material Management, Commercial Activities, Customer Care, Clerical Skills, Computer Applications, Office Management, Familiarization programmes for New Recruits, Refresher programmes, Road Safety Traffic Law & sign, Handling Machinery and Equipment in WSSs. Security Functions, Hydrology and Ground Water Improvement, Effective communication and telephone Etiquette, Office Aid Development.

Training at other Training Institutions in the country

176 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 2011

Higher National certificate course on Training and counselling - SLFI, Internal Auditing of Laboratory Management - Sri Lanka Accreditation Board, Improving Women Participation in Decision Making process - SLFI, Database Administration (SQL 2008) - Net Assists (Pvt.) Ltd., Improving staff capacity for Institution Development - SLFI, International Symposium on Social Management System - IESL, Human Talent Manager - SLFI, Office Management - SLFI, Managing Legal Methods in Government Institution - Institute of Labour Studies and Alternative Dispute Resolution Mechanism - ICTAD

Overseas Training/Official Visits

- I. Short term fellowships & visits - Overseas Training was provided to 72 employees of the NWSDB with the financial support of ADB, JICA, SIDA, DANIDA, Netherlands Fellowship Programme and KOICA. In addition 53 officers participated in pre shipment inspection visits, meetings, seminars, etc.
- II. Long Term Fellowships - During 2011 two places each for following long term fellowship have been received.
 - a. M.Sc. Programme in Municipal Water Infrastructure specialization Urban Water Engineering sponsored by NPP.
 - b. M.Sc. Programme in Water Supply Engineering sponsored by JBIC.

On-the Job Training

On-the Job training was provided to 215 Apprentices (Undergraduates, Special Apprentices, National Diploma in Technology/ Higher National Diploma in Engineering trainees, Craft Apprentices, Technical College, Institute of Chartered Accountants, AAT, Vocational Training Authority and National Apprentices & Industrial Training Authority Trainees).

CUSTOMER CONVENIENCE

The NWSDB is making several efforts to make matters easy for its customers, because efficient customer service is one of the most important objective of the organization.

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. During the year, 39,376 customer complaints (mainly leak repairs) have been handled with this system and it proves that the call center plays a huge role in informing and how people have embraced the service. At present, the NWSDB has reviewed the Customer Grievance System (CGS) module and implemented the Interactive Voice Response (IVR) solution for the call center.

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. This SMS service has got a significant popularity during the year and furthermore, according to the NWSDB officers, this SMS service has been accepted as the easiest service by the customers who are related to the young generation.

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.

Services

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, HNB, NSB, BOC, People's Bank, DFCC Vardana 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.

The SMS technology to pay water bill has not been implemented yet since a delay has occurred in the process of integration with the bank. At the beginning of the project it was designed to use Java script software to run the specific application related to the billing services. Later on the designers had come across some difficulties and decided to use another software to which the Bank of Ceylon did not agree, and they need to prepare a new act for it. Currently both parties are trying to solve the issue and intend to implement the service as soon as possible.

Public Awareness Programmes

Public awareness programmes were conducted by the Public Relation Unit of the NWSDB, mainly focusing on saving of purified water and prevention of water bodies from pollution by human activities, while giving the main concentration to school children.

24 school programmes covering Kalutara, Monaragala, Ratnapura and Colombo districts as well as other programmes at Karapitiya, Ragama, Kegalle, Welisara and Borella Lady Ridgeway hospitals and one programme at Mirihana police station were successfully conducted. Furthermore, through out the year, awareness programmes

were conducted for training teachers all over the island. In addition to these conventional awareness programmes, PR unit has initiated publishing paper advertisements to aware public to communicate on illegal water connections for prompt action.

Services

Assistance to sustain RWS by CBOs

More than 4,000 small scale rural water supply schemes were constructed by various government & non government organizations, in the country. They provide water to about 3 million people of Sri Lanka. Most of these schemes are maintained and operated by beneficiaries through their Community Based Organizations (CBOs). However, it was experienced that the lack of technical knowledge of the CBOs and the absence of proper institutional mechanism to provide back up support to the CBOs led to challenge the sustainability of rural water schemes during the past. As a result of this situation, number of requests made by such CBOs for technical and other support from the NWSDB has been dramatically increased.

In order to address this challenge, National Water Supply & Drainage Board, being the National Agency for provision of water supply services to the country, has taken steps to establish decentralized institutional set up and supportive mechanism to assist CBOs and to enhance water supply and sanitation services in the rural sector. Under this initiative, NWSDB has established district Rural Water & Sanitation (RWS) Units to provide required support, ensuring sustainability of facilities managed by CBOs. At present 19 RWS Units are in operation in Colombo, Kalutara, Gampaha, Kandy, Matale, Galle, Matara, Hambantota, Ratnapura, Kegalle, Badulla, Monaragala, Ampara, Trincomalee, Anuradhapura, Polonnaruwa, Kurunagala, Puttalam and Mannar & Vavuniya. Necessary funds have been obtained from UNICEF for purchasing furniture, equipment for these units and also for conducting awareness programmes for stake holders in district level. These units will provide technical, community development and financial management support to CBOs. They will also support to conduct water quality surveillance programme including support for preparation of Water Safety Plan to assure water quality of CBO managed water schemes. These units also encourage CBOs to organize themselves as CBO Forums as umbrella organizations and to share their experience and knowledge. Further, CBOs are motivated to liaise with Local Authorities, Divisional Secretariat, other local agencies, private sector and NGOs working in the area.

Capacity Building of CBOs

RWS Section assisted in providing technical, financial and social development training to CBOs with a view to strengthen the human, institutional and technical capacity of those organizations. The most of such training programmes have been designed and conducted through donor funded rural water supply and sanitation projects and some others directly by the RWS Units. It is evident, that the capacities

developed through training are being utilized by CBOs for successful maintenance of their WSSs.

Uva province RWS unit provided technical support to Girandurukotte WSS, implemented under Gamidiriya project and for Mahamewana Asapuwa WS.

Water Quality Surveillance Programme

Water quality surveillance programme 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 programme, 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 programme. National level steering committee was established to review the above programme. 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 actions taken and informed to CBOs to prevent such issues.

Under the financial assistance of UNICEF funded Water Sanitation and Hygiene (WASH) programme, number of awareness programmes were conducted to aware staff of community based organizations for the preparation of water safety plan for community managed water supply schemes. Regional staff of the NWSDB were trained for developing water safety plans for rural and urban WSSs. National level TOT (training of trainers) programme 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.

Preparation and implementation of Water Safety Plan workshops were held all over the island by relevant Regional Support Centers to knowledge the public and our own staff. Among all regions RSC Central, Uva and Western North were highlighted. Morethota catchment of Haliela WSS, Walasbedda Catchment of Bandarawela school WSS and Nayabedda –Ellethota catchment in Bandarawela WSS are catchment areas prepared with water safety plans in Uva province.

Rural Water 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 45).

RWS section has involved in preparing the following Rural Water Supply & Sanitation Projects.

1. Rural Water Supply and Sanitation Pilot Project for North & East Housing Reconstruction Project (Grant from AUSAID through World Bank). This project intends to provide drinking water supply facilities for 3,000 households and sanitation facilities for 900 households in Mannar and Trincomalee districts. Grant agreement was signed



Rural Water Supply Awareness

on 26th November 2011, RWS units were established in Trincomalee and Mannar district to implement the project.

2. Grant agreement has been signed for Japanese Funds for Poverty Reduction, improving Community-Based Rural Water Supply and Sanitation in Post-Conflict Areas of Jaffna and Kilinochchi districts. This project is being implemented in ground level.

In addition to above projects, following project proposals for Rural Water Supply and Sanitation have been approved by Project Appraisal Committee (PAC). Improvement of rural water supply and sanitation in Badulla and Monaragala districts to benefit 300,000 people with Total Cost Estimate of Rs.3,770 million, Improvement of rural water supply and sanitation in Kurunegala, Polonnaruwa and Matale districts to benefit 550,000 people with TCE of Rs.6,378 million, Improvement of rural water supply and sanitation in Southern Province to benefit 350,000 people with TCE of Rs.6,247 million and Improvement of rural water supply facilities in Puttalam district to benefit 46,114 people with TCE of Rs.2,236 million.

A competition among CBOs was held for the World Water Day 2011. The required funds for the awareness campaign for the competition was arranged from the UNICEF, IFRC and other NGOs.

Establishment of Database for Rural Water Supply

Necessary funds were received from UNICEF for establishment of Database for rural water supply. Under the above programme, computer facilities were provided for district level RWS units and software for data base has been installed in computers in RWS units. District level rural data base are linked to RWS division through existing servers in RSCs. Grama Niladhari Division (GND) wise data are being entered to above data base by District RWS units.

SACOSAN IV Conference

The Fourth South Asian Conference on Sanitation (SACOSAN IV) was held in Colombo from 4th to 7th April 2011, under the theme 'Sanitation enhances quality of life.' The National Steering Committee for SACOSAN and the NWSDB organized the International Conference while the Exhibition event under the SACOSAN IV was handled by the RWS Section

The Conference was attended by 320 delegates from the SAARC region and international agencies, comprising representatives from Governments, UN Agencies, Development Banks, sector INGOs, NGOs, Donor Agencies, and the media representatives from the region, Civil Society Organizations and School children. The Ministerial Summit held on the 6th of April was attended by six Ministers, Parliamentarians and Heads of delegates from 8 countries. The conference included three days of deliberations of four technical sessions and one day of selected field visits. The exhibition was widely participated by many state and private sector agencies

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, repair and rehabilitation of existing hand pump tube wells, surface water flow measurements, flushing and development of existing tube wells and cleaning of existing dug wells within resettlement areas in northern and eastern regions. Progress was completion of 754 hydro-geological investigations, 375 tube wells (deep and shallow), 111 pumping tests, 501 hand pump repairs and rehabilitations, 130 hand pump installations, 163 flushing and development of tube wells, 13 surface water flow measurements, 862 dug well cleaning and 2 bed rock profile activities.

Sociological Activities

Sociological inputs are categorised and listed as follows Development of sociological policies, strategies and guidelines

- Preparation of policy for incorporating socio-economic, ethnicity related cultural and religious values along with environmental concerns and gender issues during

planning and design phases of the projects. Several studies have been completed at RSC level.

- Prepare guidelines to balance the environmental concerns, technological development in harmony with different social climate. A guideline on preparation of small scale water and sanitation projects were completed.
- Develop policies and strategies for implementing water source security surveys, water quality surveillance programmes and water safety plans in consultation with the Chief Chemist, Water Resources Specialists etc. Awareness programmes were held to support regional staff on WSP (Water Safety Plan).
- Preparation of social safe guard and grievances addressing mechanisms through relevant project staff. Preparation of guideline was in progress.

Monitoring of Community Managed Water and Sanitation Systems

- Compilation and maintaining information and data on physical characteristics, economic aspects, social infrastructure, demography, social organization, gender issues, poverty, strengths and capacities of the NGO sector at the national level by establishing mechanism at regional level with the assistance of regional sociologists.
- Preparation and standardisation of policy documents with regard to user participation, participatory development and community management. Brief note on community participation has been finished.
- Promote and institutionalise the need based demand responsive approach and strategies of participatory development process in NWSDB planning process. It is being carried out through RWS units.

Project Appraisal in order to reflect Community Needs and Expectation

- Develop strategies to involve users in the planning process in the urban water supply systems and implement pilot level programs. A summary report of planning of small-scale water and sanitation projects has been finished.
- Involved in the Project Appraisal Process by preparing guidelines and reviewing the project reports submitted for appraisal.

Social Impact Studies and Benefit Monitoring Studies

- Study and analyse the social perspectives in reduction of UFW / NRW and developing appropriate mechanisms for the reduction programmes in consultation with other relevant officers. Brief report on above has been completed based on Moratuwa area.
- Impact study on Rain Water Harvesting Tanks, through Rain Water Harvesting Forum.

Planning and Facilitation of Community Managed Water Supply Systems

- Planning, coordination, facilitation and monitoring of

all community participatory activities in consultation with RSCs into project formulation process through regional sociologists attached to established RWS units.

- Coordinate with other relevant agencies and institutions for developing river basin committees and water sharing committees where relevant, in consultation with Water Resources Planning personnel and others through project sociologists.

Capacity Building and Training

- Several awareness programmes were held for sociologists in head office and regions.
- Document on social dimensions of water resources management has been developed.
- Training on planning of rural ware supply and sanitation was held by RWS staff for Local Authority Officials in order to make them aware on the process.

Non Revenue Water Reduction

Non Revenue Water (NRW) has four major components. They are physical losses, administrative losses, theft or unauthorized consumption, free water (un-billed but legitimate water consumption).

Water Supply for Low Income (Underserved) Settlement in Colombo City

Disconnection of common outlets and provision of individual connections to the underserved on concessionary terms is called Randiya Program. There are 1571 underserved settlements in Colombo City. The Government plans to relocate them outside Colombo City on a long term plan. However, the NWSDB continued to implement the Randiya Programme. The benefits of having individual connections improve hygienic conditions and enhance quality of life.

Most of the occupants in these settlements are daily wage earners, and to make it convenient for them to process the individual water supply application and make the required payments, mobile offices were conducted in four settlements during 2011. During this year, provision of individual connections were promoted in 113 Tenement Gardens (TG). Due to the delay in occupants voluntarily coming forward, repeated visits to the TGs has to be made. In total, 1,356 connections were provided after disconnecting 256 common outlets.

Metered Common Outlet in Colombo City

Due to the congestion in the Tenement Garden area, it was decided to provide a common outlet / yard tap for solely the use of a group of families which comprises around 5 families instead of individual connections. The consumption through this common outlet is metered and payment has to be made for the consumption by the beneficiaries. This practice was introduced in 2010. During 2011, 116 common outlet committees benefitted under this programme. To encourage regular monthly payment, a concessionary rate was introduced.

Reduction of Unauthorized Consumption

Identification of unauthorized consumption is carried out through flying squads headed by Engineering Assistants. Various methods are adopted to locate unauthorized consumers. Some of the methods adopted are, responding to information received from the general public (mostly anonymous), programmed search in areas for unauthorized consumption (specially in commercial premises), check all premises in identified area in a planned manner with the intention to cover the whole Colombo City. Special programme was conducted to compare 108,770 premises registered in the Electoral register with the list of NWSDB customers in Colombo City. Through the investigation, 290 unauthorized connections were detected and loss of



Bulk Measurement

revenue Rs. 7.8 million imposed. It is important to note that 77 defaulters made payment over Rs. 100,000. Table shows the changing patterns.

Steps Taken for NRW Reduction

a) Customer Premises Survey to Reduce Unaccounted for Water

Visits to customer premises were 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. The general observation was 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 only two zones are covered. Opportunity was extended for others in Colombo City to get the knowhow.

In carrying out this exercise, buried valves were surfaced and they were made to operate or replaced. Maps were updated with newly identified information.

The condition of the existing pipes were known. Bundled pipes were replaced. House connections given from different roads became known.

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. Locating suspected leaks has to be done during night time when there is no external disturbance from moving vehicles. A total of 108 leaks have been identified in 2011 out of which 32 were outside Western - Central area.



Community mobilization

b) Identification of leaks in private premises

Customer premises leak checking is done for a fee on the request of the customer. This service can be provided to even those who are not our customers. Customers make their request to the relevant Area Engineer for the required service and make the necessary payments. During 2011, 605 premises have been checked. Among them, leaks have been confirmed in 538 premises. In addition, 4 commercial premises were checked.

c) Flow and Pressure measurements

During 2011, 180 measurements of flow and pressure using portable instruments had been taken for calculation of NRW figures. Further, 134 measurements were taken on request from various parts of the country.

Details of Unauthorized Consumption Detection

Description	2007	2008	2009	2010	2011
No. of Premises checked	9,550	22,637	17,165	15,057	21,994
No. of Detection made	3,328	3,115	1,638	1,669	1,477
Recovery loss of Income (Rs. Mn)	39.60	65.83	45.61	55.07	56.23

Location of Underground Information

a) 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. Valves get covered when road improvements are made by other agencies. In 2011, 103 buried valves have been located in Western Central area and seven on request by other regions. In addition to that, 25 sewer chambers were located.

b) Identification of Underground Water Pipes

Water lines, Sewers, telecommunication cables and power cables can be laid under the edges of roads in a built up area. It will be necessary to know their whereabouts in advance when trenches are to be excavated to lay water pipes. During the year 25,000m of pipe tracing was made. In addition, the outer diameter of pipes were marked at 100 locations by trial pit excavation to determine pipe sizes for the procurement of fittings.

Main activities in some of other areas

Highlights of NRW reduction activities in the Western North RSC were; replacement of 16,652 defective meters and 4.5 km AC pipes, fixing of overflow 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 area.

Highlights of NRW reduction activities in the Western - South RSC were; replacing 3,182 defective meters in Kalutara area and 4.1 km AC pipe replacement in Aluthgama, Beruwala, Wadduwa in Panadura – Horana region 330 m long 80 mm diameter CI pipes replaced along Galle Road from MOH premises to Walana Junction. In Dehiwala some domestic water meters were relocated and internal distribution system rectified. All these activities reduced the NRW from 59.57 % to 40.61 % in the Western South RSC.

Highlights of NRW reduction activities in the Western Central RSC were as follows; NRW reduction activities were carried out intensively in this area. During the year, night leak surveys could detect 434 leaks and they were repaired. In the Northern part of Colombo city 4,858 defective meters were replaced, 306 unmetered premises were detected and metered and 1,203 main leaks and 2,849 service leaks were detected and repaired promptly. In the Southern part of Colombo city 4,772 defective meters were replaced, 294 unmetered premises were metered and 983 main leaks and 2,964 service leaks were detected repaired. 7,389 defective meters were replaced in Kotte. In the Western Central area 256 common outlets were removed and 166 common outlet location committees were formed. Highlights of NRW reduction activities in the Central RSC were; repaired and replaced 13,702 defective meters. Installed 23 new valves

and refurbished existing valves. Installed District meters, detected 190 water leaks after carrying out night surveys, replaced 7.5 km long pipes and carried out 48, 24 hour flow tests.

Highlights of NRW reduction activities in the Southern RSC are as follows; The RSC has spent Rs. 6 million for NRW reduction activities such as relaying of distribution main in circular road from Thanipolgaha Junction to Thalpitiya Junction and raising of surface boxes and valve chambers at several roads.

The North Central RSC has spent about Rs. 21 million for NRW reduction such as replacement of old pipelines, valves, fittings and preparation of digital maps of all pipelines to identify leakage points easily. Highlights of NRW reduction activities in the North Western RSC were; the RSC has spent Rs. 25 million for NRW reduction activities such as replacement of bundle pipes, replacement of Mee Oya pumping main with PE pipe and distribution operational improvements.

Highlights of NRW reduction activities in the Northern RSC were; 100 m of pipelines have been replaced and 75m have been repaired due to Calcium deposit in Vavuniya and 300 m have been replaced and 200 m repaired in Mannar. Highlights of NRW reduction activities in the Eastern RSC were; replacement of distribution and transmission main in Akkaraipaththu region, fixing of bulk meters for every OIC division with chambers, defective meter replacement and leakage rectifications. Highlights of NRW reduction activities in the Sabaragamuwa and Uva RSCs 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 pipeline in Haputale WSS.

RESEARCH AND DEVELOPMENT

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

Water pollution due to pesticide residues and toxic metals in selected drinking water bodies in Sri Lanka

As natural water sources such as rivers and irrigation reservoirs are used as drinking water sources, pollution of such sources is a threat to provision of safe drinking water. As an identification study this island wide testing programme was funded by the Ministry of Environment and the testing were done by National Water Supply & Drainage Board and the Industrial Technology Institute. The study was done covering eight districts during the period of January to April 2011 with samples from twenty locations. Organic pollution was detected in Uma oya at Welimada (Chemical Oxygen Demand {COD} 17.5 mg/l), Iranamadu tank (Dissolved Organic Carbon {DOC} 4.2 mg/l) and Madawalasingham tank (DOC 4.2 mg/l). High E. coli levels were detected in Maha Oya at Alawwa 3600 Nos. per 100 ml and at Polgahawela 4200 Nos. per 100 ml. High total Phosphate value was detected at Kattakaduwa tank (0.8 mg/l). High copper values were detected at Badulu Oya (0.123 mg/l) and Uma Oya (0.250 mg/l) and high Cadmium value was detected at Madawalasingham Tank (0.05 mg/l). None of the samples showed pesticide residues where testing was done for forty six species of pesticide residues.

Tri Halo Methane Study

Sustaining clean and safe drinking water is one of the major challenges the world faces today. Disinfection is a technique used in water treatment to prevent the spread of diseases through drinking water. Due to reactions between disinfectants and natural organic matter in water, Disinfection By-Products (DBPs) are formed. Due to their adverse health effects, the occurrence of DBPs in water has been an issue of major concern and these DBPs are regulated in international guidelines.

The primary objective of this study was to determine the formation of Trihalomethanes (THMs) which is one of the major DBPs, in water supplies of nine water treatment plants (WTPs) located in Sri Lanka. The study was conducted over a six month sampling program covering many water quality and operational parameters which have direct influence on THM formation. THMs were determined using gas chromatography coupled to purge and trap pre-concentrating technique.

Significant difference in mean THM levels was noted among the nine WTPs. The THM levels in all water samples investigated were below the WHO recommended

levels however with cases exceeding United Nations Environmental Protection Agency (UNEP) guideline value for drinking water.

The data generated under this study becomes the first detailed database in the country on THM. Further the regression models developed after proper validation will enable their use as decision making tools in policy development and in environmental or toxicological studies associated with THMs in drinking water.

Study on Algae and Cyanobacteria identification, species composition, determination of concentrations of Nitrogen, Phosphorus, Manganese, iron, COD, Total Organic Carbon and screening of algal toxins in some selected drinking and irrigation water bodies in Sri Lanka

Lack of perennial surface water sources in the dry zone of Sri Lanka has forced to choose irrigation water tanks for drinking water abstraction. As these waters are rich in nutrients, growth of algae and cyanobacteria in these water bodies is inevitable. Algae and Cyanobacteria can bloom and cause many problems to water supplies. Few such problems are increased chemical demand for water treatment, malfunctioning of the settling process, filter clogging, membrane fouling and increased disinfectant demand. With respect to water quality, algae and cyanobacteria have the capability of strongly influencing the basicity, dissolved oxygen, level of chlorophyll a, biodegradable dissolved organic carbon, turbidity, taste, odor and color. Toxins such as Microcystin produced by cyanobacteria cannot be removed by conventional water treatment unit processes such as coagulation, flocculation, boiling up to 100 deg. C., chlorination and filtration. As these toxins are a challenge to safe drinking water this research study was initiated to identify the problem. The complete study is to cover fourteen locations covering Ampara, Anuradhapura, Killinochchi, Puttlam, Hambantota and Colombo Districts. Under the phase one of the study one time testing in Anuradhapura, Hambantota and Killinochchi Districts have been completed. Rapid detection of microcystin was done by using "Microcystin immuno strip kit". All the reservoirs tested had cyanobacteria above 2000 cells/ml which is the WHO health alert level 1 for drinking water. Further findings of this study are detection of high concentrations of Phosphate and heavy metals in the storage tanks. Phosphate concentrations above 0.7 mg/l. Ambient water quality standard of Central Environmental Authority (2001) are in Nuwara wewa (2.14 mg/l), Thuruwila Tank (2.56 mg/l), Kattakaduwa wewa (3.73 mg/l) and Ridiyagama tank (2.5 mg/l). This is an alarming situation where these reservoirs receive chemicals containing phosphates form

the catchments and will lead to eutrophication of these storage tanks which may result in algal blooms in the near future. As a remedy measures such as controlled chemical fertilizer usage and promotion of organic farming could be recommended. Also action shall be taken to protect the catchment characteristics to maintain its capability to retain water in the soil and vegetation thus improving slow water flow pattern within the catchment which is often disturbed by human activity.

Lead, Chromium and Cadmium were below the minimum detection level of 0.001 mg/l in all tested water bodies. Zinc is within the CEA ambient water quality standard of 1 mg/l. Copper is the only heavy metal parameter exceeded the Thailand ambient water quality standard, 0.1 mg/l, values being Thuruwila 0.4 mg/l, Iranamadu 0.282 mg/l, Kattakaduwa 0.09 mg/l and Ridiyagama 0.08 mg/l respectively. The source of copper is suspected to be agrochemicals.

Incidence of Oesophageal and Stomach Cancer related to Nitrate-N concentration in Ground water in Jaffna Peninsula Water quality of ground water wells in three selected areas of Jaffna peninsula namely Vadamarachchi, Chunnakam and Jaffna were checked. The study period was from December 2010 to April 2011 with monthly ground water sample collection from sixty wells. Thirty wells were from households where there were cancer patients and other thirty from wells where there were no cancer patients as a control. Concentration of Nitrate Nitrogen of one well in Vadamarachchi, six wells in Chunnakam and two wells in Jaffna were above the WHO /SLS 614 nitrate level of 10 mg/l. This is an indicator study of Nitrate levels in Jaffna peninsula which provides very important base values. It was not possible to establish a correlation in incidence of Oesophageal and Stomach Cancer and nitrate concentration under this study. This was a collaborative research study among the National Water Supply & Drainage Board, the University of Ruhuna and the University of Jaffna.

Water Quality Index (WQI)

National Water Supply & Drainage Board has got a lot of data on raw water and treated water collected over many years but no efforts have been made to convert these data into information which will be valuable to the management. The Open University of Sri Lanka under one of its undergraduate projects did a study covering 25 water supply schemes in eleven districts of Sri Lanka. The study focused on developing raw and treated water quality index. WQI is a means of conversion of complex water quality data into easily comparable and understandable information. It is a numeric expression used to transform large quantities of water characterization data into a single number, which represents the water quality level which is the most effective way to communicate the information on water quality. The WQI involves assigning weights to different water quality parameters to combine as one value. Index value of less than 100 is clean water and above 300 is not suitable for drinking. The study was done using raw and treated water

quality data of four years. The raw WQI varied from 50 to 712 and the treated WQI varied from 23 to 91. Another interesting outcome of the study was the treatment efficiency which varied from 28 to 92%.

Rain Water Harvesting

Chronic Kidney Disease of Unknown Etiology (CKDu) has been prevalent in the North Central Province of Sri Lanka over the past decade. The number of cases has been steadily rising since the inception of the disease. In certain areas 5 to 10% of the population of all age groups including children is affected. CKDu has grown to epidemic level in Anuradhapura district resulting in this disease the main cause of death in Anuradhapura District. Many research groups including a specialist team of WHO are involved in studies to identify the cause of this disease at present. Naturally available water in the district is not excluded as a cause of disease but statistics reveal that treated water from NWSDB piped water schemes have very low contribution to it. Considering this situation NWSDB concludes that drinking pure water could control the disease.



Rain Water Harvesting



Rain Water Harvesting

As it is not practically possible to cover the entire district with pipe borne water, NWSDB proposes rain water harvesting and provision of treated water via bowser supplies could help the unserved communities to avoid this deadly disease. With the lessons learnt from provision of ferrocement tanks,

NWSDB has initiated a 2,000 liter capacity rainwater tank pilot project in Polpithigama. The salient features of the facility provided are incorporation of a cloth filter, automatic first flush facility and introduction of a smaller capacity poly ethylene tank. The pilot project contains 154 rain water tanks and a follow up monitoring programme scheduled to ensure the sustainability of the project.

Dayata Kirula National Development Programme



Fabricated treatment plant

Research & Development section jointly with the central workshop initiated contribution to the Dayata Kirula National Development Programme at Oya Maduwa, Anuradhapura in November 2011 by commencement of fabrication of a Water Treatment Plant of 1,500 cubic meters per day capacity (stage 1). 4 mm thick Mild steel plates with food grade resin paint coating was used for the fabrication of the unit operation modules. The need for sand blasting was eliminated by using this special paint thus reducing the completion time and adverse effects on the health of the fabricators. This fabricated treatment plant concept was initiated at Pugoda in 2005 and was expanded to Mahiyangana, Alawwa and Polgahawela towns. Important advantages of this concept are movability of the treatment modules avoiding construction delays at site due to monsoonal rains, low capital investment with respect to treatment plant in the range of Rs. 8,000 per family and reduced space requirement due to thin walled fabrication and space saving tube settler technology.

Implementation of Water Safety Plans

Water safety plan is a concept approved by WHO to ensure both short term and long term health aspects of drinking water. Implementation of water safety plan will retain the quality and safety of water for drinking commencing from a catchment to the point of consumption. Awareness is one of the key factors of implementation of Water Safety Plans enabling protection of water sources as a community responsibility. Water Safety Week was held on 6-12th December 2011 with an awareness campaign jointly with the Ministry of Health and the UNICEF. Ten awareness

programs have been conducted in regions under WHO funds in 2011. Industrialists of the country should be vigilant of the wastes they discharge to the environment. Such wastes often contain organic and inorganic toxins which could be strong contributors to the non communicable diseases caused by chronic toxicities.

Information Technology

The IT Division of the NWSDB was strengthened and well equipped to implement the IT solution island-wide and maintain it using the in-house staff/ resources. Rs. 10 million worth equipment was procured for improving the IT infrastructure during 2011. New software solution was developed for the call centre operations and for document management purposes. Customer complaint system was improved which facilitates the NWSDB customers to lodge their complaints via the NWSDB web site.

The Virtual Private Network (VPN) expanded in 2010 covers most of the Island-wide offices, except a few including Jaffna and Vavuniya. Email system of the NWSDB was in operation during 2011. 300 Email accounts are available at present for the NWSDB staff.

The facility developed to get the water quality data from regional laboratories to central laboratories on line through the ADSL facility was operating smoothly during the year, and intends to improve more.

Contracts signed with MS Technologies Ltd. to implement a Microsoft solution for IT infrastructure development which costs Rs. 18 million tentatively.

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).

Policy Formulation

Access to safe drinking water and sanitation is an inalienable right of the people. Safe water, suitable for human consumption is a scarce and limited resource which is under threat of pollution, contamination and waste. Similarly sanitation has been given lower priority as a basic need in comparison to drinking water.

The integral role of safe drinking water and sanitation development has been recognized over the last two decades. Therefore the requirement of development of guidelines and standards has identified and two separated policies, National Policy on Drinking Water and National Policy on Sanitation have been developed in 2010.

The National Policy on Drinking Water intends to develop broad strategies to promote the drinking water sector in terms of the coverage, quality as well as the service delivery. Similarly the National Policy on Sanitation aims to develop strategies to regulate the on-site sanitation and sewerage sectors in terms of equitable coverage as well as enhanced quality.

This policy too aims at providing guidance to all government agencies, all Community Based organizations and Non Governmental Organizations (NGOs) involved in the sector.

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 has granted approval for the National Policy on Drinking Water in 2010. Cabinet approval is pending for the National Policy on Sanitation.

Institutional Development

The importance of institutional development as a prerequisite 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 2011 are described below.

Attitude changing programmes were held along with the topics of administration, office procedures and team building in Central, North Western and Northern regional support centers. A basic computer training programme and three English language programmes were held for technical and clerical staff in RSC Kandy. Also they had arranged a workshop to enhance the report writing ability in executive staff.

Every RSC had arranged special programmes on 1st of January, Sinhalese new year, Vesak, Poon and Christmas day to strengthen the personal relationships and unity. Various Dansala programmes, Christmas carol and annual concert of NWSDB were taken a special place.

In addition to the repairs, renovations and new construction works were held in several regions, such as

- Renovation of call center at Maligakanda.
- Refurnished the P&D section at head office.
- Construction of cashier point at People's Park building.
- Removing and fixing of Aluminum partition at RSC eastern office building.
- Construction and repairing of boundary walls, toilets and caretaker rooms in various regions.

Furthermore all RSCs were educated about 5S system and trained how to implement it. A committee was appointed to improve the physical appearance of the NWSDB Head Office. Short term (6 months) programmes and Long term (2 years) programmes were worked out.

All offices up to Area Engineer level have been provided with ADSL facilities.

ADB Technical Assistance (TA)

The Technical Assistance provided by the ADB during 2009 to 2010 improved the service delivery of the NWSDB. The improvements were explicitly seen in 2011.

Regional Benchmarking

The regional benchmarking enabled us to compare the NWSDB's status with other developing/neighboring countries.

Regional Business Plan

Province-wise business plans were prepared for a five year period 2010 - 2014. Provincial DGMs were able to see the level of achievement at the end of 2011 and extend the plan by another year.

Asset Management Planning

The Provincial DGMs were faced with resource constraints to carry out Asset Management Planning in new WSSs. Asset surveys are time consuming and expensive process and staff has to be deployed specifically for this purpose.



Team effort

Internal Monitoring and Regulation

The twelve Key Performance Indicators identified for internal monitoring were reported by every Provincial DGM quarterly. It was scheduled and compared subsequently. Regulatory measures are taking place internally within the NWSDB. The Ministry of Water Supply & Drainage is also taking regulatory measures on the NWSDB's activities.

Technical Assistance from JICA

The Technical Assistance provided by JICA during 2009 to 2011 resulted in the preparation of overall business plan of the NWSDB for 2011 to 2015. This business Plan incorporated the features of the Provincial Business Plans prepared under the ADB TA.

Technical Assistance from DANIDA

DANIDA has provided technical assistance to improve the capacity of NWSDB's RSCs in management, operation and maintenance of services in the context of increasing decentralization to the RSCs during the period 01.09.2008 to 31.10.2011.

Main objectives were better functioning of RSCs and improved quality of infrastructure. It intended to increase the level of skills and commitment of work force, improve decision making based on improved information and improve business strategies for more efficient service delivery. Similarly, it intended to improve the quality of construction, maintenance and design, to improve quality of infrastructure.

New Initiatives

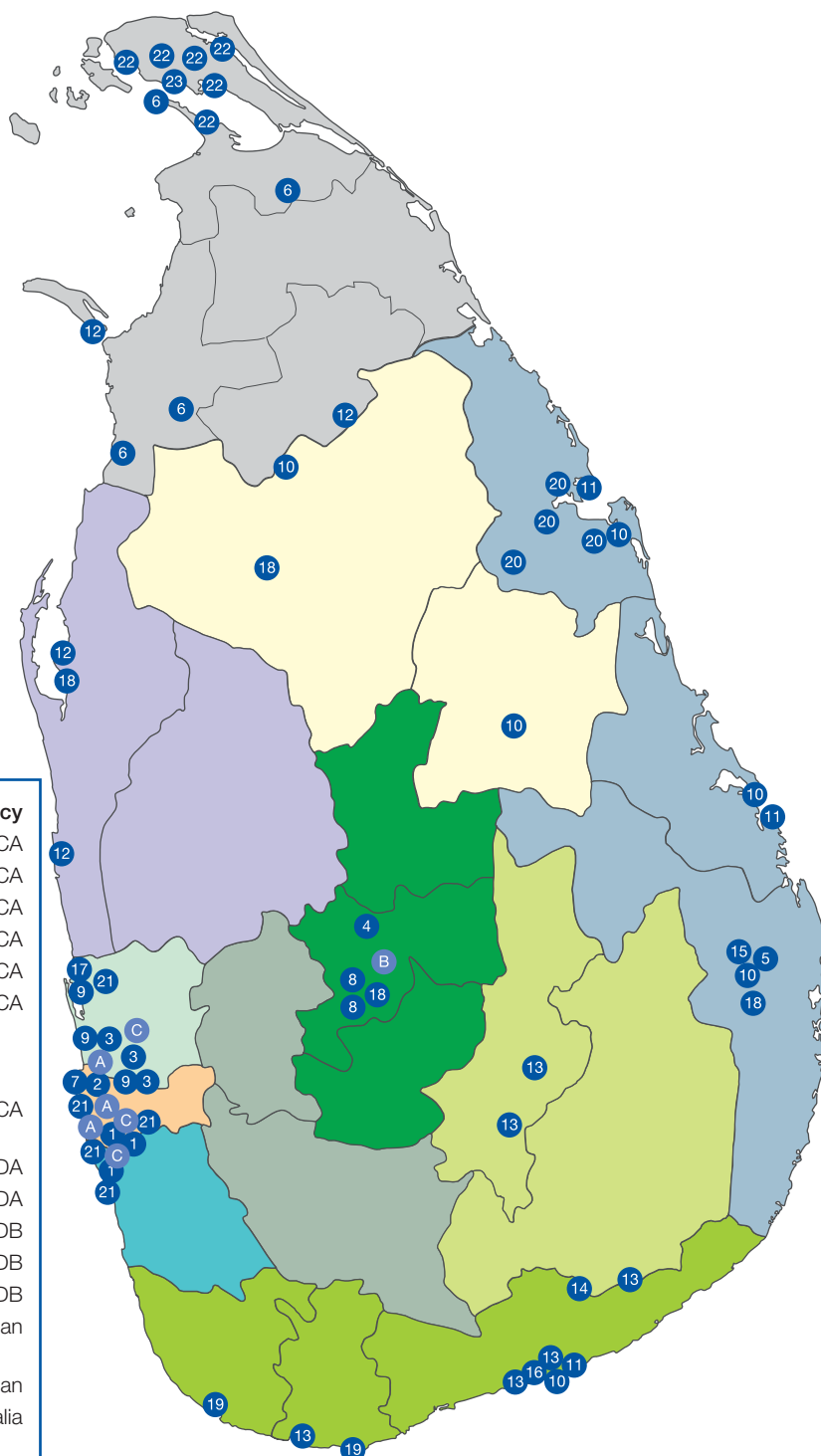
Among New Initiatives to be taken to enhance the provision of water supply and Sewerage services, following listed subjects were dominant in 2011.

- Development of alternative Business Models to secure Investments through Public Private Partnerships [Build, Operate & Own (BOO) / Build, Operate Own & 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 human 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

ONGOING PROJECTS

Major Water Supply and Sewerage Projects Accomplishments
Location Map of Foreign-funded Projects under Construction/ Augmentation during 2011



Project	Funding Agency
1. Kalu Ganga WSP - Phase I, Stage II	JICA
2. Greater Colombo Water Rehabilitation	JICA
3. Towns North of Colombo WS - Stage II	JICA
4. Greater Kandy WSP - Phase I, Stage II	JICA
5. Eastern Province Water Supply Development	JICA
6. Supply of Equipment for the Provision of Safe Water and Construction of Septage Treatment Plant for IDP Welfare Centres at Vavuniya	JICA
7. Capacity Development Project for NRW Reduction in Colombo City	JICA
8. Towns South of Kandy WS	DANIDA
9. Kelani Right Bank WTP	DANIDA
10. ADB 4th WS & Sanitation Project	ADB
11. Tsunami Affected Area Rebuilding Project	ADB
12. ADB 5th WS Project	ADB
13. Implementation of Hambantota, Amabalntota, Weligama WSPs	Austrian
14. Reh. & Augmentation of Kirindi Oya WS	Austrian
15. Integrated WSS for the Unserved Areas of Ampara District - Phase III	Australia
16. Ruhunupura Water Supply	Korea
17. Negombo WS and Optimization Project	Netherlands
18. Water Sanitation and Hygiene (WASH) Programme	UNICEF
19. Tsunami Rehabilitation Project	IFRC
20. Greater Trincomalee Integrated WSP	French
21. Water Treatment Facilities to Moratuwa/ Panadura, WTPs located at Ambatale and Negombo	Spanish
22. Jaffna - Kilinochchi WS & Sanitation Project	ADB
23. Mandathivu Water Supply	UNICEF

Project	Funding Agency
A. Greater Colombo Wastewater Rehabilitation	ADB
B. Kandy City Wastewater Management	JICA
C. Wastewater Disposal for Ratmalana/ Moratuwa & Ja-Ela/ Ekala Areas	SIDA

■ Water Supply Project ■ Sewerage Projects

FOREIGN FUNDED WATER SUPPLY PROJECTS

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. Total cost estimate is Rs. 10,846 million

The project components are water treatment plant at Kandana - Horana of capacity 60,000 cu.m./day, 1,000/800 mm diameter 15 km long DI transmission main, 450/400 mm diameter 7 km long secondary mains, Non-revenue Water reduction in Colombo City by the rehabilitation of 57 km long distribution pipe lines in Pettah, Hulftsdorf and parts of Kotahena and Maradana in Colombo and water towers at Kesbewa, Jamburaliya and Kumbuka.

Construction of water towers at Kesbewa, Jamburaliya and Kumbuka are progressing satisfactorily. Supply & laying of DI transmission main has been awarded and preliminary works are in progress. Supply & laying of uPVC/DI Pipes, fittings, specials and DI valves for distribution system in Panadura East is progressing slightly behind schedule. Invitation for the pre-qualification of contractors had to be recalled for the extension of Kandana WTP. Physical and financial progress as at the end of the 2011 are 51% and 26% respectively.

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. Total cost estimate is Rs. 4,785 million. It is planned to rehabilitate and enhance the water supply systems of CMC and Kotikawatta - Mulleriyawa area.

The Project comprises of four packages. They are 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 and 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.

At the end of 2011, the project had achieved physical & financial progress as 66% and 51% respectively.



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. The Stage I of this project was completed in November 2006. The total cost estimate of Stage II of the project is Rs. 6,490 million.

Mechanical work will go on till end February 2012. A large number of requests have been received for pipeline extensions in the areas where the originally planned networks do not cover. Most of the pipeline extensions are being provided and new connections are being given. The physical and financial progress are 90% and 73% respectively.

4. Greater Kandy Water Supply Project Phase I Stage II

Greater Kandy water supply project is designed to provide safe drinking water to Kandy district and to minimize the Non Revenue Water percentage. The project will be completed in two stages. Stage 1 was completed in January 2007 which provides 36,670 cu.m. / day water to 294,000 people in Kandy city. Main components of the stage I were a raw water intake with a capacity of 110,000 cu.m. / day, a pumping station with a capacity of 38,000 cu.m. / day and 2 treatment plants at Kondadeniya and Katugastota.

Stage II is currently in progress to improve service level of 231,000 consumers and provide 30,000 new connections in Kandy Municipal Council (KMC) area, Ampitiya, Rajapihilla, Kulugammana, Nugawela, Heerassagala, Meekanuwa, Mallepihilla, Elhena, Gohagoda, Kondadeniya and Thelambugahawatta areas. Stage II is divided in to eight independent packages including the consultancy package. Among them five contract packages are in progress where two are completed. The TCE for stage II is Rs. 4,164 million. It is expected to complete the project in 2012. The physical and financial progresses were 90% and 85% respectively.

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. 6,526 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.

Construction of civil structures were commenced in 2011. One contract for Supply and delivery of DI pipes and fittings was awarded. The contract for PVC pipe supply was completed. Tender for Supply & Delivery of PE pipes and fittings had to be recalled and bids are under evaluation. Tender for laying of a transmission main and four distribution systems are under evaluation. The Agreement for Algae study Consultancy assignment was signed. Pipe laying in Mahaoya area was postponed until early in 2012 due to heavy rain experienced. The physical and financial progresses were 45% (Including designs) and 4% respectively.

6. Capacity Development for NRW Reduction in Colombo City (JICA)

Main objective of this project is capacity development for NRW reduction in Colombo City. Two pilot zones, Borella and Kotahena have been selected and equipment required for 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, removal of illegal connections, etc. was carried out. This project is to benefit 267,000 people in the area. The estimated cost is Rs. 200 million.

Budget allocation for 2011 is not available. The physical and financial progresses at the end of 2011 were 46% and 15% respectively.

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.

Water sources are the Mahaweli river, 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 TCE is Rs. 9,626 million.

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 in Peradeniya, Pilimalalawa, Kadugannawa, Murutalawa, Danture, Gampola, Ulapane and Welamboda.

“The Government of Sri Lanka has arranged financing from bilateral and multilateral agencies for the NWSDB to implement Water Supply, Sanitation and Sewerage Projects throughout the country”

The main features of the project includes new technologies such as the use of High Density Polyethylene 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.

Major work relating to the project is complete except for the iron removal plant to be constructed at Elpitiya WSS. Tenders were awarded for this in October 2011. Few minor contracts under the local budget are on-going and about 75% of work related to these contracts were completed by the end of 2011. Physical and financial progress of the project as at the end of 2011 are 93% and 91% respectively.

2. 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 towns in the northern part of the Western Province, namely, Biyagama, Kiribathgoda, Kadawatha, Ragama, Wattala, Kandana, Ja-ela, Seeduwa and Ganemulla. It is intended to feed the distribution network laid under the Towns North of Colombo Project funded by JICA.

The project comprises a raw water intake with a capacity of 360,000 cu.m./ day and a treatment plant with an initial capacity of 180,000 cu.m./ day (40 MGD) to be constructed on the right bank of the Kelani river at Pattivila, Ambatale which benefits about 1,000,000 people. The project

commenced on 22nd October 2008 intending to complete in 2012. TCE of the project is Rs.10,150 million.

Balance pipe laying (connection between the Treatment Plant & the existing pumping main), landscaping and M&E testing were in progress. Delay in designs and bad weather conditions are major reasons for project delays. Most of the civil works were completed. The physical and financial progresses as at the end of 2011 are 95% and 79% respectively. The salinity barrier will be constructed by the same contractor, as a variation in 2012.

Projects undertaken with Asian Development Bank assistance

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

Overall goal of the project is to contribute to the poverty reduction efforts of the Government of Sri Lanka and to promote the human development by improving access to safe water and sanitation for poor population; there by decreasing water borne diseases and reducing the amount of resources spent in these activities. The total revised cost estimate of the project is Rs. 29,680 million. The project aims to provide safe water to 969,000 people and sanitation to 171,500 in four urban centers, Batticaloa, Hambantota, Muttur and Polonnaruwa and the rural area of North Central



Polonnaruwa Water Treatment Plant



Polonnaruwa Water Treatment Chemical Building

province and capacity building of water sector institutions in providing safe water to the equivalent community.

The overall physical and financial progress of the project are about 93% and 78% respectively. The project was started in 2004 and it is expected to be completed in 2013. Project details and status at different places and components are briefed below.

Urban Water Supply and Sanitation Component

Hambantota District: In Hambantota District the project will provide a Water Treatment Plant of capacity 15,000 cu.m./day by constructing an intake of capacity 120,000 cu.m./day, to provide 15,000 cu.m./day of treated water to 133,000 people. The major elements will consist of 5 new water towers at Ekkassa, Bolana, Bellagaswewa, Mirijjawila and Keliyapura, clear water tanks of capacity 3,500 cu.m. & 1,250 cu.m., Salinity barrier across Walawe ganga at Ambalantota and 156 km of distribution pipe lines. There is a sanitation component to provide 1,098 household toilets in Hambantota District. Total estimated cost of the work in Hambantota District is Rs. 6,066 million.

The Hambantota water supply scheme was ceremonially opened by the Minister of Water Supply & Drainage on 28th February 2011. All the works were completed other than the 'Salinity Barrier' of which 57.4% was completed by December 2011. Completion target for the salinity barrier is December 2012.

Batticaloa District: In Batticaloa District the project will provide a Water Treatment Plant of capacity 40,000 cu.m./day by constructing an intake of capacity 100,000 cu.m./day, to provide 40,000 cu.m./day of treated water to a design population of 246,000 people. The major elements will consist of 7 new water towers at Chenkalady, Eravur, Iruthayapuram, Air Force Premises, Kallady, Kattankudy and Arayampathy, clear water tanks of capacity 7,000 cu.m. & 2,500 cu.m. and 277 km of distribution pipe lines. There is a sanitation component to provide Sewerage treatment plants of capacity 460 cu.m./day to the Prison and the Hospital and 1,387 household toilets in Batticaloa District. Total estimated cost of the work in Batticaloa District is Rs. 12,398 million.

Construction of head works, raw water transmission main (18.6km long, 800mm diameter) and water treatment plant, elevated water towers and clear water transmission (6.7km long, 800mm diameter) were about 96% completed by December 2011. The balance works are expected to be completed in early 2012. The works are now in operation and the Batticaloa water supply scheme was ceremonially opened by the H.E. President on 19th October 2011.

Polonnaruwa District: In Polonnaruwa District the project will provide a Water Treatment Plant of capacity 13,500 cu.m./day, by constructing an intake of capacity 60,000 cu.m./day, to provide treated water to a design population of 85,000 people. The major elements will consist of 3 new water towers at Gallalle, Bandiwewa and Sewagama,



Batticaloa Raw Water Main

clear water tank of capacity 1,700 cu.m. and 135 km of distribution pipe lines. Total estimated cost of the work in Polonnaruwa District is Rs. 5,455 million.

Physical and Financial Progress of the work in Polonnaruwa District are 98% and 90% respectively. Distribution system and towers have been completed. The construction works were completed and testing & commissioning was in progress.

Trincomalee District (Muttur WSS): For Muttur Water Supply, the project will provide a Water Treatment Plant of capacity 8,500 cu.m./day, by constructing an intake of capacity 40,000 cu.m./day, to provide treated water to a design population of 52,000 people. The major elements will consist of 3 new water towers, a clear water tank of capacity 3,000 cu.m., a Ground reservoir of capacity 60 cu.m. and 127 km of distribution pipe lines. There is a sanitation component to provide 1,334 household toilets in Trincomalee District. Total estimated cost of the work in Trincomalee District is Rs. 3,485 million.

Physical and Financial Progress of the work in Trincomalee District are 34% and 38% respectively. Towers and distribution system have been completed. The contract for the intake and head works was awarded in December 2011.

Work under Rural Water Supply and Sanitation Component water towers, a clear water tank of capacity 3,000 cu.m., a Ground reservoir of capacity 60 cu.m. and 127 km of distribution pipe lines. There is a sanitation component to provide 1,334 household toilets in Trincomalee District. Total estimated cost of the work in Trincomalee District is Rs. 3,485 million.

Physical and Financial Progress of the work in Trincomalee District are 34% and 38% respectively. Towers and distribution system have been completed. The contract for the intake and head works was awarded in December 2011.

Work under Rural Water Supply and Sanitation Component

Anuradapura: In Anuradapura the project will provide 84 pipe water schemes and point sources of 1,778 rain water tanks, 1,456 dug wells and 55 tube wells. Population served is about 161,000. There is a sanitation component to provide 8,987 household toilets in Anuradapura. Total estimated cost of the work in Anuradapura is Rs.999 million.

Physical and Financial Progress of the work in Anuradapura are 99.7% and 122.8% respectively. Out of 84 pipe water schemes, 80 were completed, 12 are ready to commission and 4 are finishing work. All point sources have been completed. All other work will be completed in early 2012.

Polonnaruwa: In Polonnaruwa the project will provide 51 pipe water schemes and point sources of 1,228 rain water tanks, 3,132 dug wells and 6 tube wells. Population served is about 161,000. There is a sanitation component to provide 9,022 household toilets in Polonnaruwa. Total estimated cost of the work in Polonnaruwa is Rs. 874 million.

“Reaching the unreachable: Rural Water Supply Projects are being implemented by the NWSDB for those who do not have easy access to safe water supply facilities”

Physical and Financial Progress of the work in Polonnaruwa are 99.5% and 83% respectively. Out of 51 pipe water schemes, 38 were completed, 7 are ready to commission and 6 are finishing work. All point sources have been completed.

Batticaloa: In Batticaloa the project will provide point sources of 20 rain water tanks, 78 dug wells and 40 tube wells. Population served is about 8,293. There is a sanitation component to provide 293 household toilets in Batticaloa. Total estimated cost of the work in Batticaloa is Rs.45 million.

All the work has been completed. Physical and Financial Progress of the work in Batticaloa are 100% and 147% respectively.

Institutional Strengthening Component

The objective of this component is Financial and operational improvement of the NWSDB. Work includes, Implementing strategies to improve financial management, Assets registry management and Improve operational efficiency. Total estimated cost of the work is Rs.372 million.

All the work of this component has been completed. Physical and Financial Progress of the work are 100% and 59% 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 was started in April 2005. The number of beneficiaries is 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. The project period had to be extend up to 2011 from 2010, because of the delay of awarding Kalawanchikudy contract. Project was divided in to 23 sub projects and it had achieved 100% physical progress and 75% financial progress at the end of 2011.

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

NWSDB is implementing a project for water supply and sanitation improvements in North Western and Northern Provinces. Under this project, Vavuniya, Mannar, Chilaw and Puttalam towns will be provided with enhanced water supply and sanitation facilities as briefed in following paragraphs. The total cost estimate is Rs.13,030 million.

The project was started in 2009 and currently it has achieved 22% overall physical progress. It will be completed by December 2015.

Vavuniya: In Vavuniya the project will provide a Water Treatment Plant of capacity 6,800 m³/day by constructing an impounding reservoir across the Peru Aru stream. Both surface water & ground water will be combined to provide 6,800 cu.m./day of treated water to a 88,000 people. The major elements will consist of 3 new water towers, one

reservoir and 137 km of distribution pipe lines. There is a sanitation component to provide 2 public latrines and 500 household toilets in Vavuniya.

At present the Vavuniya Regional Support Centre (3 storey RSC building) is under construction. Super structure completed and finishing works will be completed in mid 2012. All other tenders are in the design completion stage and the tender document preparation is substantially complete.

Mannar: Mannar improvements includes, Developing 8 bore holes to provide 8,000 cu.m./day treated water to Mannar township. One new tower and a ground water reservoir shall be constructed with 33 km transmission and 100 km distribution system to provide fully treated water to a designed population of 64,000 people. Four public latrines and 330 house hold toilets shall be provided.

The Mannar transmission main was awarded in August 2011. All other tenders are in the design completion stages and the tender document preparation is substantially complete.

Chilaw: In Chilaw, water will be extracted from Deduru Oya and it is expected to provide 12,000 m³/day of treated water to a design population of 83,000. The major elements of the scheme will consists of 12,000 cu.m./day water treatment plant in Bingiriya, 2 reservoirs, 43 km of transmission lines, 120 km of distribution lines. 04 Public latrines & 500 house hold toilets shall be constructed in Chilaw by the project.

Most of the designs are nearing completion. Chilaw implementation is expected to be completed in 2015.

Puttalam: Puttalam Water Supply Scheme shall include a 15,000 cu.m./day water treatment plant and water will be extracted from Kala Oya. The population to be served is 134,500. Puttalam proposed scheme shall consists of 2 reservoirs, 7 pump stations, 40 km transmission from Eluwankulama to Puttalam, 100 km distribution lines and a 15,000 cu.m./d water treatment plant. The sanitation component will have the construction of 3 public toilets & 500 house hold toilets in Puttalam town & suburbs. Designs shall be completed in Feb 2012 and the work is expected to be completed by 2015 December.

4. Jaffna Killinochchi Water Supply & Sanitation Project (ADB 6th Project)

This project is to improve drinking Water Supply facilities of about 689,000 people in Jaffna city, suburbs and several townships in the Jaffna Peninsula. It is expected to extract water from Iranamadu tank located in Killinochchi to supplement the Ground Water sources in the Jaffna Peninsula. Implementation will be done in two stages. The total cost estimate is Rs.18,328 million.

The proposals received for the Consultancy services were evaluated and the report is ready to be submitted to the CAPC. 50% of the land acquisition work is over and all

consent letters for lands have been obtained. Tender document for the Regional Manager's Office is being prepared and the contract to construct residential Quarters is in awarding stage. Physical and Financial progresses achieved by the project are 6% and 1% respectively.

Projects undertaken with Austrian assistance

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

This project is an augmentation started in November 2004. The main objective 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 components are; 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.

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 Austria. Improvement to existing distribution system of Sella Kataragama had been identified under GOSL funds too. Additional work identified for the project will be completed in 2012. The total cost estimate for the project is Rs.2,126 million. Additional work identified for Kataragama is under design stage physical and financial progresses at the end of 2011 were 93% and 81% respectively.



Kirindi Oya Water Treatment Plant

2. Kirindi Oya Water Supply Project

This project is a rehabilitation and augmentation, targeting 50,000 people in Lunugamwehera, 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 Rs.2,105 million. 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.

The WTP was commissioned in December 2010.

This project has been completed. New connections are being given and daily operations are being carried out by the NWSDB. The contractual maintenance period ends on 31st January, 2012.

Projects undertaken with Korean assistance

1. Ruhunupura Water Supply Development

This is a new project to serve 112,000 people by the design horizon in 2025. Water source is Ridiyagama tank. The total cost estimate is Rs.9,742 million. This Project is planned



Ruhunupura Intake

to provide drinking water to Ruhunupura and Mahaweli Development areas.

The PMU has been established. Design work was complete. Construction work commenced on 25th November 2011. The project has achieved 22% physical progress and 21% Financial progress.

Project undertaken with Netherland (DUTCH) assistance

Negombo Water Supply and Optimization Project

This project is a rehabilitation and augmentation. Water sources are Maha Oya and Kelani River with full treatment. The TCE is Rs.7,288 million. 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 Water Treatment plant and M&E works were completed and ceremonially commissioned in September 2011. 24 hour water supply was provided to all existing consumers and approximately 2,400 new connections have been given since then. A new pipe bridge across Dandugam Oya is under construction. It is expected to be completed in March 2012. The physical and financial progresses as at the end of 2011 are 90% and 81% respectively.

Project undertaken with Australian assistance

Integrated Water Supply Scheme for the Unserved Area of Ampara District Phase III

This project is to serve about 150,000 people in Ampara area. Main components are 12,000 cu.m./day capacity water treatment plant, ground sump (22,250 cu.m.), elevated towers, pump houses and transmission and distribution mains. The water source is Himadurava Tank. The total cost estimate is Rs.18,012 million.

The project has achieved 12% physical progress and 42% financial progress.

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 was 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 TCE is Rs.3,750 million. The project was started in 2005 and completed in this year.

Project undertaken with French assistance

Greater Trincomalee Integrated Water Supply Project

The objective of this project is to increase the production capacity of the Kantale water-treatment plant to 54,000 cu.m./day (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.

“When water supply projects are implemented, economic activities in the benefiting areas increase substantially, thereby improving the livelihood of the people”

Project components in brief are Construction of new intake and pump-house at Alle Kantale bridge, Laying a new raw-water and transmission mains, Distribution system improvements, Rehabilitation and augmentation of Kantale WTP and service reservoirs, Introduction of a SCADA system and Construction of new WSSs at Pulmoddai and Echchilampattu.

The project has achieved about 70% overall physical progress and 57% financial progress.

FOREIGN FUNDED SEWERAGE PROJECTS

Project 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. Total Cost Estimate is Rs.13.3 billion. Project period is from 2010 to 2014. Physical work was started in 2010. It was planned to map existing sewer connections with extensions jointly with Mapping Section.

Consultants for designs and construction supervision were mobilized during the month of April 2011. GIS data base related to CMC by NWSDB. Preparation and updating of sewerage GIS maps for Kolonnawa and Dehiwala/ Mt. Lavinia areas were carried out by the Mapping Division with the active participation of respective O&M staff. The digital copies of the relevant maps were handed over to managers in August 2011. DSC consultant started the preparation of tender document for the rehabilitation/ augmentation of waste water pump stations at Dehiwala/ Mt. Lavinia and Kolonnawa.

A formal comprehensive study was done by the consultant to estimate the waste water flows for 2020, 2030 and 2040. The draft document and drawings are almost completed

and it is proposed to submit them for the review of Cabinet Appointed Tender Board (CATB)/ Technical Evaluation Committee (TEC). NWSDB has already requested the treasury to appoint a TEC and awaiting the team of TEC to expedite the work.

A separate accounting staff was appointed under a Senior Accountant to look after the accounting of Greater Colombo Wastewater Management Project.

Preparation of tender documents for rehabilitation and augmentation of Wastewater Pump Stations at Dehiwala/ Mt. Lavinia and Kolonnawa are in progress which comprises four pump stations for Kolonnawa and two for Dehiwala/ Mt. Lavinia.

Progress of the project has delayed because of not allocating funds in 2011.

Project 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) - under SIDA grant.
- Supervision contracts - under SIDA grant.
- Study for House Connections & off-network Sanitary Solutions - World Bank funds.

Ecological Sanitation Pilot Project - 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.

Total Estimated Cost has revised in January 2011 and approval was obtained to revise up to Sri Lankan Rs.16,155 millions.

During the pipe laying works, diversion of the traffic was the most significant constrain and it caused estimated loss of revenue.

At the end of 2011, overall financial progress and physical progress achieved were 64% and 72% respectively.

Project 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

“Industrial effluent will be collected and disposed in a safe manner in the most industrialized areas viz., the Northern and Southern parts of Colombo”

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 200C) 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 Coli form (Most Probable Number per 100 ml) should be less than 40.

Total Cost Estimate is Rs.22,585 million. The consultancy part carried out for the project has completed and construction works have commenced and has achieved 3% progress physically.

Among important achievements are;

- Lands finalized with the KMC area and surveying and fixing boundaries in progress.
- Finalized the location and alignment of the retaining wall at WWTP land & outfall structure.

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.

Project Undertaken with World Bank Assistance

Increasing household sewerage connections & Off Network Sanitary Solutions in Greater Colombo (Global Partnership on Output-Based Aid - GPOBA)

The principal objective of the project is to increase the number of poor households in Greater Colombo area who benefits from improved sanitation systems and to ensure that their domestic wastewater is effectively managed prior to disposal rather than being disposed of untreated in urban water ways.

A secondary objective of the project is to pilot a new framework for delivery of improved sanitation services to poor households. The project area includes the areas of Greater Colombo in which NWSDB is the sewerage service provider.

Where sewers cannot be provided or are not appropriate, GPOBA funds will be used to stimulate the introduction of a new system of management of on-site sanitation.

NWSDB and Swedish International Development and Cooperation Agency (SIDA) submitted a joint proposal to the GPOBA requesting the support. The grant agreement has signed by GPOBA and the Ministry of Finance.

The project will benefit 15,275 poor households live in Dehiwala / Mount Lavinia area, Moratuwa Municipal council area Kollonnawa and Ja-Ela Pradeshiya Saba areas that currently rely on unsanitary pit latrines, non-functioning septic tanks or have no sanitary facilities at all. It intends to commission the project within three years.

The Total Cost Estimate is Rs.797 million. Out of this total amount 50.94% will be provided by the World Bank and 32.47% will be provided by Government of Sri Lanka. NWSDB contributes 9.38% out of the total amount and the rest was contributed by customers.

The project started in the 4th quarter of 2011 and at the end of the year it has achieved 1% financial progress.

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 2011. 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. Total Cost Estimate 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 main scope covered under this project is 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 progresses at the end of 2011 were 100% and 84% respectively.

GOSL FUNDED SMALL AND MEDIUM SCALE WATER SUPPLY PROJECTS

Central Province

Kundasale Water Supply Project

This is an augmentation to serve about 130,000 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. Total Cost Estimate is Rs.1,400 million. Presently a production of 13,000 cu.m./day is obtained from Arattana WTP. Treatment Plant augmentation and pumps Installation are in progress. The overall progress at the end of 2011 was 68%.

Palapathwela Water Supply Project

This is an augmentation plan to serve 22,000 people in Palapathwela and Kottegoda areas using Suduganga as the water source. The treatment plant capacity is 4,000 cu.m./day with the full treatment process.

Total Cost Estimate 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 pumps installation are in progress, while the construction of pump house has been completed.

Overall progress at the end of 2011 was 90%.

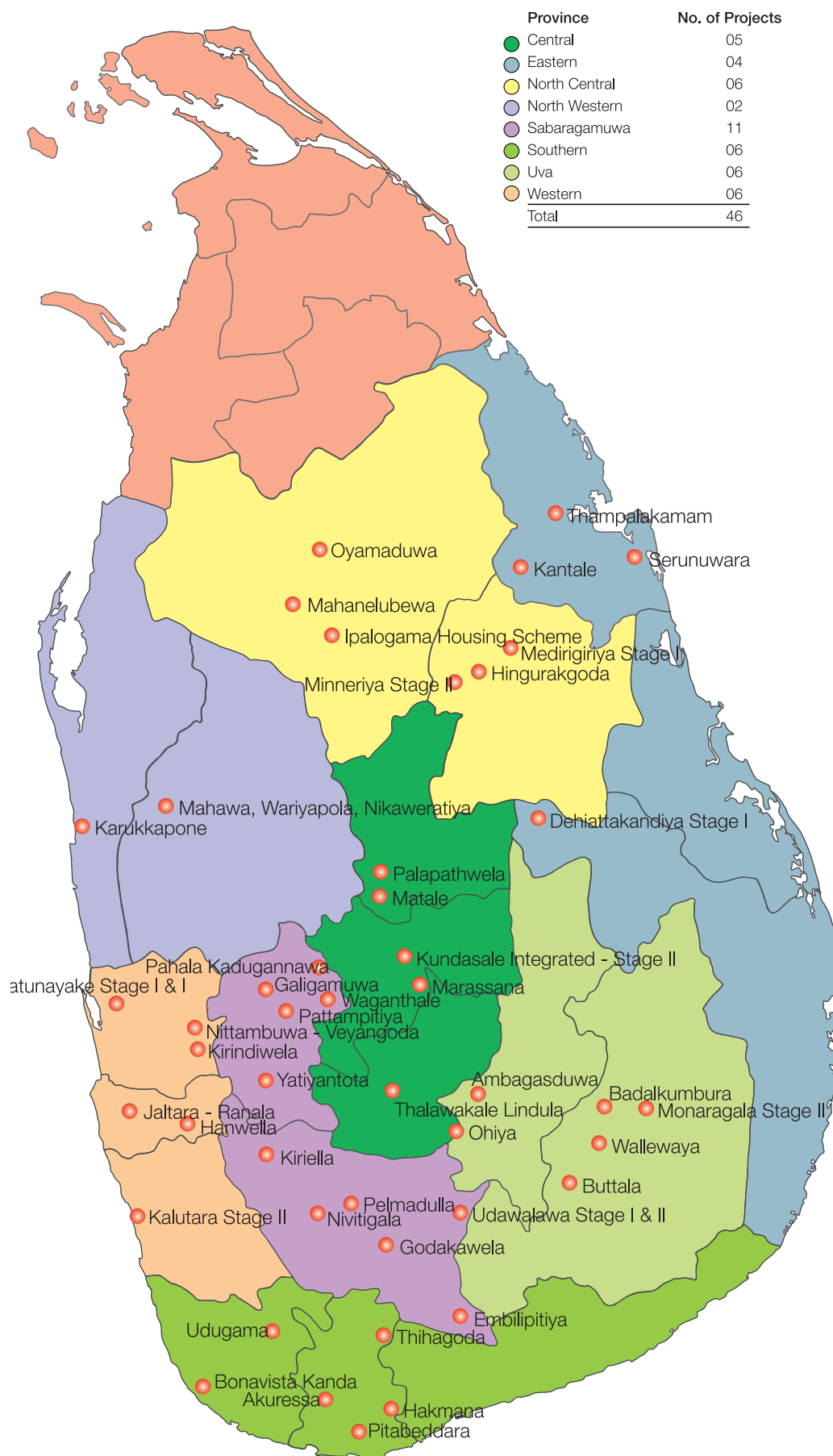
Matale Water Supply Project

This is a rehabilitation of the existing WSS to serve 15,000 people in Matale town area and suburbs.

Water source is Suduganga with full treatment having existing treatment plant 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. Treatment Plant augmentation, Supply of DI fittings and pump installation are in progress. The overall progress as at the end of 2011 is 77%.

GOSL FUNDED SMALL AND MEDIUM SCALE WATER SUPPLY PROJECTS

Location Map of Projects under Construction/ Augmentation During 2011 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, using raw water from Ma-oya with a full treatment method. Capacity of the treatment plant is 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 rapid growing water demand of the area. All together there are about 3,500 service connections.

Lack of funds and land matters were the constraints for the progress of the project. The overall progress as at the end of 2011 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. The reduction of fund allocation was the major effect for construction of dam in Kotmale Project. Overall progress at the end of 2011 was 67%.

North Central Province

Medirigiriya Water Supply Project - Stage I

This is a new scheme planned to serve about 60,000 beneficiaries in Medirigiriya Divisional 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.638 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 2011 was 78%.

Minneriya Hingurakgoda Water Supply Project - Stage II

This is an augmentation of the existing scheme to serve 69,000 people in Minneriya, Girithale and Hingurakgoda area. Water source is Minneriya tank and existing treatment process consists of rapid sand filters and disinfection system of 10,900 cu.m./day capacity. Total Cost Estimate 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. Improvements of intake & Treatment Plant are in progress. The physical progress at the end of 2011 was 73%.

Mahanelubewa Water Supply Project

This is an augmentation of existing scheme to serve 3,000 people in Mahanelubewa area. The project period is 2 years and distribution improvement only. The physical & financial progress at the end of 2011 were 42% & 59% respectively. The Total Cost Estimate is Rs.130 million.

Ipalogama Water Supply Project

This is a new scheme intends to serve 18,000 beneficiaries in Ipalogama Ranaviru village including 4 GN divisions in Ipalogama Pradeshiya Sabha area. The treatment plant with 4,500 cu.m/day capacity and the intake are common to both Ipalogama and Kekirawa existing water supply schemes. The water source is Kalawewa. Total length of the raw water pumping main is 4 km and the length of transmission main is 4 km. Total Cost Estimate is Rs.798 million under GOSL funds. Physical and financial progress at the end of 2011 were 76% and 69% respectively.

Dayata Kirula 2012

This project intends to provide safe drinking water within 2 years to 27,500 people in Mahawilachchiya & Thanthirimale areas in Anuradhapura district, which will cost Rs.830 million. It is proposed to improve Thanthirimale water supply and Oyamaduwa Water Supply Schemes. The physical and financial progresses at the end of 2011 are 70% and 10% respectively.

Eastern Province

Kantale (Agbopura) Water Supply Project

This project meets daily requirement of 1,100 beneficiaries in Trincomalee District. The associated Total Cost Estimate is Rs.275 million. The physical and financial progress as at the end of 2011 are 73% and 73% respectively.

Thambalagamuwa Water Supply Project

This project intends to provide safe drinking water facilities to 30,000 beneficiaries in Trincomalee District. The Total Cost Estimate is Rs.95 million. Supply & Laying of distribution mains are in progress. The physical and financial progress at end of 2011 are 80% and 76% respectively.

Serunuwara Water Supply Project

This is a new project proposed to serve 9,500 beneficiaries in Serunuwara, Kallaru and suburbs. The Total Cost Estimate is Rs.110 million. Physical progress at the end of 2011 was 62%.

Dehiattakandiya Water Supply Project - Stage I

This project intends to extend the safe water supply in Dehiattakandiya to 16,000 new beneficiaries. Total Cost

Estimate Rs.300 million. The physical progress at the end of 2011 is 82%.

North Western Province

Mahawa Nikaweratiya Integrated Water Supply Project

This is a new project planned to serve 9,000 families in Mahawa, Nikaweratiya, Wariyapola and suburbs. The raw water collected from Magalle will go through a full treatment with the capacity of 6,500 cu.m./day. Revised TCE is Rs.996 million. Treatment Plant, distribution system and storage tanks of Nikaweratiya WSS have been completed. 4.5 km length of 12 km long pumping main has to be laid.

Treatment Plant of Wariyapola WSS is under design stage. The overall physical and financial progress is 85% and 79% respectively.

Karukkapone Water Supply Scheme

This project intends to provide safe drinking water to 2,500 beneficiaries in Karukkapone area in Puttalam District. Total Cost Estimate is Rs.51 million. Supply & Delivery of pipes, Fitting and specials were completed. Physical and financial progress are 98% and 65% respectively at the end of 2011.

Sabaragamuwa Province

Embilipitiya Water Supply Project

This is an augmentation of existing scheme with a treatment plant intends to serve 84,000 beneficiaries. Construction of the treatment plant has been completed. Total Cost Estimate is Rs.810 million. Construction of Intake was delayed due to high water level at chandrika irrigation tank. The financial progress at the end of 2011 was 93% of the original TCE. Approval is pending for a revision of the total cost estimate.

Udawalawa Water Supply Project - Stage I & II

This is an augmentation of the existing WSS. TCE is Rs.973 million. Construction of treatment plant and intake were completed during 2009. The distribution system was 90% completed. Cabinet approval for revised TCE has to be received to complete the remaining works. The financial progress at the end of 2011 was 57%.

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 fully treated in a WTP with the capacity of 4,500 cu.m./day. The project components are WTP, Caretaker quarters, gas chlorinators and back wash pumps. Total Cost Estimate is Rs.288 millions.

Galigamuwa Water Supply Project

Currently there is no pipe borne water supply in Galigamuwa Town. This project includes construction of new intake (5,000 cu.m./day) at Alawwa, a conventional WTP with the capacity of 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. Total Cost Estimate is Rs.841 million and 30,800 people are to be benefitted in Galigamuwa town area. The financial progress at the end of 2011 was 14%.

Nivithigala Water Supply Project

This project intends to provide safe drinking water to 9,400 beneficiaries in Nivithigala area in the Ratnapura District. Total Cost Estimate is Rs.99 million. The ground reservoir was 95% completed. The financial progress at the end of 2011 was 57% of the original Total Cost Estimate. 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 Total Cost Estimate is Rs.384 million. The financial progress at the end of 2011 was 73% of the original Total Cost Estimate. The project can be completed by end of June 2012. Approval is pending for a revision of the Total Cost Estimate.

Yatiyanthota Water Supply Project

This project intends to supply safe drinking water for 6,700 beneficiaries in Kegalle District. The revised Total Cost Estimate is Rs.165 million. Embankment improvement was 90% completed & distribution 8 km was completed out of 11 km. The project was partially commissioned in early 2009. The physical progress at the end of 2011 was 90%.

Kiriella Water Supply Project

This projects intends to supply safe drinking water to 8,000 beneficiaries in Kiriella area in Ratnapura District. The Total Cost Estimate is Rs.205 million. Stage I of the project was completed in December 2011 and to be commissioned in early 2012. Designs are ongoing for the stage II of the project. The physical progress at the end of 2011 was 25%.

Galigamuwa Water Supply Project

This scheme will provide water to about 30,800 people living in Galigamuwa town area. The project is to be implemented during the period from 2009 to 2013. Pipe laid in the industrial zone was completed. Treatment Plant is in design stage. The physical progress at the end of 2011 was 20%. Total Cost Estimate is Rs.841 million.

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 the 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 and the minor construction of the Treatment Plant is in progress.

Hakmana Water Supply Project

Under the proposed Hakmana WSS, it is planned to supply safe drinking water to 10,000 beneficiaries in the Hakmana



Pelmadulla & Kahawatta WTP

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.383 million and approval is pending for a revision of the TCE. Treatment plant works are in progress & 15% completed.

Thihagoda Water Supply Project

This project was planned to meet the rapidly increasing demand due to the development in Thihagoda and suburbs to 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 the legal action taken by the contractor seriously affected the progress negatively. Since the major constructions are over, project has been commissioned and remaining minor construction work is continuing.



Thihagoda WSS Opening Ceremony

Pitabeddera Water Supply Project

Proposed water supply scheme intends to provide water to 6,000 people in Pitabeddera 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 the year 2007, progress was very slow due to the non availability of funds and poor performances of the contractor. Construction of the balance work at the treatment plant is in progress. Supply of pumps were completed & installations are to be done. The physical progress at the end of 2011 was 62%.

Udugama Water Supply Project

Construction of this scheme commenced in 2004 to meet the water demand of 6,000 people in Udugama and 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. This project was completed in November 2011.

Bonavista Kanda Water Supply Project

This is a new project planned for the benefit of people living in Bonavista Kanda area in Matara District. The scheme will cater 1,400 population. The total estimated cost of the project is Rs.57 million. Unexpected rock boulders at the site have retarded the progress. The physical progress at the end of 2011 was 28%.

Uva Province

Ohiya Water Supply Project

This is a new scheme intends 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 Total Cost Estimate is Rs.189 million and physical and financial progress at the end of 2011 were about 77% and 100% 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. Water source is a stream through G-Lon estate with partial treatment of capacity of 3,500 cu.m./day. The Total Cost Estimate is Rs.154 million and the financial progress at the end of 2011 was about 93%.

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.135 million. Supply of laboratory equipment, backwash pumps, air blowers and DI pipes for treatment plant work in progress. The financial progress at the end of 2011 was about 96%.

Wellawaya Water Supply Project

This project intends to provide safe drinking water to 6,000 beneficiaries in Monaragala District. The Total Cost Estimate is Rs.250 million and the financial progress at the end of 2011 was about 14%.

Badalkumbura Water Supply Project

This project intends to provide water to 22,000 beneficiaries in Badalkumbura area in Monaragala District. The Total Cost Estimate is Rs.124 million. The physical and financial progress of the project was about 80% and 55% as at the end of 2011, respectively.

Buttala Water Supply Project

This project intends to provide water to 38,250 beneficiaries in Monaragala area under Dayata Kirula program. The Total Cost Estimate is Rs.295 million. The physical progress of the project was 80%.

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 the Kelani River with full treatment and effluent is discharged to inland water canal. The Total Cost Estimate is Rs.198 million. The new treatment plant which can supply 2,750 cu.m./day. is in progress at the existing treatment plant site in Pugoda. Overall physical progress as at the end of 2011 was about 73%.

Nittambuwa - Veyangoda Water Supply Project

This is a new augmentation project intends to serve 15,000 beneficiaries in Nittambuwa, Thihariya, Warana and Kalagedihena. The water will be extracted from Attanagalu Oya and undergo full treatment in a WTP having capacity 3,000 cu.m./day. The Total Cost Estimate for the project is Rs.210 million. PVC pipe line was laid up to Warana Temple road and balance work of the Treatment Plant is in progress. Overall physical progress as at end of 2011 was about 96%.

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 was started in 2006. Water Source is Kalu Ganga with full treatment and capacity is 56,250 cu.m./day. The revised Total Cost Estimate 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. Supply & Laying of pipe line from Maggona to Beruwela was delayed in obtaining RDA permission. The physical progress as at the end of 2011 was 46%.

Katunayake Water Supply Project Stage I & II

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 Total Cost Estimate 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 financial progress at the end of 2011 was about 50%. Supply of pipes & construction of hone are in progress. Pipe laying along Negambo Puttalam road contract was awarded.

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 7,646 population 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 Total Cost Estimate 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 Total Cost Estimate for Phase I Stage II is Rs.114 million. The Physical Progress at the end of 2011 was 6%.

Hanwella Water Supply Project

This is an augmentation project intends to serve 20,000 people in Hanwella area. Water for this scheme is from Labugama - Kalatuwawa WTPs. Total cost estimate is Rs.47 million. It is proposed to augment the existing water supply scheme to expand the distribution network. Total length of new distribution is 15 km out of which 9 km had been completed except along RDA roads. The physical progress was 65%. 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 intends 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 Total Cost Estimate is Rs.30 million. Project was completed and commissioned in March 2011.

Pahala Kadugannawa Water Supply Project

This is a new project intends 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 Total Cost Estimate is Rs.30 million. The physical progress of the project was about 75%. Project was almost completed, but newly added work to be done.

PROJECTS TO COMMENCE PHYSICAL WORKS IN 2012

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 Colombo 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.

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 Samanawewa area will be benefited from this project. The TCE is Rs.4,956 million. The Contract Agreement was signed.

Badulla, Haliela and Ella Integrated WS (US Exim Bank)

The project scope includes construction of a water treatment plant of capacity 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.

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.

Kirama, Katuwana, Middeniya & Angunakolapelessa Water Supply Project

Kirama- Katuwana water supply project covers 34 Grama Niladhari Divisions while Middeniya - Angunakolapelessa covers 50 divisions. 3,000 new water connections in Katuwana area and 10,000 new water connections in Middeniya area will be given. Total cost estimate for the project is Rs.2,662 millions.

Thambuttegama Water Supply Project

The project covers 155,000 beneficiaries in Thambuttegama Pradeshiya Sabha division which is situated in Anuradhapura district. The Total Cost Estimate is Rs.9,000 million. Raw water source is Thambuttegama tank.

Wandurapinu Ella Water Supply Project

The water source for the project is Deduru oya. A treatment plant with the capacity of 38,500 cu.m./day will construct to cater 219,400 people in 7 DS divisions in North Western Province. The project will be completed in two phases and the Total Cost Estimate is Rs.9,756 million.

Nuwara Eliya District Rural Water Supply & Sanitation Project

This project will rehabilitate the existing intake by constructing a new intake structure having the total capacity of 10,200 cu.m./day to cater 59,000 consumers in Pundaluoya, Kotagala, Thalawakele, Nanuoya and suburbs. Total Cost Estimate is Rs.1,850 millions.

Pathadumbara Integrated Water Supply Project

This project will cater 723,000 beneficiaries in Kundasale, Polgolla, Karalliyadda and Ragala areas by providing 10,000 new connections in addition to service improvements. A new treatment plant having capacity of 65,000 cu.m./day will construct with 3 new intakes. Total Cost Estimate for the project is Rs.2,000 million.

Hemmathagama Water Supply Project

130,000 People in Hemmathagama, Mawanella and Aranayaka areas will be benefited with 28,000 new water connections. The project plans to construct an intake having capacity of 21,000 cu.m./day. The Total Cost Estimate is Rs.3,445 million.

Colombo City Distribution Expansion & Augmentation Project

This project will expand the service area. Therefore 700,000 people in the Colombo city will be benefited and the NRW will be reduced. Total Cost Estimate is Rs.3,500 million.

Katana Water Supply

93,000 People in Katana, Kadirana, Kimbulapitiya, Andiambalama and Heenatiyana will be benefited with 7,000 new water connections. Total Cost Estimate is Rs.1,641 million.

Ruwanwella Water Supply Project

This water supply project augments the capacity of existing water supply scheme up to 5,700 cu.m./day. Total Cost Estimate is Rs.494 million.

Wadinagala Water Supply Scheme

This water supply project provides water to Wadinagala area situated in Eastern Province. Total cost estimate is Rs.808.50 million.

Dambadeniya Water Supply Project

This project covers 33,000 consumers in Giriulla, Dambadeniya and Narammala area. Water source is Ma oya. Total Cost Estimate is Rs.796 million.

Ibbangamuwa Water Supply Project

This project intends to provide safe drinking water to 13 Grama Niladhari Divisions (GNDs) in North Western province including Ibbagamuwa GND. It comprises a full water treatment plant having capacity, 1,500 cu.m./day and a ground reservoir having 500 cu.m. capacity, and eventually it will cater 7,400 people. Total Cost Estimate is Rs.216 million.

Maharagama Boralesgamuwa Waste Water Facilities

This project intends to cover the Maharagama and Boralesgamuwa areas by constructing 9km long reticulation wastewater distribution network with pumping stations and pumping main. This collected waste water will be brought to Ratmalana/ Moratuwa waste water treatment plant. The project will be benefited to 27,250 people in the said areas. Total Cost Estimate is Rs.2,200 million.

Galle Sewerage Project

This project will cover 34,595 beneficiaries in Galle area by providing the pipe borne sewerage facilities. Total Cost Estimate is Rs.3,200 million.

Hospital Sewerage System Improvement

This project is designed to provide pipe borne waste water disposal system to National Hospital (Colombo), 21 teaching hospitals and 3 provincial hospitals. Beneficiaries will be 69,500 patients. The Total Cost Estimate is Rs.2,100 million.

PLANNING & DESIGN ACTIVITIES

The need for new (or the augmentation of) water supply projects is first realized by the OIC 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 drinking water. 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-wide yearly, based on selected criteria for sector planning purposes and the prioritization is used for approvals, funding inquires and implementation.

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

The total construction value of Planning and Design work carried out during 2011 was Rs.3,934.0 million while the total operational expenditure of the Section was Rs.130.4 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, review of Conceptual designs of proposals and for planning/feasibility work.

Planning Works carried out during 2011 are:

Towns East of Colombo District WSP, Gampaha, Attanagalla & Minuwangoda Integrated WSP, Improvement of Colombo City WS Distribution System, Kaluganga WSP Phase II Stage I, Aluthgama, Mathugama & Agalawatta WSP, Kelani Right Bank WSP - Stage II, Transmission analysis in GC Area and Distribution analysis in Colombo City, ADB Assisted Jaffna Kilinochchi Water Supply & Sanitation Project including procurement documents for selection of consultants, Anuradhapura North Integrated Water Supply Project, Madu Water Supply Scheme (Phase II), Mullaitivu WSP, Mankulam WSP and Killinochchi WSP.

Design Review Work carried out during 2011 are;

- Review of structural, hydraulic, and process designs of Kelani Right Bank Water Supply Project and Salinity Barrier across Kelani River, Review of structural, hydraulic, process design, distribution and transmission



Bambukuliya Water Treatment plant

design of Negombo Water Supply Augmentation Project

- Review of Structural, hydraulic, distribution and transmission systems and process designs of Ruhunupura Water Supply Project
- Review of Structural, hydraulic, distribution and transmission systems and process designs of Integrated Water Supply Scheme for Unserved Areas of Ampara District - Phase III
- Review of Conceptual designs of Monaragala/Buttala Water Supply Project
- Analysis of current water demand and pumping capacity of high lift pumps at Ambalantota WTP under ADB 4th Project (Hambantota)
- Conceptual and process designs of Greater Trincomalee Integrated Water Supply Project and ADB Assisted Dry Zone Urban Water & Sanitation Project.

Some detailed Designs carried out during 2011 are:

- Re-routing and shifting of Kalatuwawa - Dehiwala transmission (N33) pipeline at Makumbura to accommodate the Outer Circular Road
- Pump house for Nawala booster pumps
- Water supply to Diyagama Township Development including the Mahinda Rajapaksha International Sports Complex
- Design of a water supply system to Sri Lanka Army Housing Scheme at Manning Town, Narahenpita
- New Transmission arrangement to Katunayake International Airport and BOI
- Design of Bridge crossings for Transmission and distribution networks of Negombo Augmentation Water Supply Project and Kaluthara WSS - Stage II
- Final Designs and Procurement documentation of

distribution networks of Negombo Augmentation Water Supply Project

- Design work on Kalatuwawa and Labugama Dams under Dam Safety & Water Resources Planning Project
- Augmentation of Buttala WSS under “Dayatakirula” Programme
- Reinforcing existing water pumping main of urban water supply scheme in Kegalle
- Detailed designs and procurement documents for ADB CARE project assisted Eachchalampattu WSS
- Continuation of detailed designs for JICA funded Eastern Province Water Supply Development Project
- Modification of Treatment Plant at Ilmanite factory at Pulmoddai
- Modification of Kataragama WSS
- Retaining wall for Godakawela Water Treatment Plant
- Detailed designs for Distribution Networks in Integrated Water Supply Scheme for Unserved Areas of Ampara District - Phase III
- Detailed designs and procurement documents for Adampan, Vidaththaltivu and Thevenpidy WSS under the World Bank assisted Emergency Northern Rehabilitation Project (ENReP)
- Detailed designs and procurement documents for Point Pedro WSS under the ADB Assisted Conflict Affected Region Emergency (CARE) Project
- Detailed designs and procurement documents for Maha Oya WSS

Some energy saving efforts during 2011 are:

- Design of Variable Speed Drives connected to direct pumping distribution systems under the Ampara Phase III WSP and Weligama WSS.
- Prepared Prefeasibility report and obtained PAC approval for Towns East of Colombo District WSP to utilize the available gravity water effectively from Labugama & Kalatuwawa WTP.

Documentation, Quantity Surveying and Design Manual Updating works in 2011 are:

- Involved the preparation of SBDs, on directions issued by SBDRC and providing all inputs to SBDRC.
- Involved with preparation of BOQs, Rating of design works and reviewing the Engineer's estimates submitted by Projects.
- Prepared 2011 Rate Book and 2012 Rate Book is being prepared.
- Conducting work studies for the relevant work areas.
- Updated the P1 Manual for preparation of Pre-feasibility and Feasibility Reports in consultation with all RSC after conducting two consultative workshops.
- Updating of D2 Design
- Manual Monitoring and providing inputs to update other existing Manuals

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

- Most of the new projects are formulated on design-build basis. Reviewing designs of these un-solicited Design-Build projects require experienced design engineers due to the complexity of work and the very short time period

granted. In the long-term engineers and other experts do not gain any experience in designing of Water Supply Schemes as very few projects are involved with detailed designs.

- Delay in providing necessary Mechanical, Electrical and Electronic Engineers for the section
- Project Consultants are reluctant to accept changes proposed by the NWSDB staff. Delay in submission of complete drawing sets and complete design reports by designers result in deterioration of the quality of work, done by the consultants.
- Delay and difficulty in obtaining approval for raw water abstraction.
- Lack of expertise to planning and design water resources improvement, water sheds/catchment protection including new impounding reservoirs and improving raw water storages.
- Locating and timely acquisition of suitable lands for ground reservoirs, towers and treatments plants.
- Non-availability of service corridors for laying new pipelines and obtaining RDA/PRDA approval for laying pipes on existing roads.

Some new focus in 2011 will be:

- Initiating new strategies for project financing to ensure more in-house detailed design works. Some identified strategies are to negotiate with foreign donors for NWSDB to carry out detailed designs at an agreed cost and explore the possibilities to obtain funds from local banks for projects.
- Using more advanced computers software packages to save the time and improve the productivity.

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 2011 are;

Sewerage section of P&D division has drafted two proposals for plant designing and construction of Sri Jayawardanapura Kotte Wastewater Collection and Disposal System with Sea Outfall Project and Hambantota Wastewater Disposal Project. Above two documents were issued to prequalified bidders those who interested in the job.

The tender document was drafted for the contract for Environmental Impact Assessment (EIA) of the Galle & Negombo Wastewater Disposal Projects. The contract was awarded to the EML Consultants on 02nd August 2011. P&D Sewerage Section developed a technical proposal for Extension of Piped Sewerage Coverage for Dehiwala - Mt.Lavinia Municipal Council Area and obtained the approval from the Board of Directors.

Design Review Work carried out during 2011 are;

The P&D section was involved in reviewing detailed designs & provided specialists' assistance for three foreign funded projects, namely Wastewater Disposal Project for Ratmalana/ Moratuwa and Jaela/Ekala Phase I, Colombo

Sewerage Rehabilitation Project-Southern Catchment and Kandy City Wastewater Disposal Project.

In addition to that following works were guided and inspected by the sewerage section of P&D.

- Construction of wastewater treatment plant for Sri Lanka Ayurvedic Drugs Cooperation Factory (SLADC) at Navinna, Maharagama.
- Planning, design and construction activities for shifting of wastewater pumping main at Pelawatta Ceylon Electricity Board.
- Providing technical inputs to rehabilitation of wastewater disposal system of Balapitiya Base Hospital.

Special events that took place on Planning and Design of Sewerage Projects during 2011 are;

- Preparation of Design Manual for Sewerage Works.
- Conducted training programmes on Wastewater Treatment and Operation for NWSDB engineers on 12th and 14th December 2011.

Proposals Prepared for New Sewerage Projects

- Design of Sewerage Treatment Plant for National Zoological Garden at Dehiwala
- Wastewater Disposal System of Mixed Development Project at Sethsiripaya
- Wastewater Treatment & Disposal facilities to Akuressa New town Center Development Project
- Wastewater Treatment & Disposal facilities to proposed Defense Head Quarters at Akuregoda and Pelawatta
- Design of Wastewater Treatment & Disposal facilities to Kilinochchi Hospital and the Army Camp
- Wastewater disposal facilities to Salamulla and Government Factory Land Housing Complexes at Kolonnawa
- Rehabilitation of Wastewater Treatment & Disposal facilities at Karawanella Hospital

There are number of hospitals that face severe problems of wastewater disposal. Most of the existing systems are obsolete due to wrong maintenance or the age of the system. Those hospitals have sought technical assistance from the NWSDB to upgrade their wastewater treatment systems. However, providing solutions is challenging due to funding, the non availability of the required human resources and due to limitation of engineers and construction staff who could be mobilized quickly.

Project Preparation

Procedures and Guidelines were 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, Visit of a High Profile Delegation from the Czech Republic, Round table Meeting with Malaysian Delegate.

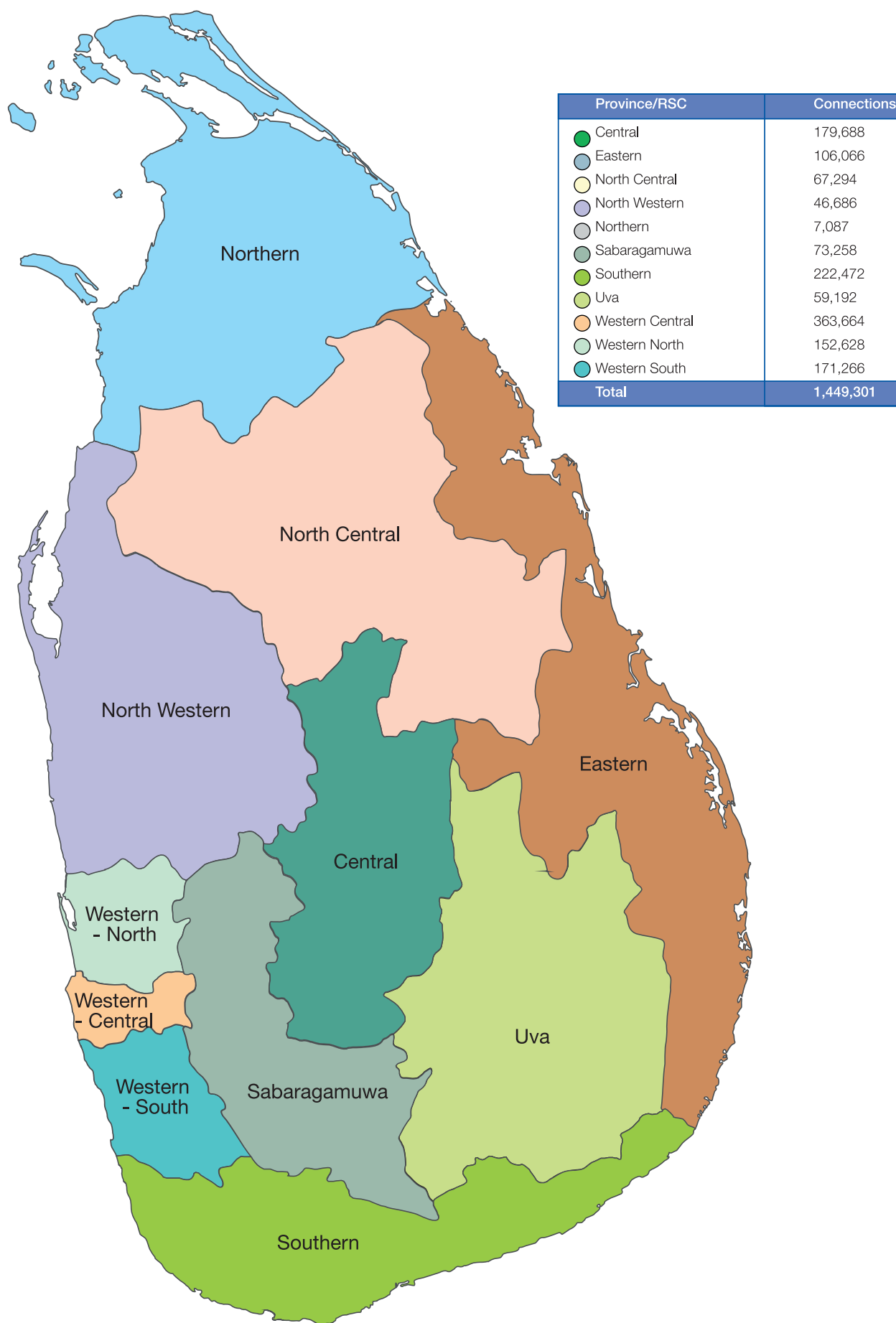
Secured NPD clearance for the NWSDB approved Projects: Anuradhapura North Integrated Water Supply Project, Anuradhapura South Phase II Integrated Water Supply Project, Hemmathagama Water Supply Scheme, Matara Stage IV Water Supply Scheme, Rehabilitation of

Distribution Main from Church Hill Reservoir to Kelaniya, Improvements to the Treatment process (short term) of water supply schemes with partial Treatment, Bandarawela, Diyatalawa & Haputale Integrated Water Supply Scheme, Augmentation of Colombo City Water Supply System, Katana Water Supply Scheme, Kiriibbanwewa Water Supply Scheme, Water Resources Assessment & Development – Northern Province, Small Town Water Supply Scheme in South - West Part of Kurunegala, Improvement of Colombo City Distribution System. Coordinated and liaised with the Ministry of Finance & Planning for securing donor funding for Multilateral Projects: ADB – Colombo City Service Improvement Project.

Warakapola Water Supply Scheme & Pathadumbara Integrated Water Supply Scheme were some project screening reports, which were prepared to screen the experience and eligibility of project components.

Coordination & Finalization of Planning Stage of Foreign Funded Projects and Liaise, with the Attorney General's Department for the finalization Commercial Contract: Kollonna, Balangoda Water Supply Project, Energy Conservation Project, Badulla Haliela Water Supply Project, Greater Dambulla Water Supply Project.

REGIONAL SUPPORT CENTRES



REGIONAL SUPPORT CENTRES

New projects are originated from the eleven 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; Pipe laying of Vipulasena Mawatha and Nawam Mawatha, Construction of cashier point at People's Park building and Kirulapona pump house, Distribution improvement at Moragasmulla. Some special events during the year are; Carried out disconnect premises inspection programmes at Area Engineer Mattakkuliya, Maligawatta, Pamankada & Fort Area. Special water supply service arranged (Elections, government, festivals etc) and provided necessary assistance and information for project works (eg:- Kalu Ganga Project, NRW Project & GC Rehabilitation Project). Religious activities had taken place in each Area Engineer Offices and OICC Offices.

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 26 km and 30 km Extensions / Infillings of various diameters of distribution pipelines laid in Kalutara and Panadura-Horana regions, respectively. Out of 09 rechargeable works for pipeline extensions, 04 were completed and others are in progress in Panadura - Horana Region. Several stores improvements were completed spending Rs.3.5 million in Dehiwala Region and some were in progress amounting to Rs.14.5 million in Kalutara region, under stores rehabilitation funds.

There was a salinity water issue continuing during the January and February in 2008, 2009 and 2010 but in 2011 it has not happened. Delayed O&M works such as pumping main laying up to Beruwala and replacement of AC pumping mains along the New Road – Dharga town due to objections of Road Development Authority.

Water supply coverage was extended both in Kalutara and Panadura-Horana regions such as in Horana region, it was increased by 30.36 km.

Western - North

New proposals were prepared for Katana DS division and Giridara area in Dompe DS division. Distribution network in Katunayake/ Seeduwa area was expanded by 50km and 15,122 new connections were given. Using PCB, UNICEF, Samurdhi & Gamanagama funds 39 pipe laying projects were carried out during the year.

Total length of the pipe extension was 324.49 km. Water Asset Management (WAM) has been included in Negombo water supply & Optimization Project to promote a responsible and pro active approach to water utilization and minimization of waste. Therefore WAM office was established in Ja-Ela area engineer's office premises and GIS database was prepared which acts as the central repository for all WAM related data such as pipe distribution network data and digitized entire road system and all the buildings. The same WAM project was initiated under Biyagama Gampaha and Ja-Ela area engineer divisions. It needs to be essentially highlighted that the construction section of the Western North has taken over more works by using direct labour method than giving contracts, which affected positively on attitudes of NWSDB staff skills, quality of works, planning, using of resources and time management. Eventually it caused to save Rs.25.76 millions at the end of 2011.

Southern

The Southern RSC has carried out 8 feasibility studies and prepared proposals, out of which six have been approved. These six WSPs are in planning stage and funding is to be identified. Six rechargeable projects were carried out and two were completed. seven awareness programmes on water conservation, water treatment processes, cost of water treatment, conservation of water sources and sanitation practices were conducted for school children and seven nos awareness programme to CBO officers & OIC's attached to NWS&DB on health & sanitation under the UNICEF funds were held.

There were several matters arised due to road widening works and fly over construction in Hambantota districts such as pipe laying and relaying works on Mattala, Mirijjawila, Lunugamwehera, Gonnoruwa and Sooriyawewa-Meegahajandura roads were delayed. Therefore discussions with RDA, PRDA and other local authorities are in progress.

North Central

One of the major activities taken place in the province in 2011 is staring construction of Oyamaduwa water supply project and cover the Dayata Kirula exhibition area and suburbs.

After spending Rs.1 million Awkana water supply system has commenced within 3 months. Meanwhile Viharapalugama and Oyamaduwa water supply projects had started and

achieved 50% and 75% physical progress respectively. Mahameuna Uyana water supply system had commenced which costed Rs.3.6 million.

Since the Chronic Kidney Disease (CKD) has prevailed in the North Central Province it has decided to start water supply schemes immediately in the affected areas. Until the completion of schemes, drinking water was supplied by water bowsers to identified villages such as Billawa in Anuradhapura district. The project costed Rs.3.63 million and benefitted to 150 families in the area.

It had identified water quality issues in Medawachchiya, Kahatagasdigiliya, Horoupathana and Kebithigollewa such as Fluoride, Hardness, Electrical conductivity and Alkalinity exceeding the permissible limits of Sri Lankan Standards (SLS) for drinking water quality. Another significant issue identified was insufficient quantity of water at Habarana and Madawachchiya water supply schemes which will be prevented by implementing Habarana-Palugaswewa and Anuradhapura-North water supply projects.

North Western

Nikawaratiya WSS was commissioned in November 2011 and it caused to solve the prevailed water quality issue in Nikawaratiya area. Further it is found that the bacteriological water quality in the region is found to be 100% satisfactory. Rain Water Harvesting (RWH) programme was conducting throughout the year successfully and constructed 151 RWH tanks in Polpithigama area for chronic kidney diseased patients. Accordingly requests received, 30 Rural Water Supply proposals were prepared. Replacing of bundle pipes and distribution operational improvements had spent Rs. 4.77 millions.

New project proposals were prepared to expand the water supply coverage in the province, such as preparation of pre feasibility report for Alawwa, Polgahawela water supply scheme revision and Makandura-Pannala WSS revision. Ibbagamuwa WSP had obtained cabinet approval and selected as one of the capital investments under the Capital Budget 2012 of NWSDB. While Galgamuwa WSP obtaining PAC approval, Anamaduwa and Dankotuwa WSPs have forwarded for NPD clearance.

First part of water supply to the Coconut Research Institute Lunuwila including water supply to Kirimatiyana town has completed which costed Rs.15 millions and balance work is in progress. Pipeline shifting due to road widening programme at Padeniya-Anuradhapura roads had obtained 80% physical progress. During the year 42.41 km of pipelines were infilled.

Central

An international conference on “Communities and water – Challenges for sustainability” was held at the end of the year in Peradeniya. Similarly five provincial seminars on “Sanitation” had been conducted prior to the “SACOSAN IV” programme.



Regional Support Centre -Central

NWSDB proposed Mini Hydro power projects mainly for internal use which causes energy saving and eventually capital budget saving. The project will cost Rs.1.5 million. Stores were improved in Galagedara WSS & Gampolawatta WSS by spending Rs.10 million and Rs.12 million respectively. At the end of the year the collection efficiency has reached 107% which is the best.

Sabaragamuwa

Waganthale WSS in Kegalle district was commissioned successfully in March 2011 by the Hon. Minister of Water Supply and Drainage Mr. Dinesh Gunawardana. Further on Kegalle district, dewatering pump installation at Ruwanwella intake, construction of low cost filter for Bulathkohupitiya, pumping main replacement at Moranthota and improvement of Ruwanwella intake and treatment plant were taken place during the year.

Meanwhile in Ratnapura district construction of 10 valve chambers and construction of chlorination and fixing of gas chlorinator in Ehaliyagoda WSS were completed. Similarly gas chlorinators were replaced in Ratnapura and Balangoda WSSs. In addition to that pipe lines were extended in Kegalle by 22 Km and in Ratnapura by 21 Km and constructed a rain water supply scheme to meet the increasing demand. Row water quality in Gonagalgeniya, Bulathkohupitiya and Kannanthota WSSs were significantly poor and solutions have been applied. Therefore flocculators and the flash mixture at Hiriwadunna-WTP were repaired.

Uva

Uva province was inspected by the DGM (Sabaragamuwa) since the start of the National Water Supply & Drainage Board up to 2010. This was changed by a new recruitment of a DGM for Uva in 2011 April and the DGM's office was established in Bandarawela.

During the year having participated in Dayata Kirula National Exhibition, regional development activities were continued accordingly, such as augmentation of Buttala water treatment plant and measures to improve water quality in WSSs of Monaragala district. Further Badalkumbura

Alupota and Monaragala water supply schemes were under construction and intends to complete in 2012.

Transmission mains were laid from relevant intakes to Ambagasdowa and Welimada water supply schemes each having the length 2 km. In addition to that water quality improvements were done in Haliela, Lunuwatta, Bogahakumbura, Haputale, Keppetipola, Borlanda and Madawela water supply schemes in Bandarawela district.

As a help to improve community managed water supply schemes, the Resource Center of regional support center Uva, established a data bank which comprises Technical details, community development details and District NGO details which are related to water sector development. A water safety plan was developed for Morethota, Walasbedda and Nayabedda catchments and mitigation measures and action plan to be completed. Meanwhile Girandurukotte WSS was extended for 1000 more families who are suffering by Chronic Kidney Diseases.

Six new urgent rural water supply improvement project proposals were taken in to consideration and waiting for relevant approvals.

Northern

Mandithivu and Vempirai water supply projects funded by UNICEF were successfully completed and commissioned in July 2011. Madu water supply project inauguration programme was held on 8th December 2011. In addition to that major activities, malfunctioned hand pump tube wells in the region were repaired by funds received by NGO and other outside parties, and a Cistern tank and a pump house are constructed to Mandathive and Kites area.

Since Vankalai water supply scheme demanded more, a new bore hole at Kaddaikadu was constructed having capacity of 40m³ / hour. Extensions of uPVC pipelines were taken place at Madu improvement project, Vankalai pumping main and Mannar WSS.

There were several water quality issues arised in the region such as Fecal Contamination in Mannar and bacterial pollution in Erukulampiti. Immediate actions were taken to recover it although they are not long lasting, new sources were identified such as Peraru (stream), Mankulam irrigation tank, Kalli Kadu-Bore hole and old dug well-Erukulampiti and water quality testing of the said sources are in progress.

Eastern

Commissioning of six new small scale WSSs in Batticaloa taken place in the year successfully. They are Batticaloa WSS, Irruthayapuram WSS. Kallady WSS, Kattankudy WSS, Arayampathy WSS and Kaluwanchikudi WSS. Mean while extension of pipe lines were completed such as 1.14 km in Kattankudy, 2.05 km in Batticaloa and 2.90 km in Eravur.



Regional Support Centre -Eastern

Since the shortage of safe drinking water in Ampara & Trincomalee districts RWS units established to cover the required demand.

During the year, excavation and laying pipes at Kanniya, Peeliyadi, Sarthapura extension, construction bulk meter chambers and renovation of chlorinator house and tank at Varothayanagar were completed in Trincomalee district. Pipelines were extended in 253 km in Akkaraipattu area.

REPORT OF THE AUDIT AND MANAGEMENT COMMITTEE

The Audit and Management Committee was established in the year 2000 as per the Decision no. 2965 (b) of Board Meeting No. 590 of National Water Supply & Drainage Board, in compliance with Public Finance Circular No. PF/PE3 dated 19th November, 1999 issued by the Treasury.

The function of the Audit & Management Committee is to support the Board by reviewing, evaluating decisions and makes recommendations in terms of processors designed to ensure fair presentation of financial statements and robust system of internal control.

The Audit & Management Committee functions to extend its assistance to the Board of Directors even during the year under review in terms of Public Finance Circular No. PF/PE7. During the year under review, the Committee consisted of the following Members.

Mr. A.K. Seneviratne - *Chairman*
Board Member

Mr. K.D. Gamini Gunaratne - *Member*
Vice Chairman

Mr. K.L.L. Premanath - *Member*
General Manager

Mr. H. Ariyasena - *Member*
Deputy General Manager
(Personnel & Administration)

Mr. D. Thotawatte - *Member*
Deputy General Manager (Finance)

Mr. R.M.A.S. Weerasena - *Member*
Deputy General Manager (Internal Audit)

Mr. K.K. Chandrasiri
Secretary

The Audit & Management Committee met on 07 occasions during the year 2011.

Matters arisen from the Auditor General's Report 2009 was followed up during this year. It has been a major function of the Audit & Management Committee to follow up the matters pointed out in the Auditor General's Report 2010 during this year. In particular, the Committee focused its great attention on the following matters.

1. To take action to carry out more systematically and expedite the work connected to un-reconciled control accounts based on the matters pointed out by the Auditor General in regard to such accounts.
2. The Committee drew its special attention on the preparation of annual accounts and timely submission of them for audit and necessary instructions were given in this regard.
3. The Committee reviewed the internal audit findings during the year 2010 and instructions were given to rectify the situation highlighted in the audit findings.
4. Instructions were given as to how internal administration systems should be improved to avoid shortcomings having followed up the matters arisen from the audit queries made as per the improved annual audit plan.
5. To review the internal administration systems in regard to practical issues cropped up in the operational and maintenance process of the NWSDB and ensure that the instructions contained in the circulars are complied with and instructions were given whenever necessary.

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INCOME STATEMENT

As at 31st December 2011

	Note	Budget 2011 Rs.	Actual 2011 Rs.	Actual 2010 Rs.
Sale of Water	3	11,976,739,000	11,616,045,254	10,744,059,534
Less : Direct Operating Expenses	4	(7,508,081,505)	(7,470,490,082)	(7,061,727,544)
Operating Profit on Sale of Water		4,468,657,495	4,145,555,172	3,682,331,990
Other Operating Income	5	2,485,000,000	2,081,716,017	1,566,297,797
Administration Overheads	6	(2,726,975,495)	(2,447,412,103)	(2,564,857,342)
Depreciation	7	(1,850,000,000)	(1,769,054,208)	(3,258,762,679)
Other Operating Expenses	7	(366,711,000)	(249,979,834)	(268,745,918)
Profit/(Loss) from Operating Activities		2,009,971,000	1,760,825,044	(843,736,151)
Revaluation Deficit	7	-	(474,261,491)	(3,684,342,399)
Finance Cost	8	(2,100,000,000)	(943,355,146)	(1,419,459,214)
Non-Operating Income	9	100,000,000	131,257,102	97,644,018
Profit/(Loss) from Ordinary Activities before Tax		9,971,000	474,465,508	(5,849,893,746)
Taxation- Economic Service Charge	10	(34,003,000)	(53,055,544)	(105,273,966)
Net Profit / (Loss) for the year		(24,032,000)	421,409,965	(5,955,167,712)

The accounting policies and notes on Pages 70 to 84 form an integral part of the financial statements.

Colombo

09th April 2012

BALANCE SHEET


As at 31st December 2011

	Notes	2011 Rs.	2010 Rs.
ASSETS			
Non- Current Assets			
Property ,Plant & Equipment, Net - At cost	A	84,271,474,289	73,665,875,928
Capital Work in Progress	11	93,973,706,724	75,479,132,299
Investments	13	47,021,257	65,483,233
		178,292,202,270	149,210,491,460
Current Assets			
Non Operating Assets	12	129,519,607	186,528,287
Inventories	14	3,553,283,938	3,282,670,013
Trade & Other Receivables	15	4,630,585,929	4,163,963,700
Deposits & Advances	16	4,463,442,277	5,577,524,742
Investments	17	987,410,125	612,324,887
Cash & Cash Equivalents	18	715,081,472	1,160,749,233
		14,479,323,348	14,983,760,862
	-		
Total Assets		192,771,525,619	164,194,252,322
EQUITY AND LIABILITIES			
Capital and Reserves			
Assets taken over from Government Dept.		185,480,387	185,480,387
Government Grant		69,440,023,265	62,617,514,691
Capital Grants	19	94,202,911,393	78,619,983,625
Capital Recovery Fund	20	3,041,083,387	2,532,250,115
Staff Welfare Fund		13,935,577	13,468,272
Accumulated Profit/(Loss)		(16,171,869,528)	(15,587,624,913)
		150,711,564,480	128,381,072,178
Non-Current Liabilities			
Loan Payable	21	27,838,903,108	23,070,625,176
Other Deferred Liabilities	22	3,634,950,342	3,404,692,303
		31,473,853,450	26,475,317,479
Current Liabilities			
Creditors	23	3,489,384,662	2,344,883,758
Loan Capital Payable	24	2,687,799,521	2,362,323,996
Loan Interest Payable		2,464,625,111	3,157,126,784
Non Operating Liabilities	12	133,008,868	161,145,829
Other Payables	25	1,811,289,525	1,312,382,299
		10,586,107,688	9,337,862,666
Total Equity and Liabilities		192,771,525,619	164,194,252,322

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)

The accounting policies and notes on Pages 70 to 84 form an integral part of the financial statements.
09th April 2012

CASH FLOW STATEMENT

As at 31st December 2011

	Notes	2011 Rs.	2010 Rs.
Cash Flows from/(used) in Operating Activities			
Net Profit/(Loss) before Tax		474,465,508	(5,849,893,746)
Adjustments for			
Interest Income		(131,257,102)	(97,644,018)
Profit/loss on disposal of Fixed Assets		544,650	(2,867,528)
Depreciation	7	1,769,054,208	3,258,762,679
Revaluation Loss		474,261,491	3,684,342,399
Retiring gratuity provision		216,756,879	220,195,945
Prior Year Adjustments		(496,354,003)	-
Interest Expense	8	943,355,146	1,419,459,214
Operating Profit before Working Capital Changes		3,250,826,778	2,632,354,945
(Increase)/Decrease in Inventories		(270,613,925)	23,295,029
(Increase)/Decrease in Debtors, Rece'bles & Deposits		705,799,680	(706,620,578)
Increase/(Decrease) in Creditors & Provisions		1,809,701,459	738,484,038
Cash Generated from Operations		5,495,713,992	2,687,513,434
Tax Paid	10	(53,055,544)	(105,273,966)
Disallowed VAT paid to Inland Revenue		-	(1,365,488,646)
Gratuity Paid	22.1	(180,929,130)	(151,173,991)
Net Cash from Operating Activities		5,261,729,319	1,065,576,831
Cash Flows from/(used in) Investing Activities			
Investments in Fixed Assets		(30,830,027,600)	(19,739,047,979)
Sale proceeds for disposal assets		4,214,950	3,025,100
Investment Income		129,926,338	101,597,240
(Investment) / Withdrawal of Investments		(356,623,263)	(297,217,034)
Net Cash Flows used in Investing Activities		(31,052,509,575)	(19,931,642,674)
Cash Flows from/(used in) Financing Activities			
Government Grant during the Period - Net		6,822,508,574	5,537,178,665
Capital Grant during the period - Net		15,582,927,768	11,430,082,462
New Loans		5,758,818,754	3,891,224,155
Loan Repayments		(665,065,296)	(850,585,445)
Loan Interest Paid		(2,154,077,304)	(605,952,057)
		25,345,112,495	19,401,947,780
Net Increase in Cash & Cash Equivalents		(445,667,761)	535,881,937
Cash & Cash Equivalents at the beginning of the year		1,160,749,233	624,867,296
Cash & Cash Equivalents at the end of the period		715,081,472	1,160,749,233

The accounting policies and notes on Pages 70 to 84 form an integral part of the financial statements.

09th April 2012

SEGMENTAL GROSS PROFIT

As at 31st December 2011

ACTIVITIES / SOURCES	WATER SERVICE	SEWERAGE	GROUND WATER	Total
GROSS INCOME				
Sale of Water				
Metered Sales	11,621,579,331	26,677,208	-	
Bulk Sales	168,950,497			
Bowser Supp.	45,237,145			
	11,835,766,973			
less : Rebates	-246,690,626			
	11,589,076,348	26,677,208		
Other Income	532,217,681	124,273,382	8,348,647	
	12,121,294,029	150,950,590	8,348,647	12,280,593,265
Less : Direct Cost				
Personel Cost				
Permenant	3,074,287,710	125,713,754	93,123,357	
Casual	49,401,200	1,644,346	830,068	
	3,123,688,910	127,358,100	93,953,425	3,345,000,435
Pumping Cost	2,395,346,814	20,525,189	1,614,300	2,417,486,303
Chemical Cost	422,650,649	4,304,671	4,341	426,959,662
Repairs & Maintanance	554,800,136	10,424,846	16,582,404	581,807,386
Establishment Expenses	245,480,025	8,497,636	18,515,872	272,493,532
Rent,Rates,Taxes,etc.	411,473,936	12,968,828	2,300,000	426,742,765
	7,153,440,471	184,079,270	132,970,341	
Gross Profit for the Year	4,967,853,558	-33,128,680	-124,621,695	4,810,103,183

STATEMENT OF CHANGES IN EQUITY

As at 31st December 2011

	Assets from Department Rs.	Capital & Grants Rs.	Capital Recovery Fund Rs.
Balance as at 31.12.2009	185,480,387	125,635,725,836	2,150,618,551
Grant received during the year		15,601,772,480	
Net Profit/(Loss) for the Year			
Transfers to/(from) during the year			381,631,564
Balance as at 31.12.2010	185,480,387	141,237,498,316	2,532,250,115
Grant received during the period		22,405,436,341	
	185,480,387	163,642,934,658	2,532,250,115
Prior Year Adjustments (Salary arrears 2009)			
Prior Year Adjustments (Ministry Advance write off)			
Net Profit/(Loss) for the period			
Transfers to/(from) during the period			508,833,271
Balance as at 31.12.2011	185,480,387	163,642,934,658	3,041,083,387

The accounting policies and notes on Pages 70 to 84 form an integral part of the financial statements.

Colombo

09th April 2012

Revaluation Reserve Rs.	Staff Welfare Fund Rs.	Accumulated Profit/Loss Rs.	Total Rs.
309,763,136	13,116,170	(9,560,236,671)	118,734,467,409
			-
			15,601,772,480
		(5,955,167,712)	(5,955,167,712)
(309,763,136)	352,102	(72,220,530)	-
-	13,468,272	(15,587,624,913)	128,381,072,178
			22,405,436,341
-	13,468,272	(15,587,624,913)	150,786,508,519
		(440,554,765)	(440,554,765)
		(55,799,238)	(55,799,238)
		421,409,965	421,409,965
-	467,305	(509,300,577)	-
-	13,935,577	(16,171,869,528)	150,711,564,480

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 produce 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 9368. The number consists of those who were paid salaries as at 31 December 2011.

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 Date (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 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 its 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 & Loss account for the year 2010 and Rs. 474,261,491 for the year 2011.

(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%
Buildings	-	2%
Structures	-	1.67%
Treatment Plant Equipment	-	5%
Transmission Plant Equipment	-	1.67%
Survey Equipment	-	10%
Laboratory Equipment	-	10%
Furniture, Fittings &		
Other Equipments	-	10 %
Passenger Vehicles	-	14.3%
Heavy Vehicles	-	10%
Service & Bulk Meters	-	10%

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

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 gratuity 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. 456,854,704 and ETF – Rs. 114,213,676.

(d) Arbitration

In respect of integrated W.S.S 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	Value
3102 / D	500,000/-
544 / 2011	50,000/-

(c) Irrecoverable Staff Loans

A Provision has been increased to write off irrecoverable staff loans to employees who expire whilst in service by Rs. 3,076,610.

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 specific 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.

3. Sale of Water

	31.12.2011 Rs.	31.12.2010 Rs.
Metered Sales	11,648,548,237	10,747,447,037
Bulk Sales	168,950,497	149,369,059
Bowser Supply	45,237,145	40,610,465
Less: Rebates	(246,690,626)	(193,367,026)
	11,616,045,254	10,744,059,534

4. Direct Operating Expenses

	31.12.2011 Rs.	31.12.2010 Rs.
Personnel Cost	3,345,000,435	3,346,857,362
Pumping Cost	2,417,486,303	2,103,576,701
Chemicals	426,959,662	412,960,647
Repairs & Maintenance	581,807,386	560,276,883
Establishment Expenses	272,493,532	248,970,965
Rent,Rates,Taxes, Security & Other Expenses	426,742,765	389,084,987
	7,470,490,082	7,061,727,544

5. Other Operating Income

	31.12.2011 Rs.	31.12.2010 Rs.
Capital Recovery Charges	508,833,271	381,631,564
New Connection Income (Net)	390,089,351	360,228,281
Fees & Other Charges	1,233,429,466	878,780,128
Revenue Grants	(50,636,071)	(54,342,175)
	2,081,716,017	1,566,297,797

6. Administration Overheads

	31.12.2011 Rs.	31.12.2010 Rs.
Personnel Cost	1,814,396,068	1,895,652,327
Repairs & Maintenance	96,361,017	111,424,296
Establishment Expenses	339,040,146	347,104,027
Rent,Rates,Taxes, Security & Other Expenses	197,614,872	210,676,692
	2,447,412,103	2,564,857,342

7. Other Operating Expenses

	31.12.2011 Rs.	31.12.2010 Rs.
Depreciation		
Infrastructures	60,399,041	87,329,948
Buildings	128,812,736	268,162,740
Water Supply Scheme Structures	397,004,478	929,680,335
Plant & Machinery - Pumping & Treatment	527,238,142	699,773,601
Service/Bulk Meters	10,736,646	14,251,366
Plant & Equipment - Distribution & Transmission	574,977,544	848,923,368
Mobile Equipment	15,799,274	19,052,905
Survey Equipment	106,320	161,712
Laboratory & Other Equipment	23,333,793	93,529,359
Furniture Fittings & Office Equipments	93,942,075	53,974,161
Passenger Cars	15,812,996	36,511,634
Vans, Buses & Jeeps	51,610,043	151,026,099
Lorries & Trucks	83,736,850	186,973,548
Tractors & Trailors	8,972,146	21,574,186
Water Bowzers & Heavy Vehicles	48,639,431	80,136,831
Motor Cycles	2,486,942	2,439,264
Lease Vehicles	3,242,007	3,242,007
	2,046,850,464	3,496,743,064
Amortisation of Leasehold Land	-	-
Total Depreciation	2,046,850,464	3,496,743,064
Less: Depn. for Grant funded Assets	277,796,256	237,980,385
Depreciation	1,769,054,208	3,258,762,679
Revaluation Deficit	474,261,491	3,684,342,399
	2,243,315,699	6,943,105,078
Bad & Doubtful Debts	46,813,190	23,264,041
Provision for Irrecoverable Staff Loans	3,076,610	1,762,215
Over Provision for Obsolete Stock	(16,666,846)	23,523,717
Retiring Gratuity	216,756,879	220,195,945
Other Operating Expenses	249,979,834	268,745,918
	2,493,295,533	7,211,850,996

Revaluation deficit of Rs. 474,261,490.91 was charged to current period income & expenditure account due to the errors found in relation to the assets revaluation as at 31st December 2007.

8. Finance Cost

	31.12.2011 Rs.	31.12.2010 Rs.
Loan Description		
IDA 1700	24,369,977	41,470,868
IDA 1041	10,853,963	18,655,249
French - Trinco	1,236,028	1,852,722
French - Negombo 1	302,923	605,395
French - Negombo 11	456,896	788,796
Negambo Augmentation	62,216,917	67,132,267
French - Kurunegela	839,396	1,243,077
French - Badulla	981,729	1,472,192
French - Ambatale	14,845,424	22,320,384
ADB 817	31,747,587	54,028,148
ODA	223,928	493,103
ADB 1235	42,830,871	69,847,266
ADB 1575	83,437,544	116,547,681
USAID	490,095	559,845
ODA Matara-Nilambe	17,831,730	30,091,044
OECS SLP 19	16,981,390	25,861,801
OECS SLP 37	47,244,269	78,197,411
OECS SLP 49	115,921,668	188,786,981
OECS SLP 55	269,728,170	377,919,027
OECS SLP 71	61,760,176	72,053,539
OECS SLP 66	5,688,979	7,278,652
Kalmunai	742,297	1,141,068
KFW Nawalapitiya/Ampara/Koggala	31,821,060	39,133,806
EDCF - Greter Galle Korean 1	30,103,734	42,247,791
EDCF - Greter Galle Korean 11	21,130,460	28,173,946
ADB 1757	2,938,399	4,011,148
ADB 1993	153,867,098	175,613,522
Nuwara Eliya - Danida	31,205,052	36,587,450
Kandy South - Danida	82,994,863	88,386,216
Greater Trincomalee	30,346,180	26,361,144
Ambalangoda/Weligama/Kataragama	8,623,045	11,497,394
Ambatale Remote Loan	6,508,244	9,009,724
Ambatale Refurbishment	4,827,655	7,567,323
Towns North of Colombo	32,002,986	15,555,224
Greater Colombo Rehabilitation	29,977,218	10,370,867
Kirindi Oya	13,211,198	9,318,928
Greater kandy Stage 11 SLP -90	27,851,915	17,838,246
Kalani Right Bank	162,950,795	121,939,394
Kalugaga Stage 11	18,654,955	3,979,568
Local loans	5,428,613	6,538,980
Colombo North	3,803,625	5,338,420
SLP 98 Eastern Provi.WS	352,420	-
French - Anuradapura	21,597,220	29,752,767
Interest Adjustments for Previous Year SFD 1/130	(69,353,062)	-
	1,461,575,631	1,867,568,375
Less: Capitalised Interest on Construction Projects		
Kalugaga Stage 11	(18,654,955)	(3,979,568)
ADB 1993	(153,867,098)	(175,613,522)
Greater Trincomalee	(30,346,180)	(26,361,144)
Towns North of Colombo	(32,002,986)	(15,555,224)
Greater Colombo Rehabilitation	(29,977,218)	(10,370,867)
SLP 98 Eastern Provi.WS	(352,420)	(9,318,928)
Greater kandy Stage 11 SLP -90	(27,851,915)	(17,838,246)
Kalani Right Bank	(162,950,795)	(121,939,394)
Negambo Augmentation	(62,216,917)	(67,132,267)
	943,355,146	1,419,459,214

9. Other Non-Operating Income

	31.12.2011 Rs.	31.12.2010 Rs.
Investment Income	131,257,102	97,644,018

10. Taxation

	31.12.2011 Rs.	31.12.2010 Rs.
Economic Service Charge	53,055,544	105,273,966
	53,055,544	105,273,966

11. Capital Work in Progress

	31.12.2011 Rs.	31.12.2010 Rs.
Construction Work	67,352,725,056	50,180,850,647
Rehabilitation	26,620,981,669	25,298,281,653
	93,973,706,724	75,479,132,299

12. Non Operating Assets

	31.12.2011 Rs.	31.12.2010 Rs.
Non Operating Assets	129,519,607	186,528,287
Non Operating Liabilities	(133,008,868)	(161,145,829)
	(3,489,261)	25,382,458

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 was reviewed by the Audit and Management Committee and direct to carry out further reconciliation by the employees with an incentive scheme. Accordingly Rs.55,799,238 had been cleared during the year against the brought forward profit/ loss being the payments made to line Ministry as reimbursement of expenditure.

13. Long term Investments

	31.12.2011 Rs.	31.12.2010 Rs.
HDFC Investment for Staff Housing Loans	46,028,408	64,541,010
Bank of Ceylon Saving - II	992,849	942,223
	47,021,257	65,483,233

9A. SCHEDULE OF FIXED ASSETS AS AT 31.12.2011

Code	Depreciation	Rate of Dep:	Cost of Fixed Assets AS AT 01.01.2011	Addition During the year	transfers/ Adjustment	Disposals	Cost of Fixed Assets As At 31.12.2011 (E)
			(A)	(B)	(C)	(D)	(A+B-C-D)
101	Land Freehold		7,772,865,153	69,886,829.60	93,473,051		7,749,278,932
102	Land Leasehold		435,548,646	151,510,318			587,058,964
105	Infrastructure	2%	2,824,281,290	195,670,751			3,019,952,041
106	Building - Freehold	2%	5,291,651,169	1,148,985,612			6,440,636,781
108	Structures	1.67%	20,554,855,460	3,217,867,764			23,772,723,224
111	Plant & eq: pumping treatment	5%	8,220,213,945	2,313,706,390			10,533,920,335
113	Service meter	10%	627,254	4,794,000			5,421,254
114	Bulk water meter	10%	86,485,195	20,881,264			107,366,459
115	Plant & Eq: trans & dist:	1.67%	29,135,478,908	5,294,314,122			34,429,793,030
116	Mobile Eq:	10%	140,258,202	17,734,543			157,992,745
117	Survey Eq:	10%	862,116	201,087			1,063,203
118	Laboratory	10%	228,058,391	5,279,541			233,337,932
119	Other Equipment	10%	348,037,732	198,809,451			546,847,183
131/132/133	Furniture & fittings-computer	10%	310,311,812	82,374,759		113,000	392,573,571
141	Motor vehicles cars	14.3%	96,353,609	14,226,786			110,580,395
142	Van busses & jeeps	14.3%	359,416,563	6,992,831		5,500,000	360,909,394
143/144	Lorries & trucks	10%	829,281,482	8,087,016.66			837,368,499
145	Tractors & trailers	10%	89,521,460	200,000			89,721,460
146/148	Water bowsers, Heavy veh:	10%	489,769,305	1,375,000	2,550,000	2,200,000	486,394,305
147	Motor cycles	14.3%	17,057,788	333,413			17,391,201
149	Lease hold Vehicles	14.3%	22,671,376	-			22,671,376
TOTAL			77,253,606,856	12,753,231,479	96,023,051	7,813,000	89,903,002,284

Fully Depreciated Items	Depreciable Assets (G)	Depreciation 01.01.2011 (H)	Depreciation for disposals/ Adj.for (I)	Depreciation for Year 2011 (J) (GXRate)	Depreciation AS AT 31.12.2011 (K) (H-I+J)	Fixed Assets Written Down value 31.12.2011 (E-K)
(F)	(E-F)	(H)	(I)	(J) (GXRate)	(K) (H-I+J)	(E-K)
	7,749,278,932	0		0	0	7,749,278,932
	587,058,964	0		0	0	587,058,964
	3,019,952,041	93,357,406		60,399,041	153,756,447	2,866,195,594
	6,440,636,781	272,628,370		128,812,736	401,441,106	6,039,195,675
	23,772,723,224	947,061,237		397,004,478	1,344,065,715	22,428,657,509
	10,533,920,335	696,000,518		526,696,017	1,222,696,535	9,311,223,800
	5,421,254	62,725		542,125	604,850	4,816,403
	107,366,459	12,714,717		10,736,646	23,451,363	83,915,096
	34,429,793,030	980,319,444		574,977,544	1,555,296,988	32,874,496,042
	157,992,745	10,221,731		15,799,274	26,021,005	131,971,739
	1,063,203	414,216		106,320	520,536	542,667
	233,337,932	47,952,958		23,333,793	71,286,751	162,051,181
	546,847,183	7,943,818		54,684,718	62,628,536	484,218,647
	392,573,571	53,447,614	33,900	39,257,357	92,671,071	299,902,500
	110,580,395	27,077,611		15,812,996	42,890,607	67,689,787
	360,909,394	127,736,944	2,359,500	51,610,043	176,987,487	183,921,906
	837,368,499	173,235,864		83,736,850	256,972,714	580,395,785
	89,721,460	19,203,735		8,972,146	28,175,881	61,545,579
	486,394,305	113,271,233	660,000	48,639,431	161,250,664	325,143,642
	17,391,201	1,838,779		2,486,942	4,325,721	13,065,480
	22,671,376	3,242,007		3,242,007	6,484,014	16,187,362
				0		
	89,903,002,284	3,587,730,927	3,053,400	2,046,850,464	5,631,527,991	84,271,474,289

14. Inventories

	31.12.2011 Rs.	31.12.2010 Rs.
Stock at Main stores	208,394,049	179,426,440
Stock at Sites Stores	3,293,775,161	3,067,082,627
Goods In Transit	102,912,445	72,629,229
Stock Adjustments	(2,967,515)	29,028,765
	3,602,114,140	3,348,167,061
Provision for Obsolete Stock	(48,830,202)	(65,497,048)
Total Inventories at Cost	3,553,283,938	3,282,670,013

15. Trade & Other Receivables

	31.12.2011 Rs.	31.12.2010 Rs.
Advance to Staff - Travelling	1,388,633	1,443,290
Advance to Staff - Salaries	1,692,934	3,009,915
HDFC Receivable	22,770	24,270
Festival Advances	10,817,854	10,749,904
Loans to Employees-Distress	1,471,025,983	1,361,943,018
Loans to Employees-Vehicle	9,495,652	14,838,288
Loans to Employees-Special Advance	65,584	81,184
Loans to Employees-Tsunami	32,995	91,730
Special Incentive Advances	21,642,972	25,049,581
VAT Recievable	15,278,618	1,445,442
WHT Receivable	1,602,711	1,310,065
Trade Debtors-Water	2,961,050,085	
CMC Debtors	28,519,949	
Sewerage Debtors	79,928,376	
Other Debtors	61,944,479	
	3,131,442,890	
Less : Provision for Bad Debts	(479,544,933)	2,446,412,409
Debtors Collection Control	422,575,444	231,404,538
Suspense Debtors	72,992	72,992
Receivable on Interest & Others	5,755,482	4,424,718
Installment Debtors - New Connection	78,195,013	60,975,040
Installment Debtors - N/C (Low Income)	93,433	687,315
Inter-regional Current Accounts	(61,071,098)	0
	4,630,585,929	4,163,963,700

16. Deposits and Advancements

	31.12.2011 Rs.	31.12.2010 Rs.
Rechargeable Project Work	397,277,886	406,295,088
Advance to Suppliers	33,288,654	35,328,829
Advance to Contractors	219,257,640	73,057,383
Cash Advances Head Office	1,365,539	1,554,586
Cash Advances Regions	855,247	1,201,163
Other Advances	4,378,829	6,450,000
Advance to Contractors (Local Contract)	1,034,908,276	1,590,238,105
Advance to Contractors (Special Projects)	2,530,897,202	3,226,366,168
Pre Payments	-	870,000
Special Dollar Account	133,722,027	133,722,027
Other Short Term Deposits	93,871,428	91,286,467
Employees Security Deposits	906,619	2,117,714
Electricity Deposits	12,686,664	9,008,446
Telephone Deposits	26,267	28,767
	4,463,442,277	5,577,524,742

17. Short Term Investments

	31.12.2011 Rs.	31.12.2010 Rs.
Treasury Bills	892,090,141	357,413,810
Fixed Deposits	-	68,500,000
Savings account with Peoples' Bank-Ratmalana	59,428	57,142
Savings account with Bank of Ceylon- Ratmalana	56,104	53,908
Savings account with Bank of Ceylon- Dehiwela	16,337,524	15,683,082
Savings account with Bank of Ceylon-Dehiwela	78,866,928	170,616,944
	987,410,125	612,324,887

18. Cash & Cash Equivalents

	31.12.2011 Rs.	31.12.2010 Rs.
Main Current Accounts	308,976,840	856,970,717
New Connection Accounts	76,230,383	46,427,141
Main Collection Account	272,095,652	226,116,259
Internal Cash Transfer Account	8,668,950	3,301,488
Cash Imprest Head Office	234,507	1,290,678
Sub Collection Accounts	(745,135)	13,354,270
Cash Imprests Regions	282,756	248,425
Cash In Transit	40,858,146	6,010,768
Cash Balance at the End	706,602,099	1,153,719,747
Adjust:		
New Connection Control Account	3,579,292	2,360,436
Water Bill Collection Control Account	4,900,081	4,669,051
Cash & Cash Equivalents	715,081,472	1,160,749,233

19. Capital Grants

	31.12.2011 Rs.	31.12.2010 Rs.
Foreign Grants	93,727,432,909	78,149,764,416
Local Grants	475,478,484	470,219,209
	94,202,911,393	78,619,983,625

20. Capital Recovery Fund

	31.12.2011 Rs.	31.12.2010 Rs.
Balance at the Beginning of the Year	2,532,250,115	2,150,618,551
Amount Appropriated During the Year	508,833,271	381,631,564
	3,041,083,387	2,532,250,115

21. Loan Payable

	31.12.2011 Rs.	31.12.2010 Rs.
Foreign Loans through Treasury	27,220,408,823	22,451,615,595
Local Loans	123,758,710	124,274,006
Interest Payable	494,735,575	494,735,575
	27,838,903,108	23,070,625,176

22. Other Deferred Liabilities

	31.12.2011 Rs.	31.12.2010 Rs.
Retiring Gratuity Provision	2,438,804,935	2,402,977,185
Customer and Employee Security Deposits	1,196,145,407	1,001,715,117
	3,634,950,342	3,404,692,303

22.1 Movement of Retiring Gratuity Provision

	31.12.2011 Rs.	31.12.2010 Rs.
Balance at the Beginning of the Period	2,402,977,185	2,333,955,232
Add Provision for the Period	216,756,879	220,195,945
	2,619,734,065	2,554,151,177
Less: Gratuity Payments during the Period	(180,929,130)	(151,173,991)
	2,438,804,935	2,402,977,185

23. Creditors

	31.12.2011 Rs.	31.12.2010 Rs.
Rechargeable Work - Customer Advances	1,671,061,410	1,264,869,393
Contractors Retention	1,801,794,737	1,060,004,822
Lease Hold Creditors	21,717,989	
Less: Interest in Suspense	(5,189,474)	20,009,542
	3,489,384,662	2,344,883,758

24. Loan Capital Payable in 2011

	31.12.2011 Rs.	31.12.2010 Rs.
IDA 1041	85,058,364	141,065,865
French - Trinco	10,322,237	20,556,464
French - Negombo 1	2,529,975	5,037,467
French - Negombo 11	4,490,036	4,490,036
French - Kurunegela	3,097,060	3,097,060
French - Badulla	4,080,480	4,080,480
French - Ambatale	49,479,984	49,479,984
ADB 817	93,581,744	131,404,027
IDA 1700	109,242,288	96,646,476
OECE - SLP 19	80,498,688	54,943,550
Kalmunai (Australia)	2,522,312	2,522,312
USAID	6,974,972	6,974,972
A.D.B (1235)	107,571,661	89,688,575
S.L.P 37	217,215,038	217,215,035
UDA - ADB 111 1575	198,660,820	132,440,547
OECE - SLP 49	331,176,309	220,772,759
OECE - SLP 66	33,473,280	33,473,280
Greater Galle 1	81,245,753	81,245,753
Greater Galle 11	29,347,860	14,673,930
Kandy - Danida	137,361,601	68,680,800
Nuwara Eliya - Danida	52,008,420	26,004,210
UNIHA	14,371,742	7,185,871
ODA Hill Country-SLP 71	51,466,814	3,732,138
ADB 1757	6,996,189	6,996,189
OECE S.L.P 55	728,995,055	728,995,055
Matara/Nilambe (ODA)	74,298,878	49,532,586
Ambatale Remote Loan	24,939,249	24,939,249
Ambatale Refurshment Loan	21,722,729	21,722,729
Colombo North WSP	10,009,539	6,673,026
French Anuradapura	50,714,946	43,708,070
KFW Project Ampara	64,345,499	64,345,499
	2,687,799,521	2,362,323,996

25 Other Payables

	31.12.2011 Rs.	31.12.2010 Rs.
Creditors Control	171,478,098	125,883,574
VAT Payable	53,310,175	41,814,353
Security Deposit	2,860,190	2,108,742
Other Creditors	35,149,669	41,687,764
Refundable Tender Deposit	60,794,156	29,382,854
Salary Payables	129,989,375	112,258,613
With Holding Tax	-	1,420,225
VAT Payable to Inland Revenue	745,920,769	761,037,716
With Holding CIGF	580,936	172,716
With Holding VAT	1,100,125	16,983,344
Accrued Expenses	607,300,228	176,826,595
Provision for Cash Losses	1,075,000	1,075,000
Other Payables	1,730,805	1,730,805
	1,811,289,525	1,312,382,299

26. Directors Interests in Contracts

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

27. Comparative Information

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

28. Directors Responsibility

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

29. Adjustment to the brought forward loss

Rs.55,799,238 and Rs. 440,554,765 had been adjusted to the brought forward loss being the expenditure reimbursement to line ministry during the period of 1996 -2003 and recorded them as advances and salary arrears applicable for the period of 1st January 2009 to 31st October 2009 respectively.



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கணக்காய்வாளர் தலைமை அபிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය
எனது இல
My No

EH/E/NWS&DB/FA/2011

ඔබේ අංකය
உமது இல
Your No.

දිනය
திகதி
Date

9th July 2013

The Chairman
National Water Supply and Drainage Board

Report of the Auditor General on the Financial Statements of the National Water Supply and Drainage Board for the year ended 31 December 2011 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 (NWSDB) for the year ended 31 December 2011 comprising the balance sheet as at 31 December 2011 and the income statement, statement of changes in equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory information, was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13 (1) of the Finance Act, No 38 of 1971. My comments and observations which I consider should be published with the Annual Report of the Board in terms of Section 14 (2) (c) of the Finance Act, appear in this report.

1.2 Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements, whether due to fraud or error.

1.3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Board's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control.

අංක 306/72 පොල්දූව පාර,
බත්තරමුල්ල, ශ්‍රී ලංකාව

இல. 306/72, பொல்துவ வீதி,
பத்தரமுல்லை இலங்கை

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විගණකාධිපති දෙපාර්තමේන්තුව
கணக்காய்வாளர் தலைமை அறிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය }
எனது இல } EH/E/NWS&DB/FA/2011
My No }

ඔබේ අංකය }
உமது இல }
Your No. }

දිනය }
திகதி } 9th July 2013
Date }

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the management, as well as evaluating the overall presentation of financial statements. Sub-sections (3) and (4) of the Section 13 of the Finance Act, No. 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

1.4 Basis for Qualified Opinion

My opinion is qualified based on the matters describe in paragraph 2.2 of this report.

PART - 2

Financial Statements

2.1 Qualified Opinion

In my opinion, except for the effects of the matters described in paragraph 2.2 of this report, the financial statements give a true and fair view of the financial position of the National Water Supply and Drainage Board as at 31 December 2011 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Accounting Standards.

2.2 Comments on Financial Statements

2.2.1. 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.354.7 million incurred in connection with site preparation, pay roll and establishment expenses on Non-Revenue Water project which had been discontinued subsequently had been shown continuously under capital work-in-progress in the financial statements. However, this amount had been transferred to the Kaluganga and Greater Colombo Rehabilitation Projects in 2012 without any detail investigation to identify the related cost.

අංක 306/72 පොල්දූව පාර,
 බත්තරමුල්ල , ශ්‍රී ලංකාව

இல. 306/72, பொல்துவ வீதி,
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විගණකාධිපති දෙපාර්තමේන්තුව
கணக்காய்வாளர் தலைமை அறிப்பதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



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

The stocks in hand as at 31 December 2011 had not been classified and disclosed in the financial statements.

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

A Cash flow statement is being prepared to show the proceeds of generating cash and cash equivalents and its utilization during the specified period. However, no evidence had been received to determine whether the following factors had been considered to calculate cash inflows and out flows.

- (i) According to the financial statements, the profits on disposal of assets and sale proceeds were shown as Rs.9,052,894 and 8,140,050 respectively, However such figures had not agreed with the amounts shown as Rs.544,650 and 4,214,950 respectively in the cash flow statement.
- (iii) The amortization of the Government grants amounting to Rs.277,796,256 had not been taken into consideration, to determine the cash flow from financial activities. Instead the net effect of the Government grants had been taken in to cash flow statement.

(d) S.L.A.S-15

Interest amounting to Rs.494,735,575 payable to the General Treasury which was outstanding since 2009, had been shown in the balance sheet under long term liabilities instead of being shown under current liabilities.

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

- (i) As required by the SLAS, the provision of depreciation should be made from the date of purchase up to the date of disposal of the assets. It was disclosed under Accounting Policy 2.2.1 (V), that depreciation was calculated on the basis, where no depreciation was calculated for the year of purchase and full provision was made for the year of disposal. It implies that Board had not applied required policy for provide depreciation for the Fixed Assets.
- (ii) When an item of property, plant and equipment is revalued, the entire class of property, plant and equipment to which that asset belongs should be revalued. However 32 vehicles, certain Infrastructure and Buildings belonging to the Board in North Central and Southern Regions had not been revalued.

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2.2.2 Accounting Policies

Following observations are made

- (i) Even though Value Added Tax (VAT) paid on construction payment for water supply schemes constructed under foreign funded projects operated by the Head Office had been written off against the Government grants. VAT, related to other projects had been accounted as part of the work-in-progress, thus showing that no uniform policy had been applied in this regard.
- (ii) Research and development expenses of Rs.16,860,318 had been shown under work-in-progress account continuously without being appropriately adjust in the accounts. It was further observed that accounting policies in relation to Research and Development cost had not been disclosed in the financial statements.

2.2.3 Accounting Deficiencies

Following observations are made

- a) Debit balances in liabilities and revenue accounts aggregating to Rs.155,007,583 and credit balances in assets and expenditure accounts aggregating to Rs.78,167,078 had been shown in the accounts, appears to be abnormal, which also distorted the financial results and financial position of the Board for the year under review.
- b) Following observations are made on the balance amounting to Rs. 93,973,706,724 shown under the work-in- progress in the financial statements.
 - (i) Detailed information relating to items valued at Rs. 23,110,679,961 shown under work-in-progress in seven Regional offices had not been made available to audit, although called for.
 - (ii) As a practice, the balance of the work- in-progress had not been transferred to respective asset accounts immediately after the completion of the water supply projects. It was revealed that such completed water supply schemes valued at Rs.931,797,958 had remained in the work-in-progress account as at the balance sheet date without transferring to the property, plant and equipment. As a result, depreciation had been understated in the accounts.

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- (iii) A difference of Rs.1,401,683,325 had been observed between the NWSDB accounts and accounts maintained by individual Foreign funded Projects as at the balance sheet date in respect of five ongoing projects. Further, action had not been taken by the Board to reconcile such accounts with relevant project accounts.
- (iv) VAT amounting to Rs.2,419,568 related to construction payment of Kiridioya water supply project had been accounted as recurrent expenditure instead of being recognized as part of the capital works in progress thus understating the value of assets and profit for the year under review.
- (v) The water supply schemes and sanitation units constructed under the ADB assisted Third water supply and sanitation sector project at a cost of Rs.1,798,068 in Kalutara and Kegalle Districts which had already been handed over to the respective Community Based Organizations (CBO's) had continuously been shown in the Financial Statements under capital work-in- progress.
- c) Prior year adjustments made in the statement of changes in equity as at 31 December 2011 amounting to Rs.440,554,765 and Rs.55,799,238 in respect of salary arrears paid to the employees in 2009 and written off advances of the Ministry of Housing Construction and Public Utility respectively had not been disclosed separately in the financial statements.
- d) Following observations are made in respect of the value of stocks amounting to Rs.3,553,283,938 shown in the financial statements.
- (i) Shortages of stocks which were identified by the Board during the annual physical verification had not been considered for further investigation and made necessary adjustments in the accounts.
- (ii) Updating of the stock records was not satisfactory and it was observed that debit and credit adjustments amounting to Rs.1,030,626,067 had been made in the ledger accounts after the stock verification carried out in October in relation to stock movements occurred during the period from January to October 2011. This situation indicated the poor Inventory control. It was further observed that, at the stock verification date, abnormal credit balances aggregating to Rs.30,874,727 had been shown in the stock ledgers in respect of 18 stores of the Board
- (iii) Stocks valued at Euro 348,587 received from a project had not been taken into account and it was further observed that 2,000 DI and PE pipes received from a foreign funded project had not been valued and taken into accounts.
- (iv) 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 2011 was Rs.2,967,615. Following observations are made in this regard.

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- Out of this, balances amounting to Rs.428,869 identified as shortage in Anuradhapura Region. However, action had not been taken to recover these balances from relevant officers.
- It was further observed that value of stock differences amounting to Rs.25,964,295 had been written off against the profit for the year under review without the required approvals and relevant details.
- (v) Stock in transit amounting to Rs.11,433,510 had remained in the accounts for a long period without being adjusted.
- (vi) Unrealistic and unusual credit balances in goods in transit accounts, amounting to Rs.6,533,897 had been identified as at the balance sheet date due to incorrect entries made in the stock ledger.
- (vii) Even though a computerized inventory management system had been implemented at a cost of Rs.3.2 million at the main stores, stock valued at Rs. 10,734,466 had not been included in the computer system. Further, differences amounting to Rs.79,501,256 had been observed between the manual ledger balances and the balances generated by the computerized inventory system in respect of Brass item in the Main stores.
- e) Foreign Loan amounting to Rs.44,852,856 received by end of the year under review and interest thereon amounting to Rs.13,463,215 had not been brought to accounts.
- f) Following observations are made in respect of maintenance of bank and cash accounts.
 - (i) Bank Reconciliation statements furnished to audit revealed that unidentified debit and credit balances aggregating Rs.1,178,927 and Rs.230,100 respectively had been brought forward since 2008 without being identified.
 - (ii) A sum of Rs.33,390,776 had been shown in the Bank Reconciliation Statements as Bank charges, Overdraft Interest, Debit Tax, Cash in transit and Bank errors etc, without being adjusted in the ledger accounts. Hence profit for the year under review had been overstated by the same amount.
 - (iii) Internal cash transfers aggregating Rs. 10,000,000 had not been realized for more than 10 years. However, this had not been investigated up to 30 April 2013.
 - (iv) Cash in transit amounting to Rs.316,432 had been remained unrealized since 1997.

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g) Revaluation of Property Plant and Equipment

Following observations are made.

- (i) Assets valued at Rs.8,663,620,800 had not been physically identified and continuously being shown under fixed assets. However, depreciation on these assets amounting to Rs.243,789,979 had been charged against revenue for the year under review.
 - (ii) Disposal of assets had erroneously been accounted resulting cost of assets understated by Rs.16,360,734 and the cumulative depreciation overstated by Rs.12,328,410 in the accounts.
- h) New connection given on credit basis had not been accounted as debtors. As a result, connection charges recovered through monthly installments had appeared as credit balance in new connection debtors control account. Further observe that income also had been understated by value of new connection charges.
- (i) A contractor of the Secondary Towns and Rural Water Supply and Sanitation Project had paid VAT for the imported material as a B.O.Q. item amounting to Rs.227,442,710 on behalf of the NWSDB. This amount had later been paid back to the contractor by the relevant project. However, the Department of Inland Revenue had not agreed to reimburse this VAT input to the NWSDB and therefore cost of the Project had overstated by the same amount.

2.2.4 Unreconciled Accounts

- a) Although account is maintained on the information furnished by the commercial division, significant differences were observed between the financial statements and record maintained by the commercial division of the board.

Description	As per financial statements Rs.	As per Commercial Division Record Rs.	Difference Rs.
Metered sales	11,648,256,539	11,708,800,000	(60,543,461)
Bulk sales	211,082,583	168,507,000	42,575,583
Bowser sales	3,396,757	26,381,000	(22,984,243)
Rebates	246,690,625	258,147,885	(11,457,260)
Trade and Sewerage Debtors	3,040,978,461	2,997,684,000	43,294,461

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b) Rechargeable Works

Although Customer Advances aggregating to Rs.104,103,333 had been obtained 3 years ago at the time of undertaking 40 contracts. Details of current position and status of completion on such projects had not been properly maintained by the Board.

Following observations are made in this regard.

- (i) Out of the above advances, a sum of Rs.4,000,000 had remained as unsettled balances, even though those projects had been completed and handed over to the relevant parties.
- (ii) An amount of Rs.6,042,111 had been remained in Trincomalee Regional Office as unidentified balance for a long period.
- (iii) Test check carried out in Kalutara Regional office revealed that proper cost accounting system had not been maintained to identify actual cost incurred on each construction works. Hence it was not possible to ascertain in audit on the profitability of individual project.
- (iv) The construction cost of Rs. 397,277,886 undertaken by the Board from external parties had been shown as other receivables, instead of being written off against the relevant customer advances.

2.2.5 Accounts Receivable and Payable.

Following observations are made.

- (i) A sum of Rs. 660,557,583 as at 31 December 2011 consisting with VAT payable and accounting errors had not been identified and cleared in the accounts.
- (ii) Colombo Municipal Council debtors amounting to Rs. 28,519,949 had been outstanding for over three years and out of which 57 per cent had remained outstanding for over seven years as at the balance sheet date and effective action had not been taken to recover the outstanding balances.
- (iii) Trade and sewerage debtors as at end of the year under review amounted to Rs. 810 million which had remained outstanding for over two years. As per Chairman of the Board, it includes disconnected and stand post arrears of Rs. 346 million and 314 million respectively.

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- (iv) A proper system had not been introduced by the Board to reconcile the debtors' collection control account balances with individual customer balances.
- (v) Effective action had not been taken for the recovery of Mobilization Advances aggregating Rs.6,983,652 outstanding for over five years relating to constructions works. It was further observed that retention money amounting to Rs.19,996,079 had not been settled for over five years .

2.2.6 Lack of Evidence For Audit

- a) Detailed Schedules of the following evidences were not made available for audit.

Ledger code	Description	Amounts Rs.
211	Trade Receivables	1,333,850,226
212	Debtors collection control account	635,171,675
217	C M C debtors	16,257,771
219	Other debtors	139,194,424
222	Advances to Staff	1,138,084
234	Bonus over payments	21,642,972
241	Advances to Suppliers	550,320
242	Advances to contractors	1,279,868
243	Advances to Petty Cash purchase at Head Office	162,897
245	Advances to Ministry	4,378,829
247	Advances to contractors – special Projects	425,638,054
263	Treasury Deposits	133,722,027
264	Short term Deposits- others	72,185,739
266	Short term Deposits - Electricity	6,839,782
271	Water Supply Scheme belonging to others maintained by NWSDB	6,317,419
273	New connection Instalments	28,698,003
362	Assets taken over from Government	127,795,387
384	Welfare Society Funds	13,935,577
386	Employees Security Deposits	1,211,697
387	Security Deposits-Government Quarters	2,484,387

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Ledger code	Description	Amounts Rs.
389	Customer Security Deposits	98,275,125
391	Deferred Tax	569,062,720
392	Customer Advances	179,337,822
440	Contractors Retention	6,025,089
443	Regional Office Creditors	75,170,648
445	Contractors Control- Special Projects	319,733,259
446	Security Deposits	118,931
447	Other Creditors - Consultancy	578,906
461	Salaries payable	12,116,099
462	Rehabilitation Tax	1,730,804
463	Unclaimed Salaries and Wages	8,961,471
464	E.P.F. Payable	85,635,083
465	Abetment Creditors	10,429,913
468	E.T.F. Payable	12,845,265
475	Accrued Expenses	465,089,883
		4,817,566,156

b) The Register of fixed assets relating to several Regional offices had not been maintained.

2.2.7 Non – Compliance with Laws ,Rules, Regulations and Management Decisions.

Promotion had been given to 242 Engineer Assistants and Work Superintendents without obtaining approval for recruitment procedure from the Department of Management Services of the General Treasury in terms of Management Services circular No 30 dated 22 September 2006.

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2.2.8 Non-Operating Balances

Due to lack of proper supervision and poor internal control system, the aggregated amount of unidentified and unreconciled account carried forward since 1994 was Rs.1,020,199,408. The attempt to reconcile such balances by assigning the employees of the Board on the basis of incentives had become unsuccessful. After the service of an accounting firm obtained to reconcile these accounts at a cost of Rs.1,035,000, their suggestion had not been accepted by the Board. However, another attempt had been started in 2011 by the employees of the Board to reconcile the debit and credit balances of Rs.508,355,073 and Rs.511,844,335 respectively. Out of that, balances aggregating Rs.267, 976,000 or 20.8 per cent had been reconciled during the year under review. In addition to the a foresaid balances already categorized as inactive, there were several other unidentified balances amounting to Rs. 69,653,120 as at the end of the year under review.

At the examination of reconciled balance amounting to Rs.268 million. Following observations are made.

- Advances made to then Ministry amounting to Rs. 60,238,067 which had been written off without considering the following facts.
 - Relevant approval from the General Treasury had not been obtained.
 - Re-payment made by the Ministry in 1996 amounting to Rs.7 million had not been considered.
 - Supporting evidences of Rs.22, 831,992 had not been made available.
- The Board had spent a sum of Rs.876,243 in excess of the amount received from the clients to meet the project expenses in respect of Re- chargeable works. These balances had been written off against the profit instead of recovering from relevant parties in the Kandy Regional Center.
- Eleven Journal entries amounting to Rs.35,721,193 had been accounted without any supporting evidences.

PART - 3

Financial Review

3.1 Financial Result

According to the financial statements presented, the working of the Board for the year ended 31 December 2011 had resulted in a net profit of Rs.421,409,965 after tax, as against the net loss of Rs.5,955,167,712 for the preceding year thus indicating an improvement of profit by Rs.6,376,577,677 in the financial results. The following table gives a summary of the financial results at various stages.

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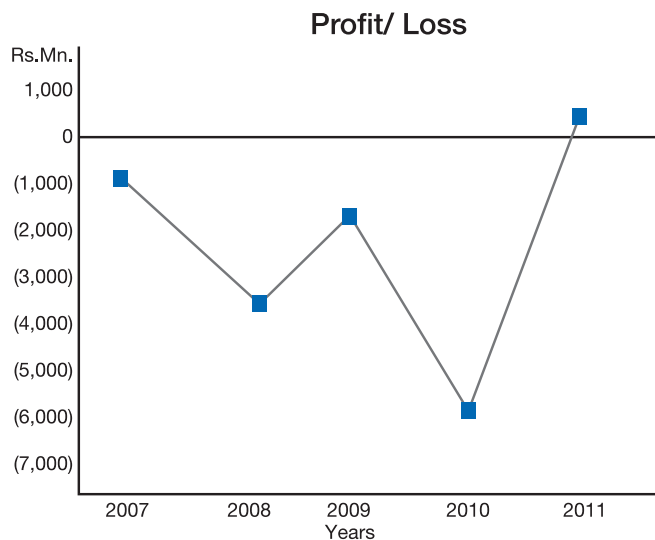
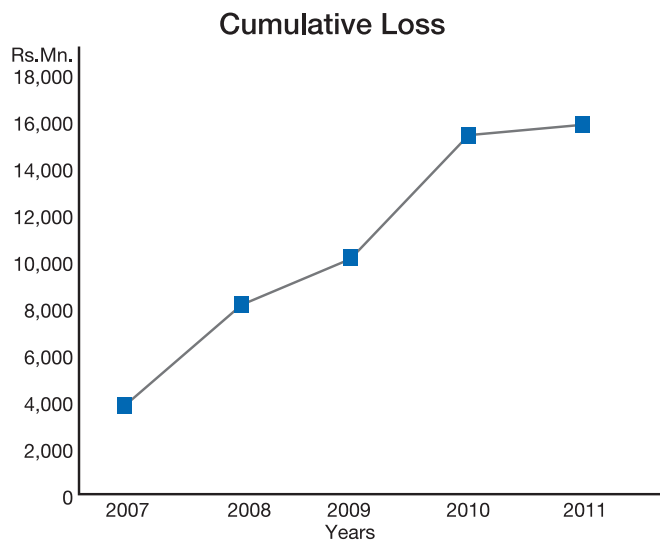
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	Year ended 31 December	
	2011 Rs.	2010 Rs.
Profit before charging Overheads and other Operating expenses	4,145,555,172	3,682,331,990
Profit / (Loss) from operating Activities	1,760,825,044	(843,736,151)
Net Profit /(Loss) for the year before Tax	474,465,508	(5,849,893,746)
Net profit/ (Loss) for the year after Tax	421,409,965	(5,955,167,712)
Prior year adjustment and transfers to reserve	(1,005,654,580)	(72,220,530)
Accumulated (Loss)	(16,171,869,528)	(15,587,624,913)

The accumulated net loss had continued to be increased. The financial results for the last five years and the accumulated loss as at end of each year are depicted in the following charts.



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The cost and profit of a unit of water produced and sold as per the information maintained by the Board for the last three years are given below.

	2011		2010		2009		Average		%
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Average Selling Price		33.71		33.28		31.27		32.75	
Cost of Production									
Direct Cost	11.50		12.27		13.41		12.39		32.5
Cost on Non-Revenue Water	4.86	(16.36)	5.58	(17.85)	6.04	(19.45)	5.50	(17.89)	14.5
Operating Profit per Unit		17.35		15.43		11.82		14.86	
Other Costs									
Depreciation		(5.94)		(10.83)		(6.09)		(7.62)	20
Administrative Expenses		(6.72)		(7.64)		(6.51)		(6.96)	18.4
Finance Expenses		(4.24)		(5.78)		(6.61)		(5.55)	14.6
Total Expenses		(33.26)		(42.10)		(38.66)		(38.02)	
Profit/(Loss)		0.45		(8.82)		(7.39)		(5.27)	

Following observations are made in this regard.

- Even though the operations of the Board indicated a gradual increase in the gross profit earned from each unit of water, it had converted to a net loss due to the increase in the overhead cost per unit during the past several years. Nevertheless, the decrease in the depreciation cost after the revaluation and the decrease in the loan interest rate, the net result had converted into a profit in 2011. As such it appears that if further controls are exercised on other expenditure, the operating financial results could be brought to an optimum level.
- Apart from the cost of production, 20 per cent of the overall expenditure represented depreciation. Even though this did not involve any outflow of funds, it indicates that the assets available at the end of the year had not made an adequate contribution for the improvement of the operations. Evidently the very high cost of the assets constructed under the foreign funded projects had specially affected this position.

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- (iii) The administrative costs represent 18.4 per cent of the overall expenditure and out of that, a large part was spent on the salaries and allowances of the non-operating staff. It was further observed that 06 employees were deployed on 1,000 connections.
- (iv) The gross profit of Rs.180,128 per employee in the year 2007 had increased by 150 per cent to Rs.450,652 in the year 2011, and the net loss of Rs.139,573 per employee in the year 2007 had improved to a net profit of Rs.51,577 in the year 2011.
- (v) A sum of Rs.5.55 per unit of water produced has to be paid as interest on foreign loans obtained for construction of water supply schemes of the Board and that represents 14.6 per cent of the total expenditure on production. This situation has arisen due to inadequate contribution from the investments made out of foreign loans for the improvement of operations. By analyzing the foreign loans that have to be paid in the future, it appears that this rate would be further increased in the ensuing years.

PART - 4

Operating review

4.1 Production and Distribution of Clean Water

According to the ten year development plan of the Government, it was expected to supply adequate water to 85 per cent of the population by the year 2013, and 90 per cent by the year 2016.

The Board had produced 490 million cubic meters of clean water during the year 2011. When comparing this production with that of the year 2010 shows an increase of 4 per cent as compared with the increase of 2 per cent over the year 2009. The number of water service connections as at end of the year 2011 were 1,449,301 thus indicating an increase of 7 per cent as compared with that of the previous year.

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4.2 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.

	2008	2009	2010	2011
Water Production (Cu. m.)	440.2	449.0	469.0	490.0
Water Consumption (Cu.m.)	300.9	309.2	321.5	344.5
Non-revenue water (Cu.m.)	139.3	139.8	147.5	145.5

- b) Out of the quantity of water produced by the Board, 30 per cent represented non-revenue water due to water leakage, unlawful connections, free supply of water and administrative reasons while 50 per cent of water distribution in the City of Colombo represented non-revenue water. In view of the failure to prevent this situation, it was observed that an additional sum of Rs.5.50 per unit of water consumed had to be paid by each consumer. That represented 14.5 per cent of the cost of production per unit.
- c) In view of the action taken by the Board during the past period to minimize the unlawful connections and expediting the systems of repairing the temporary breakdown of water distribution main lines, the rate of non-revenue water in the current year as compared with the preceding year had indicated a decrease. Nevertheless, the Board had failed to take adequate steps to prevent the leakage of water which represented 30 per cent of the overall wastage of water.
- d) As there is a need for the modernization of the main water distribution systems in the City of Colombo which is older than 75 years, special attention of the Board is drawn to the urgency for the preparation and implementation of plans for that purpose. Even though two foreign funded projects are being implemented in this connection at present, an adequate reconstruction of the water main lines had not been achieved therefrom. The main water distribution lines that should be replaced due to the water leakages have not been specifically identified up to date. Even though the proposals for the major projects for implementation have been made, the implementation of the projects are moving at a very slow level.
- e) The attention paid by the Board for reducing the non-revenue water in the areas other than the City of Colombo was inadequate and it was observed that the targets included in the Corporate Plan were also not feasible.

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4.3 Sewerage System

The need for carrying out improvements to the infrastructure facilities for the disposal of sewage in the cities has arisen due to urbanization taking place along with the economic development of the country. Even though the supply of such facilities is the responsibility of the Board, an adequate progress in this area was not shown in recent years. Even though the supply of sewage disposal facilities to 7 per cent of the population had been expected as a national policy, that remained at a low level of 2.3 per cent at present. Details are shown below.

Region	Number of Connections		
	2011	2010	2009
Dehiwala	2,413	2,221	2,168
Kolonnawa	1,595	1,488	1,339
State Institutions	7	7	7
Greater Colombo Housing Schemes	2,290	2,290	2,290
Outside Greater Colombo	4,818	4,631	4,631

4.4 Foreign Funded Projects

A number of projects had been implemented by utilizing local and foreign funds for the uninterrupted water supply and sanitation services and the performance of the utilization of foreign funds for that purpose is given below.

Project	2011			2010			2009		
	Provision as per Ministry Appropriation Account	Utilization as per Board Account	%	Provision as per Ministry Appropriation Accounts	Utilization as per Board Accounts	%	Provision as per Ministry Appropriation Accounts	Utilization as per Board Accounts	%
Large Scale	26,632	26,511	99.55	18,352	18,310	99.77	26,116	16,669	63.83
Small and Medium	2,050	1,879	91.66	1,300	1,300	100	920	900	97.83
Tsunami	1,156	947	81.92	2,306	2,290	99.31	3,824	3,517	91.97
Total	29,838	29,337	98.32	21,958	21,900	99.74	30,860	21,086	68.33

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The following weaknesses were observed in connection with the projects implemented under local and foreign funds.

- (i) Local funds amounting to Rs. 44.96 million received for the implementation of certain project activities had been utilized for the purpose of NWSDB activities.
- (ii) Most of the Large Scale Foreign funded projects had not been completed on the expected dates of completion and costs had highly escalated due to additional works and price increases resulting from the extension of the project periods.
- (iii) A cost accounting system had not been followed for the accurate computation of the cost of constructions carried out under the projects.
- (iv) Even though the NWSDB was not a funding partner for two projects, as per the respective financing agreements, a sum of Rs.68.7 million had been spent on the activities to be funded by the other funding partners. Further, this amount had not been shown in the financial statements of the NWSDB for the year ended 31 December 2011 as receivables from the respective funding agencies.

4.5 Foreign Loans

Outstanding foreign loan balances as at the balance sheet date aggregated Rs.29,908 million or 15.5 per cent of the total assets. It was observed that certain loan installments and interest thereon had not been paid to the General Treasury. The accumulated loan installments and interest with regard to last three years were as follows.

	Loan Installment Rs.Mn.	Interest Rs.Mn.	Total Amount Rs.Mn.
2008	54.3	3.3	57.6
2010	686.7	935.8	1,622.5
2011	956.6	1,525.5	2,482.1
Total	1,697.6	2,464.6	4,162.2

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கணக்காய்வாளர் தலைமை அறிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය }
எனது இல } EH/E/NWS&DB/FA/2011
My No }

ඔබේ අංකය }
உமது இல }
Your No. }

දිනය }
திகதி } 9th July 2013
Date }

PART - 5
Accountability and Good Governance

5.1 Budgetary Control

Significant variances were observed between the Budget and the actual thus indicating that the budget had not been made use of as an effective instrument of financial management control.

6. Systems and Controls

Weaknesses observed in systems and controls 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) Assets Management
- (c) Stocks
- (d) Accounting
- (e) Implementation of Projects
- (f) Capitalization of completed water supply projects

H.A.S Samaraweera
Auditor General

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ABBREVIATIONS

ADB	- Asian Development Bank	R&D	- Research & Development
AGM	- Assistant General Manager	RDA	- Road Development Authority
BOQ	- Bill of Quantity	RSC	- Regional Support Centre
BOI	- Board of Investment	RWS	- Rural Water Supply
CAPC	- Cabinet Appointed Procurement Committee	S/E	- Southern/ Eastern
CBO	- Community Based Organization	SACOSAN	- South Asian Conference on Sanitation
CMC	- Colombo Municipal Council	SCADA	- Supervisory Control and Data Acquisition
CP	- Corporate Planning	SIDA	- Swedish International Development Agency
cu.m.	- Cubic meter	SLS	- Sri Lanka Standards
DANIDA	- Danish International Development Agency	SMS	- Short Message Service
Dev.	- Development	T&C	- Tenders & Contracts
DGM	- Deputy General Manager	TA	- Technical Assistance
DI	- Ductile Iron	TCE	- Total Cost Estimate
DS	- Divisional Secretariat	TEC	- Towns East of Colombo
ERD	- External Resources Department	TNC	- Towns North of Colombo
FFP	- Foreign Funded Project	TSC	- Towns South of Colombo
FIDIC	- International Federation of Consulting Engineers	UC	- Urban Council
GM	- General Manager	UDA	- Urban Development Authority
GN	- Grama Niladari	UFW	- Unaccounted For Water
GOSL	- Government of Sri Lanka	UNICEF	- United Nations International Children's Education Fund
GW	- Ground Water	uPVC	- Unplasticised Poly Vinyl Chloride
HSBC	- Hongkong and Shanghai Banking Corporation	USA	- United States of America
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		

NOTES

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

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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 - *i*
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. Simal - (*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*)



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