

# Annual Report

National Water Supply & Drainage Board

# 2009

## Vision

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

## Mission

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

## Goals

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



## NATIONAL WATER SUPPLY & DRAINAGE BOARD

The National Water Supply & Drainage Board had its beginning as a sub department under the Public Works Department with responsibility for the water supply and drainage systems of Sri Lanka. From 1965, it functioned as a division under various ministries until January 1975 when it was converted to a Statutory Board by an Act of Parliament.

The National Water Supply & Drainage Board functions under the Ministry of Water Supply & Drainage. This Ministry was established in 2007 separately for the subject area of water supply & drainage. Also, the National Water Supply & Drainage Board is the only organization coming under the purview of this Ministry.

Around 80% of the population has access to safe drinking water of which 30% is through piped water supply systems of the National Water Supply & Drainage Board.

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# Notice of the Report

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

Dear Sir,

**Annual Report and Financial Statements - 2009  
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 31<sup>st</sup> December 2009.

Yours faithfully,

Channa Amarasinghe  
Chairman  
National Water Supply & Drainage Board

1<sup>st</sup> March 2010



## Chairman's Statement



“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”

Much emphasis was given to provide the water needs of the IDPs by us from the beginning of the year. There were about 100,000 people at the Menik Farm in January 2009 and it increased to 280,000 located in 7 zones by midyear. 130 bowsers were in use to supply drinking and bathing water. This reduced to 75,000 people by the end of the year. 25 Gully emptiers were used at the peak period while it reduced to 14 by the end of the year. We had volunteer employees from all parts of the country to render this service and in doing so, we lost the life of an Engineer while on duty.

Our repeated attempts for an upward tariff revision was granted in February 2009. It was midyear, by the time we realized revenue based on the revised tariff. There was an overall revenue increase of 41% over the previous year. While granting approval, the Cabinet of ministers referred the proposed tariff formula for detailed study and resubmission.

The staffing structure of every division of this organization was analyzed in detail with the assistance of a Consultant from the Postgraduate Institute of Management. Zero based analysis was done with Divisional Heads, redundant positions identified and important new positions identified. In the case of lower grades, norms were developed to assess staff requirements. The revised Cadre for 2009 based on this analysis was submitted to the Salaries and Cadre Commission and the Department of Management Services in April 2009. Repeated discussions were held regarding the proposed cadre for 2009 with the two institutions concerned with the participation of the Ministry of Water Supply & Drainage, but consensus of opinion could not be reached.

The Corporate Plan of the organization was implemented for the third year and activities were planned strategically to reach the targets, wherever possible. A workshop was held among senior NWSDB staff to assess the progress made and to take corrective action in June 2009. These changes were incorporated in the Action Plans of the balance period. Members of the Board reviewed the progress made at the end of every quarter.

To fall in line with the Corporate Plan, the Merchant Bank of Sri Lanka was awarded a contract to prepare our Business Plan for the ensuing 5 year period. Two discussions were held with our senior staff to familiarize them with our operations and future trends.

An important institutional strengthening programme for decentralized service delivery of water services was launched with grant assistance from the ADB. It included the preparation of Provincial Business Plans, Asset Management Planning, Internal Monitoring of performance and Capacity Development sessions.

Several procedural aspects were studied and detailed during the year. This included planning guidelines for new projects, preparation of cost estimates for water supply/ sewerage projects, unsolicited proposals, contract payments in projects (interim/ final), subsidiary loan agreements, water tariff formula, provision of new water supply connections and related documentation, assets of water supply systems constructed by us, but operated by Community Based Organizations and assets of hand pump/ tube wells constructed by us.

Draft drinking water supply and sanitation policies were prepared and forwarded to the Ministry of Water Supply & Drainage. We also assisted in incorporating public comments that were received on the drinking water supply policy after it was publicized in the news media.

We reviewed the National Thoroughfare Act No. 40 of 2008 in detail, because it was proposing the imposition of rentals on public utility lines lying below roads. Discussions were held with the RDA thereafter.

Special emphasis was given for operational staff to reduce non-revenue water. Funds were allocated under selected water supply projects and the progress made was monitored regularly. The overall NRW in the country is 31%. Excluding the CMC area, the NRW in the rest of the country is 24.2%.

Detailed discussions took place on the stores facilities and bulk supplies that we carry out with a view to streamline and improve services. Several discussions were held on the deployment of the enterprise-wide IT solution with key officials responsible for the running of the modules.

The need for Meter Readers estimating water bills were studied in detail and arrangements were made to reduce estimation as far as possible. Discussions were also held with the Meter Readers' Trade Union in this regard.

On the outcome of surveys carried out, it was decided to allocate funds to lay distribution mains as in-fills, in townships where more service connections would be feasible. It was decided to allocate special funds for this purpose from 2010.

Institutional development was encouraged and several discussions were held to coordinate among donor funded initiatives and the internal team working on it.

It was possible for us to correct the tariff category for electricity supply in some sites and carry out other power cost reduction activities and reduce overall expenditure on power during the year despite increase in water production.

We are thankful to the multilateral and bilateral agencies and all other donors who financed capital works during the year. A total of Rs. 30.86 billion was allocated for the year of which Rs. 21.14 billion was spent for work done. The main reason for the low 68.5% capital budget utilization was non availability of timely local/ counterpart funding.

I gratefully acknowledge the direction and guidance provided by the Hon. Minister for Water Supply & Drainage during the year. We thank all members of the staff at the Ministry for the coordination, support and assistance provided with our key stakeholders. I take this opportunity to thank our General Manager and his staff for the cooperation and dedicated service rendered for the functioning of this 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.

**Channa Amarasinghe**

Chairman  
National Water Supply & Drainage Board

1<sup>st</sup> March 2010

## *Corporate Plan 2007 - 2011*

### **Implementation Status**

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

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

It was considered important to have timely reviews for the successful achievement of the goals, objectives and the targets set. Therefore, 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, 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 are presented to the Board by each manager acceptable for particular goal (there are seven such goals, each overseen by a designated Accountable Manager). Accordingly, first, second and third-quarter progress reports on the Corporate Action Plans were presented to the Directors at Board meetings held in 2009.

Action Plans for 2010 relating to the fourth year of the plan were compiled and forwarded to the Board. It was also circulated among all sectional heads to carry on accordingly.

*“The NWSDB continued, working towards the achievement of the goals and objectives set out by the Plan. Special emphasis was given to formulating policy matters, setting procedures and planning items relating to the third year of the Corporate Plan 2007 - 2011 as a follow up from the first and second years”*



## Progress Towards Stated Goals

Goal	Key Objectives	Target end 2009	Achievement end 2009
1. Increase WS and sanitation coverage	1.1 Total Pipe-borne water supply coverage	37.5%	36.9%
	1.2 Piped sewerage coverage	2.7%	2.5%
	1.3 Access to safe drinking water supply coverage	79.5%	80.0%*
	1.4 Total sanitation coverage		85.7%*
2. Improve operational efficiency	2.1 NRW (island-wide)	32.0%	31.1%
	2.2 Total staff for 1,000 connections	7.5	7.2
	2.3 Expenditure on power to total recurrent cost	23.0%	22.6%
	2.4 Maintenance expenses to total recurrent cost	7.0%	4.7%
	2.5 Establishment expenses to total recurrent cost	10.0%	10.7%
3. Achieve customer satisfaction	3.1 Public awareness programmes to be carried out (schools/other)	30 Nos.	37 Nos.
4. Increase commercial viability	4.1 Estimated bills to total number of bills	8.0%	7.0%
	4.2 Collection efficiency	100.0%	94.0%
	4.3 Accounts receivable from -		
	(a) domestic and commercial institutions	60 days	55 days
	(b) Government institutions	60 days	44 days
5. Ensure greater accountability	<p>Initiatives were taken to develop a whole range of management and business tools on human resource development, management information system and business plan.<sup>#</sup></p> <ul style="list-style-type: none"> <li>• Delegation of financial authority</li> <li>• Training on budgetary control &amp; financial regulations</li> <li>• Audits on commercial operations</li> <li>• Audits on stores and supplies</li> <li>• Audits on cash/ cheque payments</li> <li>• Audits on construction contracts</li> <li>• Valuation of assets</li> <li>• Improved Management Information and Coordination</li> </ul>		
6. Promote Institutional Development	6.1 In-house training programmes	160	110
	6.2 In-country external training (no. of persons)	250	170
	6.3 Overseas training (no. of persons)	80	115
7. Provide facilities and service support to rural and marginalised communities	7.1 RWS Schemes maintained by CBOs under the the NWSDB backup support	5.0%	4.5%

\* 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.

<sup>#</sup> The Merchant Bank of Sri Lanka has been contracted to prepare the Business Plan; The draft plan prepared was presented to the senior Managers of NWSDB for comments. Under ADB Technical Assistance 7078, separate business plans are being prepared for RSCs for decentralized service delivery in the water sector.

# Our Key Players

Chairman & Board of Directors

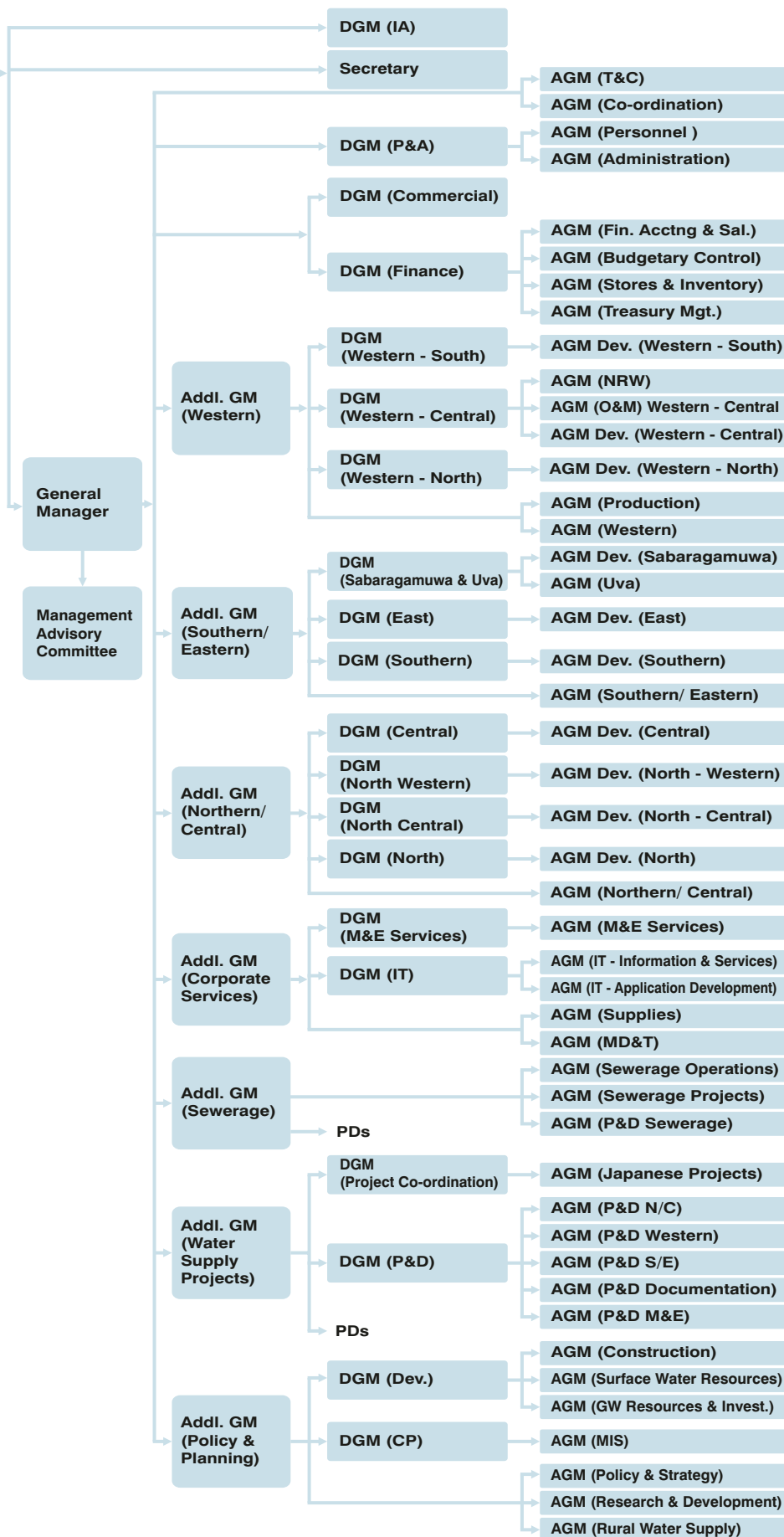
## Board of Directors

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

Secretary to the Board

## Senior Management

- 09 General Manager
- 10 Additional General Managers
- 11 Deputy General Managers of Divisions
- 12 Deputy General Managers of Provinces
- 13 Deputy General Manager & Project Director



## Board of Directors

### 01 Eng. S. C. Amarasinghe

B. Sc. Eng., Dip. Business Mgt., C.Eng.  
FIEE (Lond.), FIE (SL)  
Chairman, NWSDB

### 02 Dr. A. Uthumalebbe

DIMS (Cey.), DFC (USA)  
Vice Chairman, NWSDB

### 03 Eng. M. S. Nazeer

B. Sc. Eng. (SL), M.Sc. Eng. (UK)  
Working Director, NWSDB

### 04 Mr. H. P. C. Herath

B.Sc. (Economics), MBA (Colombo)  
Secretary, Ministry of Local Government & Provincial Councils

### 05 Mr. H. A. Amarasena

Attorney-at-Law

### 06 Mr. D. Widanagamachchi (upto 2009.11.12)

B.Sc. (Business Admin.) Sri. J.  
PG. Diploma in Public Admin, PIM. S.J.  
Director General (Department of Treasury Operations),  
Ministry of Finance & Planning

### 07 Dr. (Mrs.) Damitha de Zoysa

B. A. Hons. (Economics), Peradeniya  
M.Sc. (Agricultural Development Economics) ANU (Australia)  
M.A. (Economics) OSU, USA  
Ph. D. (Agricultural Economics) OSU, USA  
Director General (Department of Development Finance),  
Ministry of Finance & Planning

### 08 Dr. P. G. Maheepala

MBBS, M.Sc., MD, MBA  
DBS, DED, DPM, D (Mgt.)  
Deputy Director General (Public Health Services)  
Ministry of Healthcare and Nutrition

### 09 Mr. J. H. J. Jayamaha (w. e. f. 2009.12.14)

B. Sc. (Hons) Kelaniya  
M. Phil (Glasgow)  
Director General (Department of External Resources)  
Ministry of Finance and Planning

## Secretary to the Board

### Mr. K. K. Chandrasiri

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

The Board met on 18 occasions during the year 2009.

## Senior Management

### 10 General Manager

#### Eng. K. L. L. Premanath

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

### 11 Additional General Managers

#### Eng. H. G. Thilakaratne (Water Supply Projects)

B.Sc. Eng. (Hon.), MBA, MIE (SL), C.Eng., MIM (SL)

#### Eng. S. K. Wijetunga (Western)

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

#### Eng. B. W. R. Balasuriya (Northern/ Central)

B.Sc. Eng. (Hon.), M.Sc. (UK), C.Eng., MIE (SL)

#### Eng. G. A. Kumararathna (Sewerage)

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

#### Eng. (Mrs.) G. S. Munasinghe (Corporate Services)

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

#### Eng. (Mrs.) T. P. Lamabadusuriya (Southern/ Eastern)

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

#### Eng. D. N. J. Ferdinando (Policy and Planning)

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

## 12. Deputy General Managers of Divisions

### **Eng. (Mrs.) K. T. P. Fernando (Project Co-ordination)**

B.Sc. Eng. (Hons.), MIE (SL), C.Eng.,  
M.Sc. (Water & Waste Engineering) UK

### **Mr. D. Thotawatte (Finance)**

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

### **Mr. H. Ariyasena (Personnel & Administration)**

B.Sc. (Business Administration) Sp.  
Dip. in Personnel Management

### **Eng. A. W. Gunasekara (Commercial)**

B.Sc. Eng. (Hon.), M. Eng., C.Eng.,  
MICE (Lond.), MBA

### **Eng. N. M. S. Kalinga (M&E)**

B.Sc. Eng. (Hons.), MIE (SL), C.Eng.,  
Dip. Sanitary Eng. (Netherlands)

### **Eng. K. T. Karunadasa (Information Technology)**

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

### **Eng. G. K. Srimal (Development)**

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

### **Eng. D. S. D. Jayasiriwardene (Planning & Designs)**

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

### **Eng. R. S. C. George (Corporate Planning)**

B.Sc. Eng. (Hon.), C.Eng., MIE (SL),  
M.Sc. (Eng.), FRG, MICE (UK)

### **Mr. W. A. J. Weerasinghe (Internal Audit)**

Fellow of the Institution of Public Finance & Development  
Accountancy

## 13. Deputy General Managers of Provinces

### **Eng. (Mrs.) P. N. S. Yapa (Western - Central)**

B.Sc. (Eng.) MIE (SL), C.Eng.,  
M.Sc. (Struc. E.), UK

### **Eng. K. R. Dewasurendra (Western - South)**

B.Sc. Eng. (Hon.), FIE, C.Eng.,  
P.G. Dip. (Sanitary Eng. - Delft.)

### **Eng. (Mrs.) M. K. Bandara (Western - North)**

B.Sc. Eng. (Hon.), MIE (SL)  
M.Eng. (Sc.) in Public Health Eng. (NSW), Australia

### **Eng. M. A. M. S. L. Attanayake (Central)**

B.Sc. (Eng.), MIE (SL), C.Eng.,  
P.G. Dip. (Land & Water), MBA

### **Eng. W. A. N. Wickramathunge (Sabaragamuwa/ Uva)**

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

### **Eng. L. L. A. Peiris (North Central)**

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

### **Eng. D. U. Sumanasekara (North Western)**

B.Sc. Eng. (Hon.) M.Sc. (Netherlands), C.Eng., FIE (SL)

### **Eng. W. B. G. Fernando (Southern)**

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

### **Eng. M. I. A. Lathieff (East)**

M.Sc. Eng. (Russia), C. Eng., FIE (SL), MIE (India),  
P.G. Dip. BFA (SL)

### **Eng. D. F. S. de F. Gunawardene (North)**

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

## 14. Deputy General Manager & Project Director

### **Eng. (Mrs.) P. R. L. Seneviratne (PD - WWDP - RM & JE)**

B.Sc. (Eng.), MIE (SL), C.Eng.,  
Dip. S.E. (Delft. - Netherlands)

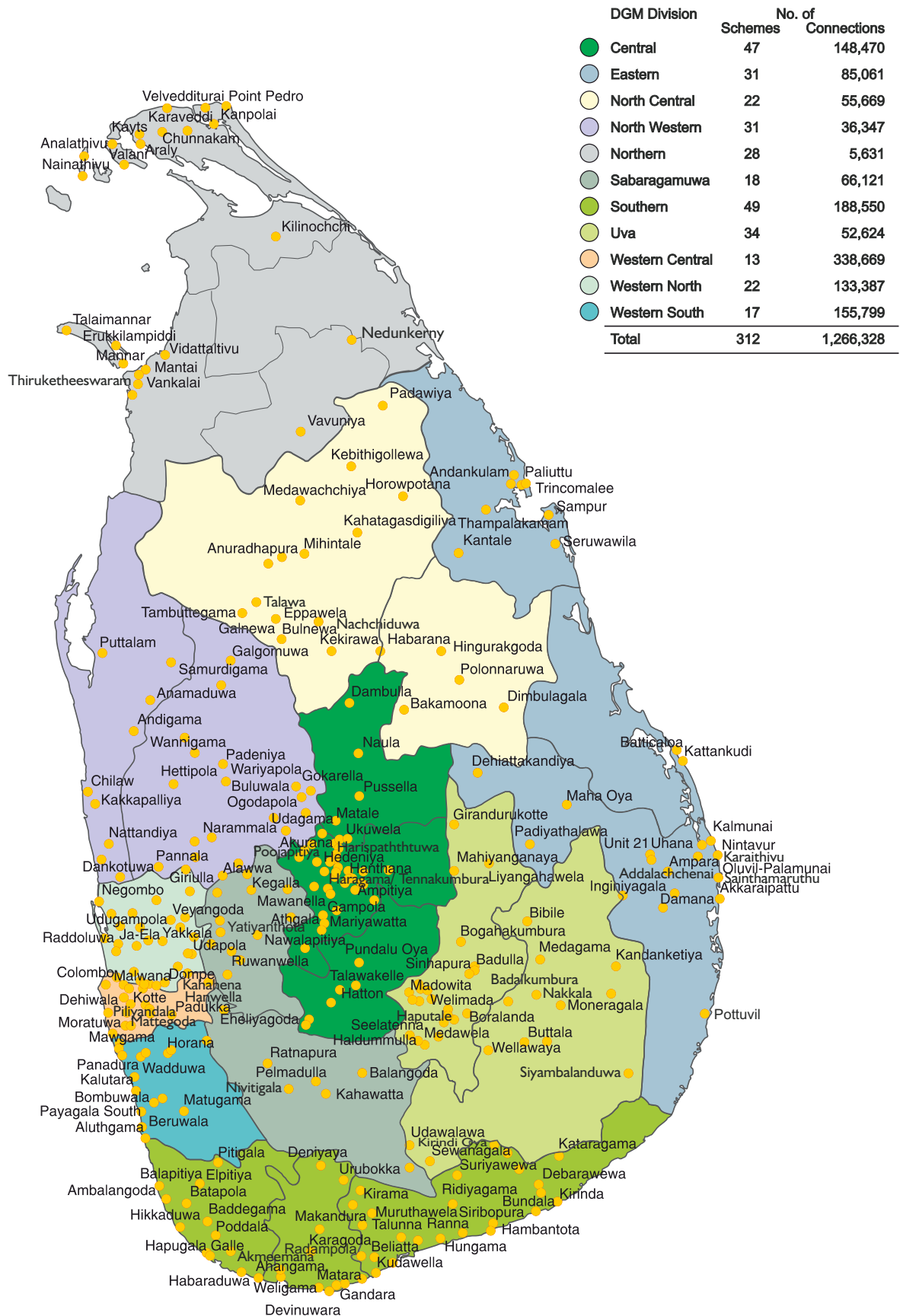
### **Eng. (Mrs.) C. J. D. Perera (PD - Kalu Ganga Water Supply Project - Phase I - Stage II)**

B.Sc. Eng. (Hons.), MIE (SL), C. Eng.,  
Dip. Sanitary Eng. (Netherlands), Dip. Environmental Eng. (SL)

### **Eng. J. R. B. Nadurana (PD - ADB 5<sup>th</sup> Project)**

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

## De-centralized Administration











## **Raw water has to be amicably shared among users**

The right quantity of water has to be extracted from water bodies without affecting the downstream users. This picture shows water being impounded across Mahaweli River at Meewathura for Kandy South Water Supply Scheme

**Water is precious; use it sparingly**

## Our Performance

“79,397 service connections were provided during the year, bringing the population that had been covered with piped drinking water supplies to 36.9%, indicating that the target for pipe-borne water supply had been almost achieved”

During 2009, the NWSDB focused on its action plans for the year, based on the Corporate Plan for 2007-2011. Quarterly progress on the activities was monitored and presented to the Board of Directors by the respective managers, who were made accountable for the seven goals set out in the plan. 79,397 service connections were provided during the year, bringing the population that had been covered with piped drinking water supplies to 36.9%, indicating that the target for pipe-borne water supply had been almost achieved.

Service levels to existing consumers were improved by commissioning several major and minor water supply projects in different parts of the country. The rehabilitation and reconstruction of tsunami-affected water supply projects also contributed towards these improvements. Providing water supply to IDP camps in Vavuniya can be described as one of the biggest challenge NWSDB had ever faced in its history.

Staff recruitments were kept under control, while the ratio of staff per thousand service connections was reduced to 7.2. The NWSDB was actively engaged in institutional development activities during 2009. 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 under the Institutional Development Programme.

A tariff revision was effected from mid February 2009 after four years. However, the finances of the NWSDB had to be carefully managed since increases in operational expenses had created a deficit. Also the debt service commitment for the year could not be fully met.

Non-revenue water (NRW) includes authorized but unbilled water supply to tenement gardens and public sanitary facilities in Colombo. The NWSDB is compelled to continue this service, earlier provided by the CMC. If authorized but unbilled water supplies in Colombo City (estimated at 11% of the water supplied) are excluded, unaccounted for water in Colombo City would be 42%. If the authorized but unbilled water supply in Colombo City is excluded, NRW in Western Province and nationwide would be 31% and 29% respectively, which shows a considerable reduction of 2.1% in Western Province and 2.2% Island-wide throughout the year.

### General

There are 312 major, minor and small water supply schemes in operation under the NWSDB's purview. Out of these, 31 schemes cover major cities and 281 schemes cover townships and villages.

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

	2008	2009	Variation (%)
<b>KEY STATISTICS: WATER SUPPLY</b>			
No. of Water Supply Systems	309	312	1.0
Piped Water Production (million cu.m.)	440	449	45.8
Domestic Connections (Nos.)			
(a) Western Province	546,675	571,684	4.6
(b) Other Provinces	531,503	580,249	9.2
<b>Total Domestic Connections</b>	<b>1,078,178</b>	<b>1,151,933</b>	<b>6.8</b>
Public Stand Posts (Nos.)			
(a) Western Province	3,511	4,411 <sup>2</sup>	25.6
(b) Other Provinces	2,934	2,757	(6.0)
<b>Total Public Stand Posts</b>	<b>6,445</b>	<b>7,168</b>	<b>11.2</b>
Non-Domestic Connections (Nos.)			
(a) Western Province	50,084	56,171	12.2
(b) Other Provinces	52,224	58,224	11.5
<b>Total Non-Domestic Connections</b>	<b>102,308</b>	<b>114,395</b>	<b>11.8</b>
<b>Total No. of Service Connections</b>	<b>1,186,931</b>	<b>1,266,328</b>	<b>6.7</b>
Average Household Monthly Consumption (cu.m. per house connection)			
(a) Western Province	17.84	17.25	(3.3)
(b) Other Provinces	13.61	13.53	(0.6)
Average Household Billing per Month (Rs.)			
(a) Western Province	388.28	530.92	36.7
(b) Other Provinces	193.41	294.56	52.3
Total Revenue (Rs. million)	7,875	11,116	41.2
Total Recurrent Expenditure (Rs. million)	8,907	12,452	39.8
Non-Revenue Water (%)			
(a) Western Province	35.20 <sup>1</sup>	34.38	(2.3)
(b) Other Provinces	27.18 <sup>1</sup>	25.93	(4.6)
(c) Island-wide	32.13 <sup>1</sup>	31.07	(3.3)
O&M Staff/ 1,000 Connections	6.11	5.89	(3.6)
Total Staff/ 1,000 Connections	7.59	7.16	(5.7)
Average Recurrent Cost of Water Production (Rs./cu.m.)	20.23	20.48	1.2
Collection Efficiency	0.99	0.94	(5.1)
Deep Wells (Nos.)			
(a) Drilled	308	622	101.3
(b) Successful	236	492	108.5
Development Expenditure (Rs. million)	25,361	21,136	(16.7)
<b>KEY STATISTICS: SEWERAGE</b>			
Sewerage Connections in Dehiwala-Mt. Lavinia Sewerage System	2,032	2,168	6.7
Sewerage Connections in Kolonnawa Sewerage System	1,009	1,339	32.7
Sewerage Connections for Institutions	7	7	-
Sewerage Connections in Housing Schemes in Greater Colombo	2,290	2,290	-
Sewerage Connections in Housing Schemes Outside Greater Colombo and maintained by Greater Colombo Sewerage Section	4,631	4,631	-
<b>Total No. of Connections Maintained by Greater Colombo Sewerage Section</b>	<b>9,969</b>	<b>10,435</b>	<b>4.7</b>

1. Though the consumption of the Panadura and Akkaraipattu Regions has been taken into consideration, their production figures have not been made available. Hence, the overall NRW figure shown is lower than the actual figure.

2. This figure was corrected in January 2009 resulted from a survey carried out in end 2008.

# Summary of Operations

“The Western Province water supply system claims the major share of production through four centres at Ambatale, Labugama, Kalatuwawa and Kandana in Kalutara amounting to 61% of the total water produced by the NWSDB”

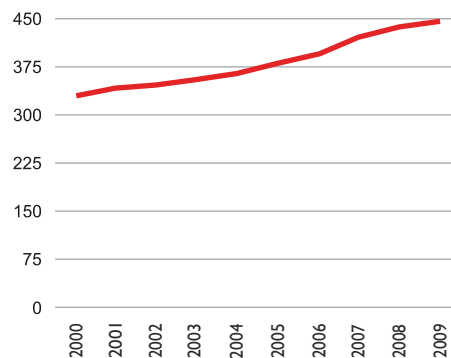
## WATER SUPPLY

### Drinking Water Production

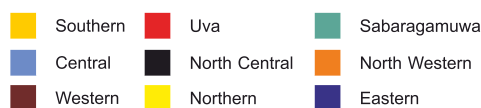
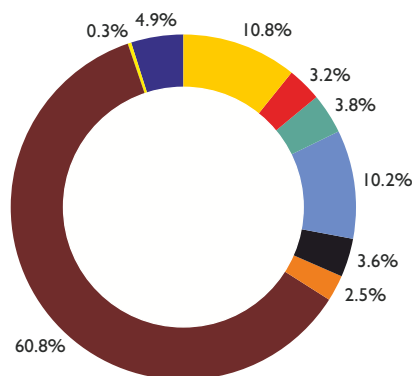
The total quantity of drinking water produced in 2009 was 449 million cu.m. The trend during the last 10 years is given in the chart. The Western Province water supply system claims the major share of production through four centres at Ambatale, Labugama, Kalatuwawa and Kandana in Kalutara amounting to 61% 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

million cu.m.



### Water Production by Provinces



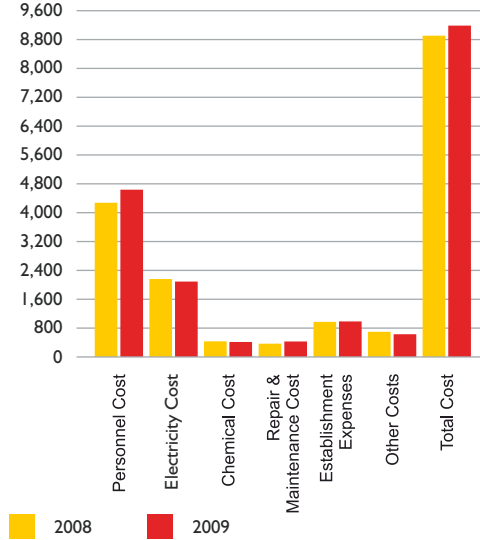


### Cost of Production:

Breakdown of the cost of production (Rs. million) in comparison with 2008 is shown below:

### Cost of Production

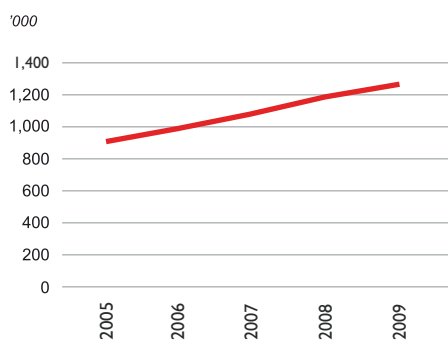
Rs. million



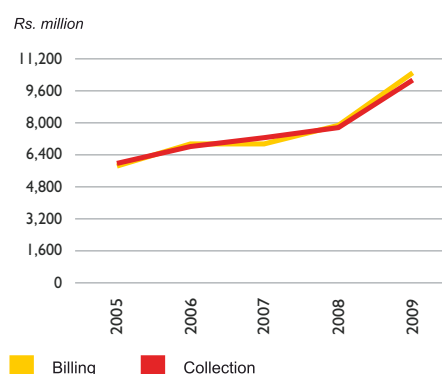
### Comparison of Service Connections

Province	No. of Connections Province-wise				No. of Connections Region-wise		
	As at end December 2008	As at end December 2009	Change %		As at end December 2008	As at end December 2009	Change %
Western - Central	323,383	<b>338,669</b>	4.7	Priority	2,846	<b>2,702</b>	(5.1)
				Colombo City	120,504	<b>125,529</b>	4.2
				TEC North	120,334	<b>124,934</b>	3.8
				TEC South	79,699	<b>85,504</b>	7.3
Western - North	128,851	<b>133,387</b>	3.5	TNC	90,906	<b>94,105</b>	3.5
				Gampaha	37,945	<b>39,282</b>	3.5
Western - South	148,036	<b>155,799</b>	5.2	TSC	84,054	<b>86,279</b>	2.6
				Kalutara	40,501	<b>42,127</b>	4.0
				Panadura	23,481	<b>27,393</b>	16.7
				Kandy	139,414	<b>148,470</b>	6.5
Central	139,414	<b>148,470</b>	6.5	Kandy	139,414	<b>148,470</b>	6.5
North Western	32,684	<b>36,347</b>	11.2	Kurunegala	32,684	<b>36,347</b>	11.2
North Central	50,026	<b>55,669</b>	11.3	Anuradhapura	50,026	<b>55,669</b>	11.3
Sabaragamuwa	62,340	<b>66,121</b>	6.1	Ratnapura	27,680	<b>29,303</b>	5.9
				Kegalle	34,660	<b>36,818</b>	6.2
				Hambantota	59,286	<b>64,482</b>	8.8
Southern	172,663	<b>188,550</b>	9.2	Matara	58,457	<b>61,642</b>	5.4
				Galle	54,920	<b>62,426</b>	13.7
				Bandarawela	31,521	<b>32,686</b>	3.7
Uva	49,157	<b>52,624</b>	7.1	Monaragala	17,636	<b>19,938</b>	13.1
				Jaffna	5,435	<b>5,631</b>	3.6
Northern	5,435	<b>5,631</b>	3.6	Jaffna	5,435	<b>5,631</b>	3.6
Eastern	74,942	<b>85,061</b>	13.5	Ampara	22,184	<b>23,732</b>	7.0
				Trincomalee	27,041	<b>29,048</b>	7.4
				Akkaraipattu	25,717	<b>32,281</b>	25.5
<b>Total</b>	<b>1,186,931</b>	<b>1,266,328</b>	<b>6.7</b>	<b>Total</b>	<b>1,186,931</b>	<b>1,266,328</b>	<b>6.7</b>

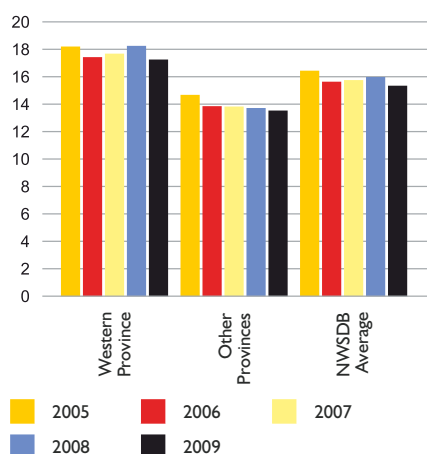
## Growth of Consumers



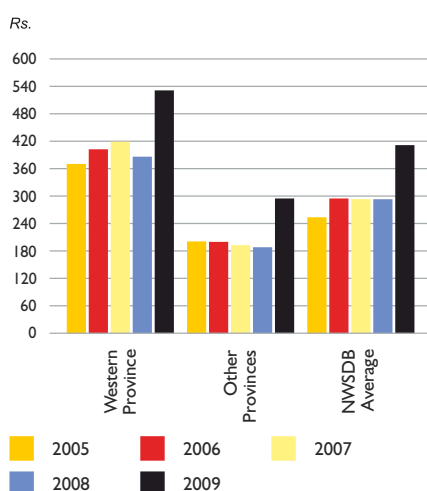
## Comparison of Annual Billing and Collection



## Average Household Monthly Consumption cu.m. per Connection



## Average Household Monthly Bill



## Billing Statistics

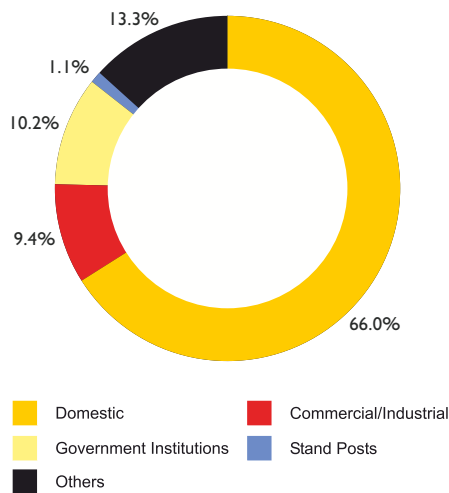
Description	2008	2009
Billing Target (Rs. million)	8,361	10,612
Actual Billing (Rs. million)	7,875	11,119
Collection Target (Rs. million)	8,361	10,925
Actual Collection (Rs. million)	7,791	10,502

## Quantity of Water Sold and Revenue by Consumer Categories (2009)

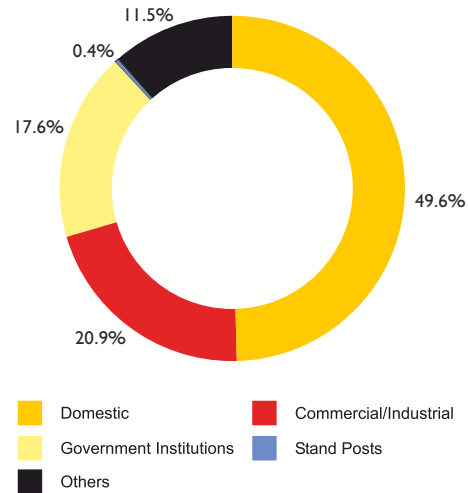
Consumer Category	Quantity sold		Revenue	
	cu.m '000s	%	Rs. million	%
Direct billing (domestic, NWSDB quarters, Government quarters)	204,446	66.0	5,513	49.6
Schools	3,900	1.3	74	0.7
Tenement gardens	10,687	3.5	243	2.2
Public stand-post supply	3,359	1.1	44	0.4
Government institutions, NWSDB premises	31,677	10.2	1,960	17.6
Commercial and industrial	28,944	9.3	2,324	20.9
Tourist hotels	1,942	0.6	145	1.3
Shipping	175	0.1	74	0.7
Board of Investment	7,386	2.4	386	3.5
Religious premises	4,363	1.4	88	0.8
<b>Subtotal</b>	<b>296,879</b>	<b>95.9</b>	<b>10,851</b>	<b>97.6</b>
Bulk billing	10,123	3.3	175	1.6
Others*	2,648	0.9	93	0.8
<b>Grand Total</b>	<b>309,650</b>	<b>100.0</b>	<b>11,119</b>	<b>100.0</b>

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

### Percentage Quantity of Water Used by Consumer Categories



### Percentage Revenue by Consumer Categories



### SEWERAGE

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

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

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

**Dehiwala-Mt. Lavinia Sewerage Scheme**  
(address: 480, Roxy Garden, Wellawatte)

This system, constructed between 1980 and 1987, consists of two pumping stations and a 32 km long sewer network. It has been designed to accommodate 5,000 property connections. At present, the number of property connections stands at about 2,168.

**Kolonnawa Sewerage Scheme**  
(address: 400, Avissawella Road, Wellampitiya)

This system, consisting of four pumping stations, was also constructed during 1980-1987. The sewer network is about 20 km long. The system is designed to accommodate about 3,900 property connections. At present, about 1,339 property connections exist.

### Sewerage Systems in some Housing Schemes and Government Institutions

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

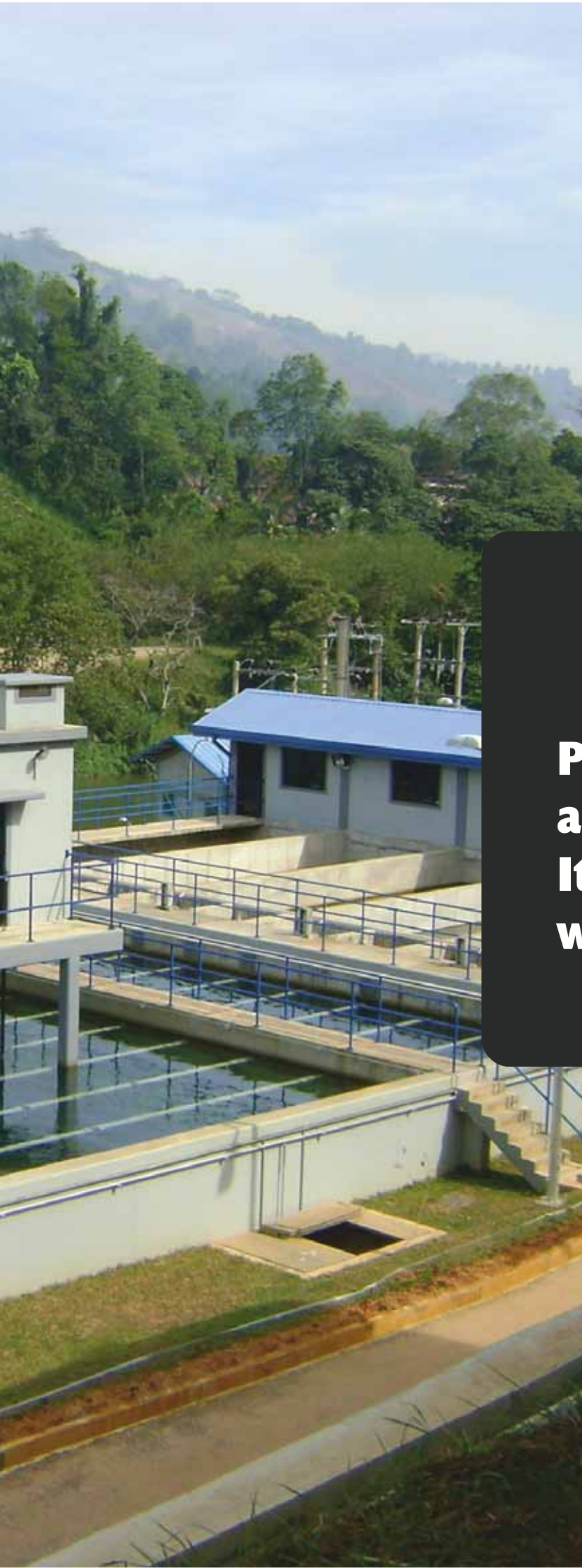
- (a) Housing Schemes
  1. Soysapura Housing Scheme
  2. Maligawatta Housing Scheme
  3. Mattegoda Housing Scheme
  4. Jayawadanagama Housing Scheme
  5. Crow Island Housing Scheme
  6. Maddumagewatta Housing Scheme
  7. Stace Road Housing Scheme
- (b) Government Institutions
  1. Presidential Secretariat
  2. Speaker's Residence
  3. Parliament (water and sewerage)
  4. Sethsiripaya (water and sewerage)
  5. Isurupaya (water and sewerage)
  6. Jayawadanagama Hospital
  7. Maligawatta Hospital

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









## **Purifying water is an expensive process It should be used with care**

Converting naturally available water to drinking water involves expenditure for power, chemicals, staff and related activities. This picture shows the water purification plant at Meewathura for the Kandy South Water Supply Scheme which produces 32,000 cubic meter/ day

**Water is precious; use it sparingly**



# Water Supply

“Water Supply Projects were implemented with assistance from JICA, DANIDA, ADB, Austria, German KfW, Netherlands, IFRC, France, Spain and USAID with counterpart funding by the GOSL”

## GENERAL

### Planning and Design Section

P&D Section is the foremost unit in the NWSDB that executes major design and feasibility studies of projects to be implemented by the NWSDB. In this context, the P&D Section is specifically in charge of reviewing the designs related to projects implemented using foreign funds, whilst carrying out detail designs of some foreign funded as well as GOSL funded projects. The Section is also responsible for the preparation of Standard Bidding Documents and Design Manuals and maintain coordination with Government Agencies in relation to Planning Activities of projects.

The scope of the P&D Section can be detailed as below based on specific areas/ functions.

The value of the work done by the P&D Section is indicated by the total value of the procurement documents produced and released during that year. On that basis, the P&D Section has carried out work to value of Rs. 1,069 million. This output does not include the substantial inputs provided for the design review of the five major FFPs. Action will be taken in 2010 to quantify the inputs provided for these design review works. Comparison of the value of work done and the expenditures for 2008 and 2009 are given below.

Description	2008	2009	Variation (%)
Total value of work done (Rs. million)	959.0	1,069.0	11.5
Western Section (Rs. million)	405.9	40.7	(90.0)
Southern/ East Section (Rs. million)	231.7	451.25	94.8
Central/ Northern Section (Rs. million)	321.5	577.2	79.6
Total Actual Expenditure (Rs. million)	90.5	91.9*	1.6

\* Expenditure for November and December 2009 were estimated.

### I. Southern/ Eastern Sub Section

This Section covers the Southern, Sabaragamuwa, Uva and Eastern Provinces. Detailed design of 3 projects Embilipitiya, Udawalawa and Badalkumbura - Alapothe were done. The detailed designs of the JICA assisted Ampara Water Supply Project is in progress. The design reviews of a major FFP Kirindi Oya WSP is in progress. The Feasibility Studies of 3 WSPs for the Augmentation of Monaragala - Buttala, Mahiyanganaya and Ruhunupura were carried out by this Section.

## 2. Western Sub Section

This Section which covers the Western Province, has carried out the detailed designs of 5 projects that will improve the Colombo City Water Distribution System viz., IT Park - Malabe, Kalutara Stage II, Sri Lanka Army Housing Scheme in Manning Town and CHICO Transmission Arrangement. The design reviews of 4 major FFPs are in progress viz., Kelani Right Bank WTP (DANIDA), Augmentation of Negombo WS (Dutch), Negombo and Ambatale WS (Spanish) and Kalu Ganga WS Phase I - Stage II (JICA). It also carried out the Feasibility Studies of 8 projects which include Ambatale to Maligakanda Transmission Main, water supply to areas upstream of Ambatale, Gampaha/ Attanagalla/ Minuwangoda Integrated System and Kalutara Water Supply Stage III. The foreign funded Dam Safety Project covering Labugama and Kalatuwawa dams is in progress too.

## 3. North/ Central Sub Section

This Section covers the Northern, Central, North Central and North Western Provinces. Detailed designs of four WSPs for Point Pedro, Dehiattakandiya, Maha Oya and Mannar were carried out. Design reviews of major FFPs for Vavuniya, Chilaw, Greater Trincomalee and Puttalam are in progress. Feasibility Studies of Adampan, Vidathalathivu and Thevanpiddy WSPs were completed.

M&E works relating to all the above sub sections covering the whole island. M&E bidding documents for 11 projects for the provision of Pumps, Generators & Accessories for IDP Camps and Welfare Centres in Vavuniya and Jaffna Districts were prepared. Bidding documents were also prepared for WSPs of Kalawanchikudy, Ambalangoda, Manning Town Housing Scheme and for equipment installation projects at the NWSDB Head Office and Ambalangoda WSS. Apart from that, design reviews of M&E works in five major FFPs Kelani Right Bank WTP, Kirindi Oya, Augmentation of Negombo WSS, Negombo - Ambatale (Spanish) and Greater Trincomalee WS are in progress.

A Structural Specialist is available for providing structural design inputs and recommendations for structural stability of the elements of new designs and of existing structures while a Water Treatment Specialist is available for providing technical inputs on water treatment processes for WSSs and for training staff on the subject matter of Water Treatment.

The Drafting Section has prepared a total of 563 drawings for 35 WSPs and 215 drawings for 10 sewerage projects in 2009. 288 km of the longitudinal surveys and a 84 km of detail surveys in relation to a total of 31 WSPs were completed in 2009. The Survey

Section has been in charge of preparing the drawings for the above surveys with the assistance of the Drafting Section.

## 4. Documentation Sub Section

During 2009, Contract Documentation Unit has prepared 14 standard bidding documents and specifications for the contract types; works, supply, supply and installation and supply and laying. The Documentation Section also functions as the Secretariate for the Standard Bidding Document Review Committee (SBDRC) which was re-established in 2008 to review the bidding documents and to resolve difficulties in procurement.

Standard Bidding Documents for Works Contracts and Design & Build Contracts based on FIDIC conditions of contract were prepared in 2009. Preparation of Standard Document for Pre-qualification of Civil Contractors and Requests for Proposals are in progress too.

During this year, 58 BOQs for supply and laying of pipes, 11 for water retaining structures, 5 for sewage treatment plants and 5 for office buildings and rating 78 BOQs were completed by the Quantity Surveying Unit

Rate analysis prepared by Greater Kandy WSP, Towns North of Colombo WSP Stage II, Integrated WSS for Eastern Coastal Towns of Ampara, Greater Trincomalee Integrated WSP and KfW Funded WSPs were checked during 2009. BOQs were prepared based on Civil Engineers Standard Method of Measurement (CESMM) and this Unit rated them for KfW funded WSPs. Further, updating the NWSDB Rate Book for 2010 and updating the Rate Book for sewerage works for 2010 were completed. This Unit also provides training to all NWSDB design staff in Head Office and the regions on preparation of BOQs on CESMM. A manual for Pre-Feasibility and Feasibility Studies was completed by the Design Manual Updating Unit. Two workshops were held at Ratmalana and Kandy to obtain views of regional staff and two workshops were held at Ratmalana and Kandy for field testing and training of trainers on this Manual.

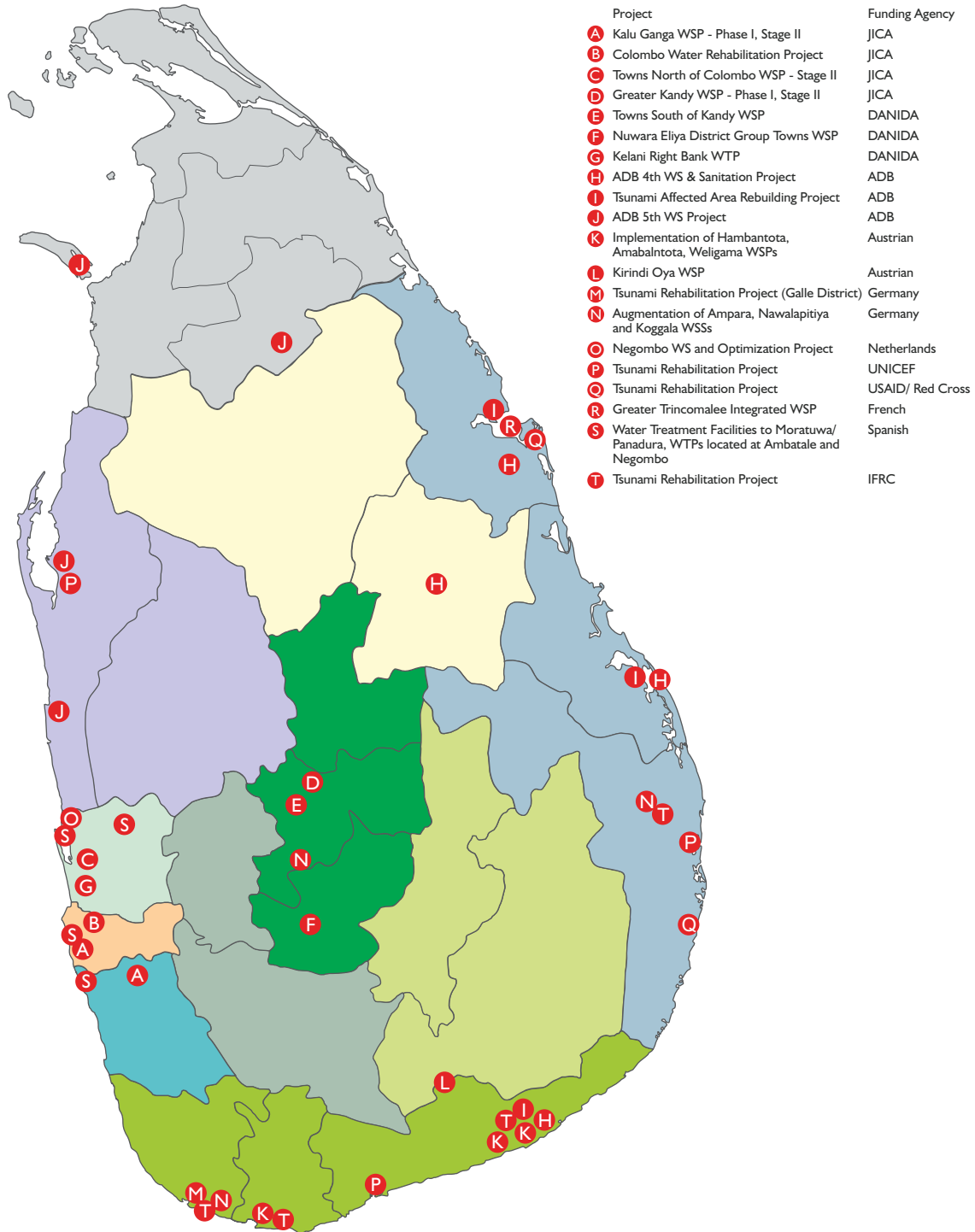
Updating four other design manuals for urban water, water treatment, sewerage and ground water were commenced.

## 5. Library

During the year 2009, the Library has been able to obtain the membership of 17 nos. of journal and periodicals in various subjects whilst aiming to procure 800 books. About 300 collection of specifications were provided to the Library by various projects such as Kalu Ganga, Greater Kandy, TNC and DANIDA funded WATSAN Project, ADB 4th Project and Greater Kurunegala WS&S project.

## Major Water Supply Project Accomplishments

### Location Map of Foreign-funded Projects under Construction/ Augmentation during 2009



## PROJECTS UNDERTAKEN WITH JICA ASSISTANCE

### I. 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 were commenced in 2008 and were in progress during 2009.

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

The project inputs and the scope;

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

The contracts for the supply of DI Pipes, fittings etc. and for the supply of PVC pipes and fittings for the distribution system have been awarded. Physical and financial progress as at the end of the year 2009 are 8% and 1% 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. The project period is from 2007 to 2011. Total cost estimate is Rs. 5,380 million which includes funds from JICA. It is planned to rehabilitate and enhance the water supply systems of CMC and Kotikawatta -Mulleriyawa area. The Project comprises of four packages.

- i. Construction of a new office building at Maligakanda
- ii. Supply and laying of distribution network in Kotikawatta- Mulleriyawa area

- iii. Major civil, electrical and mechanical works; Transmission main in Kotikawatta- Mulleriyawa area. Construction of Maligakanda reservoir, Elli House new reservoir and Gothatuwa Tower.
- iv. Water supply improvement to low income settlements providing 1,000 water connections for 8 - 10 tenement gardens in Colombo City - A proposal was forwarded for JICA concurrence.

Physical works of the project is yet to be started while the financial progress is 5%.

### 3. Towns North of Colombo Water Supply Project Stage II

This project is designed to extend water supply services to the northern part of Greater Colombo. After the full implementation of the proposed project, transmission and distribution facilities will be provided for the areas of Ja - Ela, Kandana, Ragama, Welisara, Ekala, Mahara, Ganemulla and Biyagama targeting to serve a population of 500,000 by 2025. The Stage I of this project was completed in November 2006. The total cost estimate of Stage II of the project is Rs. 6,487 million. From that Rs. 4,869 million from JICA and rest is from GOSL. Procurement activities are in progress and the project schedule is to be completed by 2011. The physical and financial progress are 21% and 8% respectively.

### 4. Greater Kandy Water Supply Project Phase I Stage II

The objective of this project is to improve the service level of 231,000 consumers and provide 30,000 new connections in Greater Kandy, which includes the Kandy Municipal Council (KMC) area, Ampitiya, Rajapihilla, Kulugamma, Nugawela, Heerassagala, Meekanuwa, Mallepihilla, Elhena, Gohagoda, Kondadeniya and Thelambugahawatta. The TCE for stage II is Rs. 4,670 million. It is expected to complete the project in 2012.

Three contract packages are in progress while others are yet under the procurement process. Five contract packages were deleted due to funding constraints. The physical and financial progress are 27% and 12%.



Sedimentation Basin of the Greater Kandy

## PROJECTS UNDERTAKEN WITH DANIDA ASSISTANCE

### I. Towns South of Kandy Water Supply Project

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

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

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

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

The main features of the project include new technologies such as the use of High Density Poly Ethylene pipes for water transmission and automation of the headworks using the SCADA system. It also addresses improved system management through the provision of 19,000 service connections in parallel with distribution pipe laying so that consumers will immediately benefit upon the commissioning of the scheme. Reduction of water wastage using above techniques is a main feature of the project. Physical and financial progress of the project as at the end of 2009 are 92% and 76% respectively.



Meewathura Water Treatment Plant

### 2. Nuwara Eliya District Group Water Supply Project

The project was designed to provide safe drinking water to 96,000 (in 2025) people at six major towns namely Rikillagaskada, Ginigathhena, Walapane - Nildandahinna, Maskeliya, Ragala and Hatton - Dikoya. Water sources are Mul Oya, Lonach stream, Kurundu Oya, Mahaneluwa Oya, Halgran Oya and Sanchimale Oya. The respective treatment plant capacities are 4,000, 3,000, 3,000, 2,500, 1,500 and 4,000 cu.m./day. Full treatment will be carried out in all 6 WTPs. Hatton WSS is an augmentation while the other 5 WSSs are new. The project period is from 2006 to 2010. The total cost estimate is Rs. 4,462 million. The physical and financial progress as at the end of 2009 are 98% and 83% respectively.



Ragala Water Treatment Plant

### 3. Kelani Right Bank Water Treatment Plant

This is a high priority water supply project which was launched with the objective of improving water supply situation in Gampaha and Colombo Districts. It is intended to feed the distribution network laid under the Towns North of Colombo Project funded by JICA. The project comprises a 40 MGD intake and a water treatment plant of 40 MGD capacity to be constructed on the right bank of the Kelani River at Pattivila, Ambatale. The total estimated cost is Rs. 8,100 million. The physical and financial progress as at the end of 2009 are 45% and 27% respectively.



## PROJECTS UNDERTAKEN WITH ASIAN DEVELOPMENT BANK ASSISTANCE

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

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

The TCE is US\$ 248 million which includes US\$ 120 million as the ADB component and is met through the original loan and two supplementary loans. The scheduled project completion is in December 2010. There is a significant cost over run situation in the project and this needs to be attended urgently.

The overall physical progress and financial progress as at the end of 2009 are 69% and 73% respectively.

Progress on Urban Water Component; Out of the 16 contracts five contracts have been completed by the end of 2009. Progress on Urban Water Supply and Sanitation, Rural Water Supply and capacity building are 52%, 16% and 1% respectively.



Batticaloa Intake Structure

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

The objective of the project is the well being of significant number of people in Tsunami affected areas through improving their living conditions rapidly by restoring the basic social infrastructure, community and public services and livelihood.

This project includes the construction of new WSSs and rehabilitation/ augmentation of existing WSSs in Tsunami affected areas. The project period is from April 2005 to 2010. The number of beneficiaries are 83,000 in Hambantota, 73,325 in Batticaloa and 5,393 in Trincomalee (Muttur) Districts.

There are several sub projects in these three districts. Some of the schemes are small schemes and their main water sources are boreholes and dug wells. Other

schemes are extensions of the existing schemes. The total cost estimate is Rs. 1,010 million from ADB (grant) and Rs. 220 million from GOSL. Out of 23 sub projects, 11 in Hambantota, 3 in Batticaloa and 2 in Muttur were completed and others were in progress with 80% overall physical progress at the end of 2009. Difficulties in finding reliable water sources in Batticaloa and Muttur are constraints for this project.

### 3. Dry Zone Water Supply and Sanitation Project (ADB 5<sup>th</sup> Project)

The NWSDB is in the process of implementing a project for Water Supply & Sanitation improvements in the North Western and Northern provinces of Sri Lanka. Under the above initiative Puttalam, Chillaw, Vavuniya and Mannar towns will be provided with enhanced water supply facilities and sewage treatment facilities. The project will initially provide water to 206,000 people in the above four towns. The total cost of the project is Rs. 12,200 million and ADB will provide about 75% of the project cost. Project period will be four and half years. The loan is effective from November 2009. The necessary counterpart funds from the Treasury are to be obtained.

## PROJECTS UNDERTAKEN WITH AUSTRIAN ASSISTANCE

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

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

Supply and laying of a pumping main from Kataragama to Sella Kataragama had been identified as an extension of the original project with funding from the Austrian Govt. Improvement to existing distribution system of Sella Kataragama had been identified under GOSL funds too. Additional work identified for the project will be completed by June 2010. The total cost estimate for the project is Rs 2,126 million.

Additional work identified for Kataragama is under design stage. Physical and financial progress for the original scope are 100% completed including Badulla-Bandarawela Integrated Feasibility Studies.

## 2. Kirindi Oya Water Supply Project

This is a rehabilitation and augmentation project, targeting 50,000 people in Lunugamvehera, Pannegamuwa, Weerawila, Beralihela, Mattala and Devramvehera towns. The water source is Lunugamvehera irrigation tank and the water undergoes full treatment in a WTP of capacity 6,500 cu.m./day. The total cost estimate is Rs. 1,703 million plus Rs. 401 million funded by Austria and GOSL respectively. Kirindi Oya WSS was originally constructed for the settlers under the Kirindi Oya Irrigation project in 1989. The existing capacity of 5,900 cu.m./day is hardly enough to manage the present demand. This project will accomplish the need of rehabilitation and augmentation of the existing scheme. M-U-T GmbH, Austria is the contractor. It is expected to commission the WTP at the end of July 2010. The physical progress is 38%.

### PROJECTS UNDERTAKEN WITH KfW ASSISTANCE

#### I. Water Supply Rehabilitation and Augmentation Project in Tsunami Affected Areas (Galle District)

This project is to augment the water treatment facilities and thereby expand the water served area in Ambalangoda during the period June 2006 to March 2010 (which includes Phase I & II). About 195,000 people in the PS areas of Balapitiya South, Ambalangoda, Hikkaduwa and Rathgama and Urban Council area of Ambalangoda are to be served. The water source is Ginganga tapped at Kiribathawila in Baddegama and the capacity is augmented to 36,000 cu.m./day with conventional water treatment. The system will comprise of aeration, coagulation/flocculation, rectangular sedimentation basins fitted with tube settlers and Rapid sand filters. Presently the sludge and the filter backwash water are discharged to an abandoned paddy field. However, after augmentation the filter backwash will be recovered and the resultant sludge will be diverted to drying beds. The TCE is Rs. 4,202 million including of Rs. 3,393 million grant from KfW and Rs. 809 million from GOSL.

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

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

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

The Project area extends along the south-west coast from Kosgoda to Rathgama. All the work for water treatment upgrading in Baddegama to satisfy water demands in 2025 was not possible within the available funds. The present project priorities have been thus given for,

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

The physical progress of the entire project is 91% by the end of 2009 whereas financial progress is 100%.

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

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



*Ampara Treatment Process Building*

*Nawalapitiya* - About 22,000 people in Nawalapitiya UC area to be served with this new project. Water source is Hangaran Oya (a tributary of Mahaweli River) and treatment capacity is 4,500 cu.m./day. Treatment process consists of Upward Flow Roughing Filters, Slow Sand Filters and Chlorination. TCE is Rs. 1,151 million. Laying of pipes for the requested extensions in the distribution system, supplying and

placing of balance filter media and landscaping were carried out during the year. The construction work was completed except placing of filter media in 5th filter and some landscaping work. The scheme was commissioned in December 2007. Delays in supply of filter media due to various environmental regulations for sand and pebble mining in rivers and strict regulation in transporting.

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

The physical and financial progress of the overall project are 99% and 80% respectively. The Ministry of Water Supply & Drainage liaised with the Treasury to increase local allocation of funds.

## **PROJECT UNDERTAKEN WITH ASSISTANCE FROM NETHERLANDS**

### **Negombo Water Supply and Optimization Project**

This is a rehabilitation and augmentation project of 3 years duration. Water sources are Maha Oya and Kelani River with full treatment. The total cost estimate is Euro 36 million and Rs. 1,016 million from the Netherlands and GOSL respectively. 54% of the foreign component is a grant and 46% is a loan. The present piped water coverage in the Negombo Municipal Council area is about 59% and the water supply to most of the area is restricted daily from 8.00 am to 3.00 pm due to the inadequacy of water and transmission infrastructure.

The objective of the project is to enhance the service level of safe water supply by providing 24 hour service to 100% of the population within the service area. The area includes Kochchikade and Duwa-Pitipana in addition to the Negombo Municipal Council area. The population benefitted will be 198,000 by 2011 and 215,000 by 2025. The project scope includes construction of a 12,500 cu.m./day capacity new water treatment plant in Bambukuliya, laying of a 600 mm dia 14 km long transmission main from Ja Ela to Negombo to transmit 21,000 cu.m./day treated water from the proposed Kelani Right Bank plant, upgrading of existing pumping mains (6 km) to 350 mm DI, upgrading of electro mechanical equipment, 200 km long new distribution system and establishment of a modern water asset management system. The physical and financial progress as at the end of 2009 are 30% and 45% respectively.

## **PROJECTS UNDERTAKEN WITH RED CROSS ASSISTANCE**

### **Water Supply Rehabilitation and Augmentation Project in Tsunami Affected Areas**

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

#### *Water supply improvements in Matara District*

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

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

Total cost of above project was Rs. 170 million.

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

#### *Water Supply improvements in Galle district*

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

A new project was initiated to lay a new transmission main from Wakwella WTP to Beekka Reservoir with IFRC assistance. Total cost of the project is Rs. 300 million and construction works were 95% completed by the end of 2009.

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

Project components in brief

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

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

## PROJECTS UNDERTAKEN WITH UNICEF ASSISTANCE

### Water Supply Rehabilitation and Augmentation Project in Tsunami Affected Areas

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

#### (a) Augmentation of Tangalle Water Supply Scheme

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

#### (b) New Water Supply Scheme for Thirukkivil

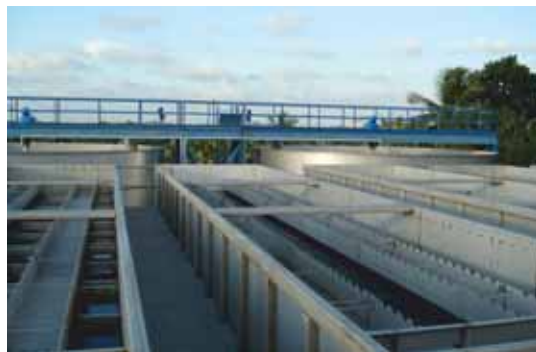
This scheme will provide water for 30,000 people fulfilling a long left need of the area. The cost of the scheme is Rs. 1,100 million. While UNICEF has agreed to provide Rs. 900 million as a grant, GOSL provides the balance. This WSS was completed and commissioned in December 2009.

#### (c) Augmentation of Puttalam Water Supply Scheme

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

## PROJECT UNDERTAKEN WITH SPANISH ASSISTANCE

### Project to Construct Water Treatment Plants at Ambatale and Negombo



Part of Ambatale Water Treatment Plant

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

The project has been in progress since June 2008.

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

## **PROJECT UNDERTAKEN WITH USAID AND RED CROSS ASSISTANCE**

### **Pottuvil - Ulla Water Supply Project**

This is a new scheme with a WTP having a capacity of 6,000 cu.m./day. The project period is from August 2007 to November 2009. The TCE is Rs. 870 million. The project is to provide safe water to 15,000 Tsunami affected people in the Pottuvil and Ulla areas.

There had been no water treatment plant and a supply network in this area. The water source was identified as 5 production bore hole wells in the banks of Hada Oya, a water stream flowing about 2 km towards Pottuvil from Ulla. The water quality reports showed that it is required to remove Iron and Manganese to desirable levels in order to supply water to the area. The works consist of bore wells, raw water collection reservoir, low lift pumps (3,500 cu.m./day), raw water

transmission main, Iron and Manganese removal plant, back wash facility, sludge drying beds, high lift pumps, transmission mains and water towers at Ulla and Pottuvil with distribution networks. Ulla was completed and commissioned in November 2009.

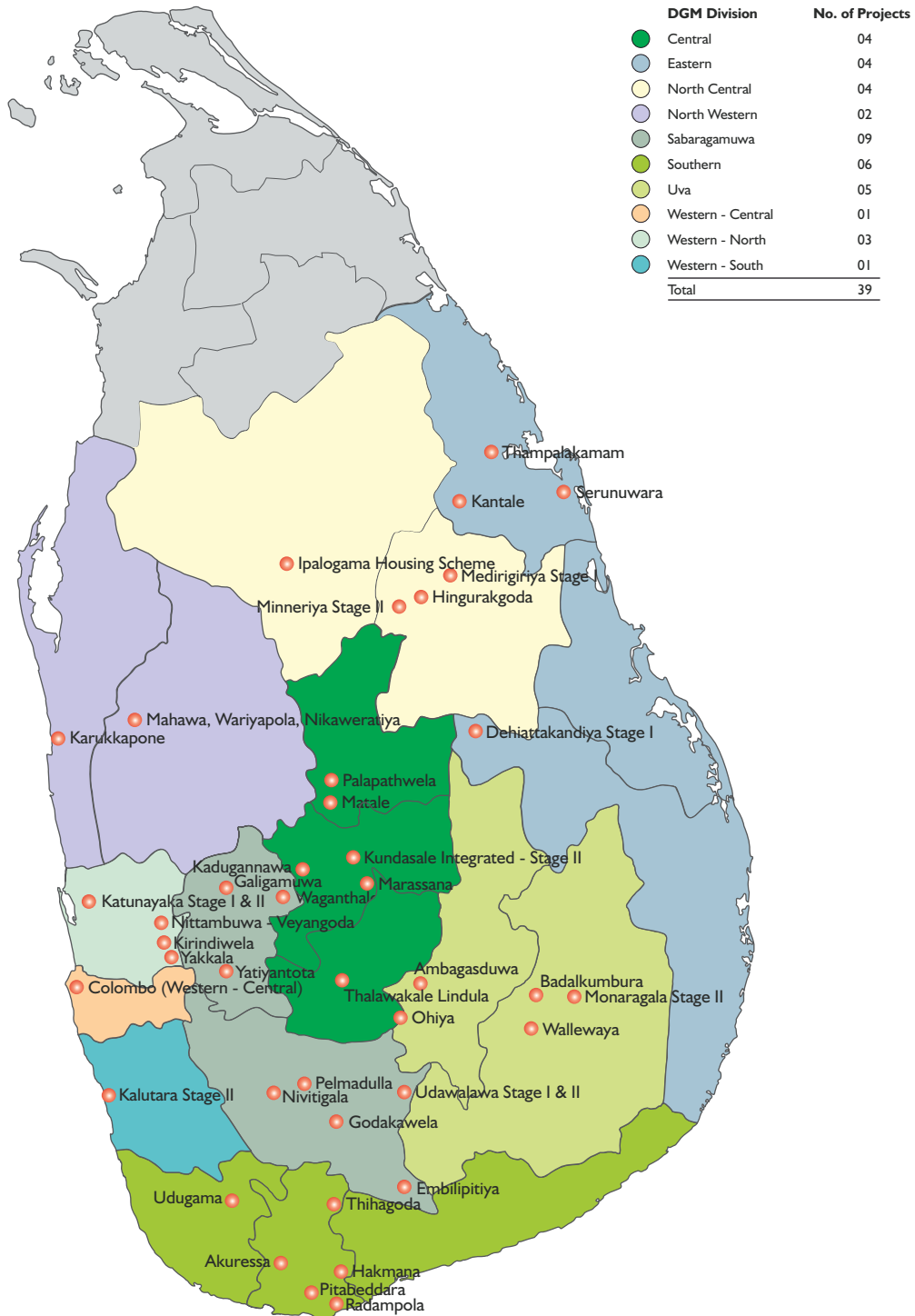
The Pottuvil water tower, transmission main from Ulla to Pottuvil water tower and the water distribution system in Pottuvil which was constructed by the Red Cross was completed in 2009.

The special treatment process new to NWSDB is adopted with continuous flushing of production wells to protect from Iron and Manganese depositing. Training of the O&M staff and close monitoring of proper operations are required to protect the water source.



## GOSL Funded Small and Medium Scale Water Supply Projects

### Location Map of Projects Under Construction/ Augmentation During 2009 Funded by the Government of Sri Lanka



### GOSL Funding through small-scale Infrastructure Rehabilitation and Upgrading Projects

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

Under the locally funded Capital Works Programme, 17 new water supply projects and rehabilitation and augmentation of a further 22 water supply schemes were continued in 2009.

### District-wise Capital Works Programme 2009

District	Allocation 2009 Rs. million	No. of Projects with Allocation	Beneficiaries
Ampara	13.0	1	17,500
Anuradhapura	120.0	1	5,000
Badulla	29.0	2	37,150
Colombo	58.0	1	162,500
Galle	13.0	1	3,000
Gampaha	40.0	3	240,000
Kalutara	80.0	1	142,000
Kandy	15.0	1	12,300
Kegalle	63.0	4	47,500
Kurunegala	84.0	1	12,000
Matale	10.0	2	29,800
Matara	92.0	5	192,000
Monaragala	49.0	3	37,800
Nuwara Eliya	56.0	1	10,500
Polonnaruwa	41.0	3	60,000
Puttalam	4.0	1	2,500
Ratnapura	92.0	5	205,900
Trincomalee	61.0	3	60,000
<b>Total</b>	<b>920.0</b>	<b>39</b>	<b>1,277,450</b>

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

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

### Completed Projects

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

East	Pottuvil WSS
Southern	Radampola WSS
Central	Rikillagaskada - Hanguranketa WSS (under Nuwara Eliya District Group Town WSP)
Sabaragamuwa	Yatyanthota Water Supply*

\* Partially commissioned

### Initiated Projects

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

North Western/ Northern	Dry zone urban water and sanitation (ADB 5 <sup>th</sup> )
Southern	Hakmana Water Supply
Western	Kalu Ganga Water Supply Phase I Stage II

## **DESCRIPTION OF GOSL FUNDED SMALL AND MEDIUM SCALE WATER SUPPLY PROJECTS**

### **Central Province**

#### **Kundasale Water Supply Project**

This is an augmentation of 2 years to serve about 100,000 people in Kundasale, Balagolla, Digana, Arattana and Wawinna areas. Water source is Mahaweli River/ Huluganga with full treatment and capacity of 20,000 cu.m./day. TCE is Rs. 1,250 million. Presently a production of 13,000 cu.m./day is obtained from Arattana WTP. Immediate improvements are underway to cater the increased demand in the area under this project. The overall progress at the end of 2009 was 60%. The major constraint is lack of funds.

#### **Palapathwela Water Supply Project**

This is an augmentation plan to serve 22,000 people in Palapathwela and Kottogoda areas. Water source is Suduganga with full treatment of capacity 4,000 cu.m./day. TCE is Rs. 212 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 increased by 4,000 cu.m./day and necessary modifications are in progress. Construction of pump house is left behind the schedule due to lack of funds. Overall progress at the end of 2009 was 70%.

#### **Matale Water Supply Project**

This is a rehabilitation of the existing WSS to serve 66,000 people in Matale town area and suburbs. Project period is 4 years. Water source is Suduganga with full treatment having existing capacity 12,000 cu.m./day. Total cost estimate is Rs. 483 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 the schedule due to lack of funds. The overall progress as at end of 2009 is 75%.

#### **Marassana Water Supply Project**

This is an augmentation to serve 25,000 new beneficiaries in Marassana town and suburbs. Water source is Ma-o-ya with full treatment with a capacity of 5,000 cu.m./day. Revised TCE is Rs. 278 million. Present production of 2,200 cu.m./day capacity is not enough to cater the rapidly growing, water demand of the area. All together there are about 3,500 service connections and zoning method is used in distribution. Lack of funds and land matters were the constraints for the progress of the project. The overall progress as at end of 2009 is 75%.

#### **Thalawakele Lindula Water Supply Project**

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

### **North Central Province**

#### **Medirigiriya Water Supply Project - Stage I**

This is a new scheme planned to serve about 60,000 beneficiaries in Medirigiriya old town & new town, Diulankadawala, Diyasenpura and Wijayapura areas. Water source is Kaudulla tank with treatment having rapid sand filters and disinfection for 9,000 cu.m./day. Sludge thickener and sludge drying beds are proposed for efficient treatment. Total cost estimate is Rs. 1890 million. This scheme aims to provide safe drinking water from Kaudulla Tank. This project consist of intake, raw water pumping system, WTP, storage facilities, transmission system and distribution system. Limited fund allocation was a constraint for progress of the project. Physical and financial progress at the end of 2009 were 20% and 15% respectively.

#### **Minneriya Hingurakgoda Water Supply Project - Stage II**

This is an augmentation of the existing scheme to serve 69,176 people in Minneriya, Girithale and Hingurakgoda area. The project period is 3 years. Water source is Minneriya tank and existing treatment process consists of rapid sand filters and disinfection system of 10,900 cu.m./day capacity. TCE is Rs. 710 million. Minneriya & Hingurakgoda water supply schemes are functioning from Minneriya WTP which is the only WTP available for 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. Limited financial allocation was a constraint for progress of the project.

### **Ipalogama Water Supply Project**

This is a new scheme intended to serve 18,000 beneficiaries in Ipalogama Ranaviru village including 4 GN divisions in Ipalogama PS. The treatment plant and the intake are common to both Ipalogama and Kekirawa existing water supply schemes. The source is Kalawewa with full treatment and 4,500 cu.m./day capacity. The total length of raw water pumping main is 4 km and the length of transmission main is 4 km. TCE is Rs. 798 million under GOSL funds. Physical and financial progress at the end of 2009 were 75% and 65% respectively. The MOU to extract water from Kalawewa is yet to be signed and is a constraint for the progress.

### **Eastern Province**

#### **Kantale (Agbopura) Water Supply Project**

This project is planned for 1,100 beneficiaries in Trincomalee District. The associated TEC is Rs. 275 million. The physical and financial progress as at the end of 2009 are 86% and 57% respectively.

#### **Thampagamuwa Water Supply Project**

This project is intended to provide safe drinking water facilities to 30,000 beneficiaries in Trincomalee District. The TCE is Rs. 95 million. The physical and financial progress as at end of 2009 are 65% and 62% respectively.

#### **Serunuwara Water Supply Project**

This is a new project proposed to serve 9,500 beneficiaries in Serunuwara, Kallaru and suburbs. The TCE is Rs. 110 million.

#### **Dehiattakandiya Water Supply Project - Stage I**

This project intends to extend the safe water supply in Dehiattakandiya to 16,000 new beneficiaries. This is a project of TCE Rs. 411 million. The physical progress as at the end of 2009 is 50%.

### **North Western Province**

#### **Mahawa Nikaweratiya Integrated Water Supply Project**

This is a new project planned to serve 9,000 families in Nikaweratiya, Mahawa and suburbs. Water Source is Magalle and the WTP with full treatment is of capacity 6,500 cu.m./day. Revised TCE is Rs. 996 million. The physical and financial progress is 85% and 65% respectively.

### **Karukkapone Water Supply Scheme**

This project intends to provide safe drinking water to 2,500 beneficiaries in Karukkapone area in Puttalam District. The TCE is Rs. 100 million and physical and financial progress are 60% and 25% respectively as at the end of 2009.

### **Sabaragamuwa Province**

#### **Embilipitiya Water Supply Project**

This is an augmentation of existing scheme with a treatment plant intended for 84,000 beneficiaries. Construction of the treatment plant has been completed. TCE is Rs. 514 million out of GOSL. Construction of intake and supply and installation of pumps will commence once MASL approval is received.

#### **Udawalawa Water Supply Project - Stage I & II**

This is an augmentation of existing WSS. TCE is Rs. 974 million. Construction of treatment plant and intake were completed during 2009. The distribution system has to be completed. Cabinet approval for revised TCE has to be received for completing balance work.

#### **Godakawela Water Supply Project**

This is a new project intends to provide safe drinking water to 22,500 beneficiaries in Godakawela, Kosnathota, Rideewela and suburbs and is implemented in 2010. The water source is Rakwana Ganga and water is treated by flocculation, sedimentation, filtration and chlorination in a WTP of capacity 4,500 cu.m./day. The project components are WTP, Caretaker quarters, gas chlorinators and back wash pumps. TCE is Rs. 228 million. Overall progress of the project is 60%.

#### **Galigamuwa Water Supply Project**

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

### **Nivithigala Water Supply Project**

This project intends to provide safe drinking water to 9,400 beneficiaries in Nivithigala area in the Ratnapura District. TCE is Rs. 99 million. The project is 55% complete by the end of December 2009.

### **Pelmadulla Water Supply Project**

This projects intends to supply safe drinking water to 14,500 beneficiaries in Pelmadulla area in Ratnapura District. The TCE is Rs. 195 million and the physical and financial progress are 80% and 90% by the end of 2009.

### **Yatinyanthota Water Supply Project**

This project intends to supply safe drinking water for 6,700 beneficiaries in Kegalle District. The relevant TCE is Rs. 152 million. The physical and financial progress as at end of 2009 is 70% and 60% respectively. The project was partially commissioned in early 2009.

### **Southern Province**

#### **Akuressa Water Supply Project**

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

#### **Hakmana Water Supply Project**

Under the proposed Hakmana WSS, it is intended to supply safe drinking water to 10,000 beneficiaries in the Hakmana area. The project is to be implemented during the period from 2010 – 2012. The water source is a bore hole and water goes under partial treatment at a water treatment plant of capacity 1,800 cu.m./day. The major project components are intake improvements, new WTP, transmission and distribution pipe lines and supply & installation of pumps. The TCE of the project is Rs. 383 million. The scheme is still in the design stage and 70% of design works have been completed by the end of 2009.

### **Thihagoda Water Supply Project**

This project was planned to meet the demand due to developments in Thihagoda and suburbs and it will serve for about 7,500 people. The water source is two bore holes and the water under goes partial treatment in a WTP of 1,000 cu.m./day capacity. The total cost of the project is Rs. 162 million. The scarcity of filter media and legal action taken by the contractor seriously affected the progress. The project is scheduled to be completed in June 2010.



*Construction of Aerator of Thihagoda Water Treatment Plant*

### **Udugama Water Supply Project**

Construction of this scheme was commenced in 2004 to meet the water demand of 6,000 people in Udugama and its immediate suburbs. The total estimated cost of the project is Rs. 145 million. Ground water extracted through three tube wells will be fully treated in a conventional treatment plant of capacity 1,200 cu.m./day. Contractor's poor performance and scarcity of filter media were main reasons for the delay of the project. Water treatment plant was constructed and filter media was supplied in 2009. The project is scheduled to be completed by June 2010.



*Construction of Slow Sand Filter at Udugama WTP*



### **Pitabeddera Water Supply Project**

Proposed water supply scheme intends to provide water to 6,000 people in Pitabeddara town area. The scheme consists of a conventional treatment of capacity 1,200 cu.m./day and will use two bore holes as the water source. The Total Estimated Cost of the project was recently revised to Rs. 130 million. Although construction activities were started in year 2007, progress was very slow due to the non availability of funds and poor performances of the contractor. The scheme is expected to be completed in 2011, if sufficient funds would be available.



*Construction of Roughing Filter at Pitabeddera WTP*

### **Radampola Water Supply Project**

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



*Construction of Roughing Filter at Radampola WTP*

## **Uva Province**

### **Ohiya Water Supply Project**

This is a new scheme of 3 year period intended to serve 10,000 people in Welimada town and suburbs. Water source is Uma Oya with full treatment, of capacity 2,000 cu.m./day. TCE is Rs. 189 million and physical and financial progress at the end of 2009 were 60% and 70% respectively. Fund restrictions are delaying the progress of the project.

### **Monaragala Water Supply Project Stage II**

This is an augmentation of the existing scheme to serve about 10,000 people in Monaragala town and suburbs. Project period is 2 years. Water source is a stream through G-Lon estate with partial treatment of capacity of 3,500 cu.m./day. TCE is Rs. 154 million and physical and financial progress at the end of 2009 were 98% and 65% respectively.

### **Ambagasdowa Water Supply Project**

This is an augmentation scheme to serve 17,750 people in Ambagasdowa and suburbs. Water source is Bomburu Ella with full treatment and a capacity of 3,000 cu.m./day. Total cost estimate is Rs. 185 million. The procurement process is in progress as at end of 2009.

### **Wellawaya Water Supply Project**

This project is intended to provide safe drinking water to 6,000 beneficiaries in Monaragala District. The TCE has increased from Rs. 250 million to Rs. 823 million. Hence approval has to be sought for the revised TCE. The scheduled completion is December 2010.

### **Badalkumbura Water Supply Project**

This project intends to provide water to 22,000 beneficiaries in Badalkumbura area in Monaragala District. The TCE is Rs. 124 million. The physical and financial progress of the project are 35% and 30% as at the end of 2009 respectively.

## **Western Province**

### **Kirindiwela Water Supply Project**

This is a new project planned to serve 8,000 people in Kirindiwela area. The project period is 5 years. Water source is Kelani River with full treatment and effluent is discharged to inland water canal. TCE is Rs. 198 million. The new treatment plant which can supply 2,750 cu.m./day will be constructed in the existing treatment plant site at Pugoda and it will be commissioned after completion of minor balance works. Intake construction is in progress. Overall progress as at end of 2009 is about 78%.

### **Nittambuwa - Veyangoda Water Supply Project**

This is a new/ augmentation project intended to serve 15,000 beneficiaries in Nittambuwa, Thihariya, Warana and Kalagedihena. The water will be extracted from Attanagalu Oya. Water will under go full treatment in a WTP of capacity 3,000 cu.m./day. The TCE for the project is Rs. 211 million. During the year 2009 PVC pipe line was laid up to Warana Temple road and the overall progress up to the end 2009 is 95%.

### **Kalutara Integrated Water Supply Project Stage II**

This scheme was designed in order to extend water supply to Payagala, Maggona, Beruwala, Dharga Town, Bentota and Aluthgama areas to serve 210,000 people. Project period is from 2006 to 2011. Water Source is Kalu Ganga with full treatment and capacity is 56,250 cu.m./day. TCE is Rs. 902 million.

The main objective of stage II is to improve the distribution system to Southern areas of Kalutara. Rapid sand filter at Kethhena treatment plant and pump house at Alwis Place Kalutara are at construction stage and the RDA approval was not granted to lay along Galle - Matara A2 road since the road had been newly relaid. Also it was not allowed to lay pipe line along the rail track. Consequently procurements were planned to lay the pipeline along Payagala Dodangoda road. The physical and financial progress as at end of 2009 are 24% and 34% respectively.

### **Katunayake - Seeduwa Water Supply Project**

About 29,000 people in Katunayake, Seeduwa and Raddolugama will benefit from this project which is of capacity 4,500 cu.m./day. Water source is Dandugam Oya and water requirement will be obtained from augmented Raddolugama WTP. TCE is Rs. 185 million. Augmentation of the existing Raddolugama WTP was commenced and part of the distribution system has to be laid. The progress of the project was delayed due to RDA issues and non availability of funds. Overall progress as at the end of 2009 was 80%.

### **Avissawella New Town Water Supply Project**

This is an augmentation project serving about 32,000 people in Avissawella new town. Project period is 1999 - 2009. Water source is Kelani River with full treatment of capacity 2,500 cu.m./day. TCE is Rs. 257 million. Treatment plant has been completed and further expansion of the WTP was proposed. Rehabilitation of old intake is completed except landscaping, road work etc. and it is 90% completed. Funds have not been allocated to finalize the project.

### **Jaltara Ranala Water Supply Project Phase I Stage I**

This is a new project serving Kaduwela & Homagama DS divisions. Design population is 7,646 in 2030 for phase I stage I, 10,273 in 2030 for phase I stage II and 92,118 in 2030 for phase II. Water source is Kalatuwawa / Labugama (D20) for phase I and plant undertaken from Ceylon Heavy Industries & Company (CHICO) for phase II. Total cost estimate is Rs. 217 million for phase I and Rs. 1,295.95 million for phase II. Jaltara – Ranala area has been identified as a priority item under above project and it is intended to implement this water supply scheme in two phases. Jaltara and Henpita. Grama Niladari Divisions will be covered under phase I stage I and Artigala East, Artigala West, Panaluwa & Batewela will be covered under phase I stage II. The rest of the area within the Kaduwela & Homagama DS divisions will be covered under phase II. 85% was completed and this project is due to complete in 2010. There are funding constraints for the project.

### **Hanwella Water Supply Project**

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

### **Inter-Provincial Projects**

#### **Waganthale Water Supply Project**

This is a new project intended to serve 5,000 beneficiaries in the Waganthale and suburbs. The water source is Ma Oya. The project components include construction of 225 cu.m. ground reservoir and an access road. The TCE is Rs. 30 million. The physical and financial progress as at end 2009 is 35% and 33% respectively.

#### **Pahala Kadugannawa Water Supply Project**

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

## **NEW INITIATIVES TO BE PURSUED IN 2010**

### **Rehabilitation & Augmentation of Labugama - Kalatuwawa WTP (Hungary)**

The project includes the rehabilitation and augmentation of Labugama and Kalatuwawa Water Treatment Plants (originally commissioned in 1886 and 1957 respectively) to improve the treated water quality and plant operational efficiency and to effect necessary repairs. It serves Colombo City, Kaduwela and Hanwell areas. Total cost estimate is Rs. 6,800 million and funding is from Hungarian Government. Loan Agreement was signed and contract agreement is to be signed. The technical proposal submitted by the contractor is under evaluation.

### **Warakapola Water Supply Project**

About 90,000 people in Warakapola, Alawwa, Galigamuwa and Ruwanwella areas will be benefitted from this augmentation of Warakapola WSS. Water source is Maha Oya. Treatment capacity is 16,000 cu.m./day and treatment process is full treatment. The TCE is Rs. 3,472 million and funding source is Czech Republic. Scope of the project includes; construction of an intake at Maha Oya, two WTPs, reservoirs and transmission & distributing system (250 km). Unsolicited proposal submitted by M/S TESLA. Czech republic is being evaluated by the PSC.

### **Pathadumbara Integrated Water Supply Project**

The project will provide safe drinking water to the people in Pathadumbara. Proposed augmentation includes new treatment plant of capacity 65,000 cu.m./day in 2027, head work improvements, installation of pumping stations construction of 6 reservoirs and laying of 60 km pumping main and 110 km of distribution networks. Water source is Mahaweli River. The TCE is Rs. 8,742 million. Unsolicited proposal submitted by a Chinese company is being evaluated by the PSC.

### **Eastern Coastal Towns of Ampara District - Phase III**

This new project includes construction of treatment plants of capacities 12,000 cu.m./day and 22,250 cu.m./day, ground water pumps, elevated towers, pump houses, M&E works, office buildings, supply & laying of transmission mains & distribution mains. About 150,000 people in Ampara area will benefit from this project. The water source is Himadurava Tank. The TCE is US \$ 105 million. Loan Agreement to be signed with Australian Government & GOSL to activate the contract.

### **Badulla, Hali Ela and Ella Integrated Water Supply Project**

The project includes integration of Badulla & Hali Ela WSSs. It includes construction of Earth dam for storage reservoirs, water treatment plants, supply & laying of transmission and distribution mains, construction of quarters and rehabilitation of existing water treatment plants. About 90,000 people in Badulla, Hali Ela, Ella and Demodara areas will be benefitted from this project. Water source is Badulu Oya. Treatment capacity is 9,000 cu.m./day and treatment process is full treatment. TCE is Rs. 5,603 million and funding source is USA. Unsolicited proposal was submitted by an USA company. PSC is evaluating the proposal.

### **Makandura, Pannala & Kuliyaipitiya Integrated Water Supply Project**

Proposed project will be planned to produce 21,000 cu.m./day utilizing Maha Oya as the source. Construction of new intake, WTP (capacity of 2,000 cu.m./day), tower, supply and laying 20 km transmission mains and 60 km distribution lines. About 112,000 people in Makandura, Pannala, Kuliyaipitiya and Udubaddhawa areas will benefit from this project. The TCE is Rs. 1,460 million. Funding is proposed from EXIM Bank - Korea. EXIM Bank concurrence awaiting.

### **Energy Conservation Project at Ambatale WTP (German)**

NWSDDB carried out Energy Conservation Strategies in Ambatale water treatment plant under two Energy Audits. The Energy Audits have revealed that there is a potential for reducing the energy cost by 31% with substantial savings which will work out to Rs. 10 million per month. About 437,000 people in Colombo and Gampaha areas will be benefitted from this project. The project consists of ; carrying out a comprehensive Energy Audits, replacement of major transmission systems from Ambatale to Colombo to conserve energy, rearrange the pipe connections and rearrange and replace pumping units. Pumping arrangements to be efficient to conserve energy. The TCE is Rs. 7,506 million. Proposal submitted by M/s ABB, Germany is under evaluation.

### **Ruhunupura Water Supply Development (Korea)**

This is a new project to serve 112,000 people in 2025. Water source is Ridiyagama tank. Funding source is the Korean Government. TCE for Stage I is Rs. 9,742 million and for Stage II is Rs. 3,760 million. The proposed Ruhunupura Water Supply Project is planned to provide drinking water to Ruhunupura and Mahaweli development areas in Hambantota. The project is proposed to implement in two stages.

Under stage I, construction of 17,500 cu.m./day WTP, supply & laying of DI transmission main and construction of 4 ground reservoirs and elevated towers are proposed. In stage II, construction of 17,500 cu.m./day capacity WTP is proposed.

Tender document is completed. CAPC approval received. Korean EXIM Bank approval obtained. Tender negotiations are in progress. Contract agreement to be signed.

### **Consultancy Services of NRW Engineering Studies, Master Plan Update and Institutional Development**

This project includes updating of Master Plan for Western Province, assessment of the available water sources, estimation of water demands and feasibility study of Kalu Ganga Water Supply Project Phase II, formulation of NRW Engineering Studies and Institutional Development. Proposal submitted by consultant is under evaluation. The TCE is Rs. 270 million and funding is from JICA.

### **Jaffna Peninsula Water Supply & Sanitation (ADB)**

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 Kilinochchi to supplement the Ground Water sources in the Jaffna Peninsula. Implementation to be done in two stages. TCE for Stage I is Rs 12,000 million while it is Rs 8,000 million for Stage II. Demining work has to be completed for the appraisal team of the ADB to visit. The Project Director is to be appointed.

### **Greater Ratnapura Integrated Water Supply Project - Phase I**

The Phase I of the Project will improve the services presently provided to the existing consumers; and also to extend their services to new areas. About 160,000 people in Ratnapura, Kuruwita and suburban areas will be benefitted in 2025 from this project. Main components of this phase are; construction of a new water treatment plant of capacity 13,000 cu.m./day, complete transmission system, part of the distribution and new intake at Kuru Ganga at Kuruwita. The existing treatment plant will continue to serve the present consumers at 6,500 cu.m./day. The TCE is Rs. 1,500 million and Euro 26 million. Tender evaluation was completed. Board and cabinet approval has been obtained. Contract agreement and Loan agreement are to be signed.

### **Point Pedro Water Supply Project**

Point Pedro is a Tsunami affected area and most of the wells were contaminated with saline water and cannot use as drinking water sources. Hence the Point Pedro WSS is proposed to be implemented under IFRC and GOSL funds to serve 22,000 consumers of the Point Pedro area. Water source is well field at Point Pedro. Treatment capacity is 4,500 cu.m./day. Treatment process is chlorination only. The TCE is Rs. 600 million. Design of components of the WSS has been completed. Several tender documents were prepared for tendering and those are in document evaluation stage. Funding arrangement is to be finalized.

### **Kolonna and Balangoda Integrated Water Supply Project**

The project consists; (i) For Kolonna - Construction of 7,700 cu.m./day full water treatment plant, intake, ground reservoirs (1,000 cu.m.) and water tanks (1,500 cu.m.). Supply and laying of 25 km DI transmission main and distribution network and (ii) For Balangoda – Augmentation of the existing WTP by 6,500 cu.m./day, Construction of 2,000 cu.m. ground reservoir and supply and laying of DI transmission mains (2 km) and uPVC distribution lines (72 km). About 55,000 people in Aereporuwa, Kolonna, Maduwanwela and Nandanagama and 62,500 people in Balangoda and Samanala Wewa areas will benefit from this project. The TCE is Rs. 3,700 million. Cabinet approval has been granted and a proposal has been submitted by Belgium for funding.



## **NEW PROJECTS IN PIPELINE**

### **Galigamuwa Water Supply Project**

At present there is no pipe borne Water Supply in Galigamuwa Town. This project includes construction of new intake (5,000 cu.m./day) at Alawwa, Conventional WTP of capacity 5,000 cu.m./day, construction of ground reservoirs (225 cu.m., 1800 cu.m.), pump house, supply & laying of 12 km, DI pumping mains & improve the existing distribution network & installation of pumps. About 31,000 people in Galigamuwa Town area will benefit from this project. The TCE is Rs. 841 million. NPD approval and funding commitment are pending.

### **Alawwa - Polgahawela Integrated Water Supply Project**

The project consists; construction of intake, WTP of capacity 30,000 cu.m./day for phase I and expand it to 60,000 cu.m./day, supply & laying of raw water mains transmission and distribution mains. About 260,000 people in Alawwa, Polgahawela, Weerambagedara, Mallawapitiya, Maspotha, Narammala and Kurunegala areas will benefit from this project. The TCE is Rs. 17,304 million and funding commitment are pending.

### **Ruwanwella Water Supply Project**

The project consists; constructing two intakes of capacities 3,000 cu.m./day and 7,000 cu.m./day, WTP of capacity 19,000 cu.m./day and ground reservoirs having capacities 900 cu.m., 1,500 cu.m. and 2,000 cu.m. Supply and laying of distribution lines. About 110,000 people in Ruwanwella Town and suburbs areas will benefit from this project. The TCE is Rs. 2,445 million. NPD approval and funding commitment are pending.

### **Jaltara - Ranala Water Supply - Phase II**

The project consists; construction of water towers at Padigamuwa and Puwakgaha (with capacity of 1,000 cu.m. each), supply and laying of 20 km transmission mains and 120 km distribution mains. About 85,500 people in Panagoda, Godagama, Meegoda, Pannala, Nawagamuwa and part of Homagama areas will benefit from this project. The TCE is Rs. 1,296 million. NPD approval and funding commitment are pending.

### **Improvement to the Treatment Process (Short-term) of Water Supply Schemes**

The main objective of the project is to improve the quality of water supply. This project will benefit WTPs located all over the island. Several water supply schemes spread in the entire island are adopting water treatment processes only with partial treatment. Due to the deficiencies of the treatment process the acceptable water quality standard can not be maintained in these schemes. The TCE is Rs. 5,226 million. NPD approval and funding commitment are pending.

### **Badalkumbura Alupotha Integrated Water Supply Project**

The project consists; construction of 3,300 cu.m./day capacity WTP; two ground reservoirs, supply and laying of 18 km raw water main, distribution mains and M&E works. About 26,000 people in Pussellawa, Badalkumbura, Madugahapattiya, Maligathera and Kalagahakiwela areas will benefit from this project. The TCE is Rs. 1,440 million. NPD approval and funding commitment are pending.

### **Augmentation of Mahiyangana Water Supply Project**

The project consists; construction of intake, WTP of capacity 650 cu.m./day and clear water tank of capacity 750 cu.m./day, supply and laying of transmission and distribution mains. About 36,000 people in Mahiyanganaya and Ridimaliyadda areas will benefit from this project. The TCE is Rs. 1,784 million. NPD approval and funding commitment are pending.

### **Pathadumbara Integrated Water Supply Project**

The project consists; construction of 3 intakes, new treatment plant of capacity 65,000 cu.m./day, 5 pumping stations, 6 reservoirs and supply and laying of 60 km pumping main and 110 km distribution main. About 723,000 people in Kundasale, Polgolla, Karalliyadda and Ragala will benefit from this project. The TCE is Rs. 8,742 million. NPD approval and funding commitment are pending.

### **Integrated Monaragala - Buttala Water Supply Project**

The project consists; construction of WTP of capacity 4,800 cu.m./day, supply and laying of transmission and distribution networks and installation of pumps. About 26,000 people in Badalkumbura, Buttala, Wellawaya, Monaragala and Madulla will benefit from this project. The TCE is Rs. 1,955 million. NPD approval is available and funding commitment is pending.



### **Ingiriya Handapangoda Integrated Water Supply Project**

The project consists; Supply and laying of 400 mm diameter 15 km long transmission main and construction of 1,500 cu.m. ground reservoir and 2 water towers. About 35,325 people in Ingiriya and Handapangoda areas will benefit from this project. The TCE is Rs. 1,323 million. NPD approval and funding commitment are pending.

### **Dambadeniya Integrated Water Supply Project**

Improvements of Intake (5,000 cu.m./day) and supply and laying of distribution and transmission mains. About 130,000 people in Giriulla, Dambadeniya and Narammala areas will benefit from this project. The TCE is Rs. 4,676 million. NPD approval and funding commitment are pending.

### **Kalutara Water Supply Augmentation - Stage III**

Supply and laying of 400 mm diameter 7 km long DI pipes, 600 mm diameter Heavy Duty Poly Ethylene pipes and construction of towers and ground reservoirs. About 400,000 people in Kalutara, Dharga Town, Beruwala and Wadduwa areas will benefit from this project. The TCE is Rs. 1,367 million. NPD approval and funding commitment are pending.

### **Puttalam/ Anamaduwa Integrated Water Supply Project**

The Project Phase I includes; 30,000 cu.m./day WTP, Ground Reservoir (400 cu.m.), supply and laying of 50 km DI Transmission main and 25 km distribution. Phase II includes construction of 15,000 cu.m./day WTP, elevated reservoirs(750 cu.m. - 4 Nos and 450 cu.m. - 4 Nos). About 240,000 people in Anamaduwa Town and Suburbs will benefit from this project. The TCE is Rs. 5,650 million. NPD approval and funding commitment are pending.

### **Matara Water Supply Project - Stage IV (With Salinity Barrier)**

The Project is planned to construct 17,500 cu.m./day intake and 16,500 cu.m./day WTP, Ground reservoirs (1400 cu.m. and 2300 cu.m.) and pump house and supply and laying of 33 km transmission mains and 200 km distribution improvements. About 72,000 people in Devinuwara, Thihagoda, Dikwella, Beliatta, Aparaka in Matara District will benefit from this project. The TCE is Rs. 6,312 million. NPD approval and funding commitment are pending.

### **Kalutara Water Supply (Stage III) - Bentota**

The project intends to utilize water from Kalu Ganga Phase I - Stage II project. It consists; Construction of 3 water towers (1,000, 450 and 250 cu.m.), 5 ground reservoirs (2,000, 2 of 1,500, 2 of 300 cu.m.) and supplying and laying of 35 km transmission mains and improvement of 184 km distribution system. About 86,000 people in Wadduwa, Waskaduwa, Payagala, Beruwala, Aluthgama, Dodangoda in Kalutara District will benefit from this project. The TCE is Rs. 3,815 million. NPD approval and funding commitment are pending.

### **Mirigama, Kandalama, Kaleliya and Ganegoda Group of Town Water Supply Project**

The project is expected to construct WTP (6,000 cu.m./day) at Ambepussa and 500 cu.m. clear water tank and supply and laying of 60 km distribution main and 11 km DI transmission mains. About 30,000 people in Mirigama, Weliwita, Neligama and Udawela in Gampaha District will benefit from this project. The TCE is Rs. 1,046 million. Board approval, NPD approval and funding commitment are pending.

### **Wandurupeenu Ella Water Supply Project**

The project consists; construction of 41,500 cu.m./day treatment plant and 11 storage reservoirs and supply and laying of 68 km transmission mains and 420 km distribution mains. About 219,000 people in Kurunegala city and suburbs will benefit from this project. The TCE is Rs. 27,627 million. NPD approval and funding commitment are pending.

## **PROJECTS CARRIED OUT THROUGH THE CONSULTANCY STEERING COMMITTEE**

### **Water Supply for Internally Displaced Persons in Puttalam District**

There are about 75,000 internally displaced persons (IDPs) who have fled Mannar area during the period from 1990 to 1991 due to the prevailing situation. They have settled in Puttalam, Wanathawilluwa, Mundalama and Kalpitiya DS areas in Puttalam District. Most of the IDPs have been living in temporarily houses about two decades. They lack of basic facilities like housing, water sanitation, roads and electricity etc. Ministry of Rehabilitation and Disaster Relief (MRDR) in 2007, commenced a project with the financial assistance from World Bank to provide them with basic facilities. While provision of grants for construction of houses was the main objective of the project, it also included provision of water, sanitation and roads for them. NWSDB was contracted by MRDR as the consultant for water supply and sanitation. This task was assigned to a group of Engineers in the Board through the Consultancy Steering Committee.

Under the proposed assignment water supply to about 50% IDPs and host community will be provided through about 10 small scale rural WSSs. At present design works are almost completed. Construction of about 4 WSS are in progress. Project is to be completed by mid of 2011. The total cost of the water supply and sanitation component is about Rs. 450 million. The consultancy fee received by the Board is about Rs. 35 million.

### **Mirijjawila Industrial Park Water Supply**

As a part of its development policy, the GOSL had set up an industrial zone at Mirijjawila area in Hambantota District through Board of Investment (BOI) of Sri Lanka. Presently, five industries have already been constructed and are in operation in Mirijjawila Industrial Park (MIP). NWSDB initiated the study on the request made by the BOI of Sri Lanka to design water supply facilities to the MIP.

The design of water tower, pump house and ground sump has already finished and these are under construction stage at present. The scope of this work covers the feasibility study, final design, preparation of drawings and tender documents for distribution network and supply and installation of water pumps for this water supply system. It is also required to lay 160 mm diameter 800m long uPVC distribution main from Sooriyawewa road up to the proposed MIP ground sump and proposed to supply & lay internal distribution system and supply & install two water pumps.

The TCE of the project is Rs. 13 million. The project is funded by the BOI of Sri Lanka. O&M of the system within the BOI premises could be carried out by them.

### **Water Supply for proposed Safari Garden at Ridiyagama, Hambantota**

The above mentioned Safari Garden is 500 acres in extent and it needs both drinking water and water for filling and maintaining the animal ponds to be constructed there. Water demand is calculated as 500 cu.m./day (200 cu.m. for drinking and 300 cu.m. for animal ponds).

After carrying out feasibility work, following two options were identified to supply required water.

- Provision of water from existing WTP at Ridiyagama with necessary augmentation (source improvement, increasing plant capacity and pumping capacity, laying of raw and treated water transmission line).
- Construction of new WTP at Safari garden and construction of river intake at Liyangastota (at Walawe River)

By considering the capital cost, O&M cost & reliability of water source, the option 2 has been recommended. Thereafter, this was discussed at the Consultancy Steering Committee and then decided to investigate for ground water instead of water from river intake. Accordingly, ground water investigations were carried out and it was found that the 2 nos shallow wells (one stand by) dug at the river bank were adequate to provide the water requirement by means of quality and quantity.

Source investigation, testing and well construction was about 40% completed. Detailed design work of transmission line, preparation of drawings and contract document was about 10% completed at the end of 2009.

### **WSS at C. V. Gunaratne Seethawaka International Industrial Park**

The scope of work includes construction of weir across Kelani River to raise the water at the intake channel, upgrading of pumping capacities at the intake and high lift pump houses and upgrading of treatment processes with new civil and M&E works. The TCE was Rs. 160 million in 2001. All relevant civil and M&E designs except weir were submitted to the BOI in 2002. BOI did not submit comments on these, but suspended the project on financial grounds. In 2009, they made a request to carry out the designs of the weir. Weir design is in progress and will be completed once the geological survey of the river bottom is submitted by the BOI to the NWSDB.

# Sewerage

*“A comprehensive proposal for cost recovery aimed at self sustainability of sewerage operation was prepared up to the year 2016”*

## General

### Sewerage Section

Several important achievements towards the developments of sewerage and sanitation sector in the country were accomplished during 2009. Listed below are these important achievements.

- A comprehensive proposal for cost recovery aimed at self sustainability of sewerage operations was prepared up to the year 2016. It is expected that approximately 70% of O&M expenditure of sewerage activities can be recovered by 2016 through gradually increased tariff and by serving more and more customers under this proposal.
- An O&M manual for use by the staff of sewerage schemes and references by any other relevant parties was prepared and distributed.
- A proposal for setting up of a sewerage authority was finalized and circulated.
- A feasibility study was completed with the assistance of the World Bank to provide subsidies to people to obtain sewer connections in the areas covered by the NWSDB sewerage schemes. This is called Output Based Aid Project (OBA) and it is expected to serve around 15,000 new households under this proposal. It will be implemented during 2010 - 2013.
- Board approval was obtained to provide sewer connections at reduced fees with a view of expanding pipe borne sewerage facilities to a wider population.
- An exercise was commenced with the assistance of UNICEF for the assessment of current sanitation coverage in Sri Lanka. This assessment was commenced in the later part of the year and expected to be completed in the early 2010. Reliable data on actual Sanitation Coverage in Sri Lanka will be available through this study.

### P&D Sewerage Section

Planning & designing, tendering, construction supervision and reviewing designs of sewerage projects of various magnitudes and providing technical assistance to establish temporary septage treatment facility for IDP camps were mainly carried out. Details of which are given in subsequent paragraphs.

Other important activities carried out during the year were;

- Updated Sanitation Development Plan for the horizon 2008 - 2015.
- Prepared Rate Book for sewerage works for 2010.
- Provided specialist assistance in preparation of O&M Manual for sewerage works and PHI Manual
- Developed new type drawing for on-site sanitation work.

### **Rechargeable Jobs**

Engaged in 11 rechargeable jobs of various scopes depending on the technical assistance expected by the clients. Havelock City sewerage disposal system, Treatment of wastewater and disposal facilities to Sri Jayawardanapura University, new sewer network facilities for Meteorology Department, Technical assistance to Seethawaka Industrial Village sewage system, improvements of wastewater treatment and disposal facilities in Jaffna Female Hostel, National Institute of Education - Maharagama, National Health Institute - Kalutara, wastewater project for Air Force Camp - Ratmalana, wastewater disposal system for Navinna Ayurvedic Hospital, sewerage disposal system for University of Peradeniya, Cancer Hospital - Maharagama, construction of septage treatment plant at Vavuniya for IDP camps, wastewater treatment facilities to Ratmalana Tsunami housing scheme & Night Soil (septage) treatment plant in Hambantota. The total value of the rechargeable works that have been handled in 2009 was approximately Rs. 91 million. Completed 4 rechargeable jobs during 2009 and achieved more than 75% of progress of other jobs. The balance works of the above rechargeable jobs will be carried forward to year 2010. The income from rechargeable jobs was Rs. 1.87 million for the consultancy provided during the year.

### **Assistance for Foreign Funded Projects**

Involved in reviewing detailed designs and provided specialist assistance for 4 foreign funded projects; namely Wastewater disposal project for Ratmalana/Moratuwa and Ja Ela/Ekala Phase II, Colombo sewerage rehabilitation project - Southern catchment, Kandy City wastewater disposal project and Greater Kurunegala water supply and wastewater disposal project. Also site visits were done and the available proposals were studied for the proposed Chilaw, Puttalam, Mannar and Vavuniya sewerage projects under ADB 5<sup>th</sup> project.

### **Feasibility Studies and Design Works**

Completed the feasibility studies and forwarded the project concepts to the National Planning Department for Negombo, Galle wastewater treatment systems and Kattankudy sewerage project. These three projects will cost Rs. 3,790, Rs. 2,248 and Rs. 3,194 million respectively and be able to serve a population of about 86,700, 34,600 and 79,000 if implemented.

Augmentation of Kataragama Sacred City wastewater disposal system is being designed and it will cost Rs. 666 million. The project concept has been submitted to the Board for approval.

The wastewater system for Jayawardanapura Kotte was studied during the year 2009 for the purpose of evaluating the successive offers by the project proponent.

Conceptual design for Hambantota Wastewater Project was completed and PAC approval was obtained. Also the UDA consent for acquiring land was obtained. This project will cost Rs. 3,300 million and will be able to serve a population of about 30,000.

### **Plan for 2010**

Under development activities, it is expected to finalize the NPD clearance for Sri Jayawardanapura Kotte sewerage project and Akkaraipattu wastewater treatment project. Also it is expected to obtain Cabinet approval for Galle and Negombo wastewater disposal projects and Hambantota sewerage infrastructure facilities in 2010.

It has been planned to formulate a project proposal to extend the wastewater disposal coverage to the remaining unserved areas in Dehiwala and Mt. Lavinia areas; to commence the detailed designs for Kattankudy wastewater disposal system and Kataragama Sacred City; to review the existing study and update the proposal for sanitation development for Jaffna MC and suburban towns; preparation of pre-feasibility study for Matara sewerage infrastructure facilities during 2010.

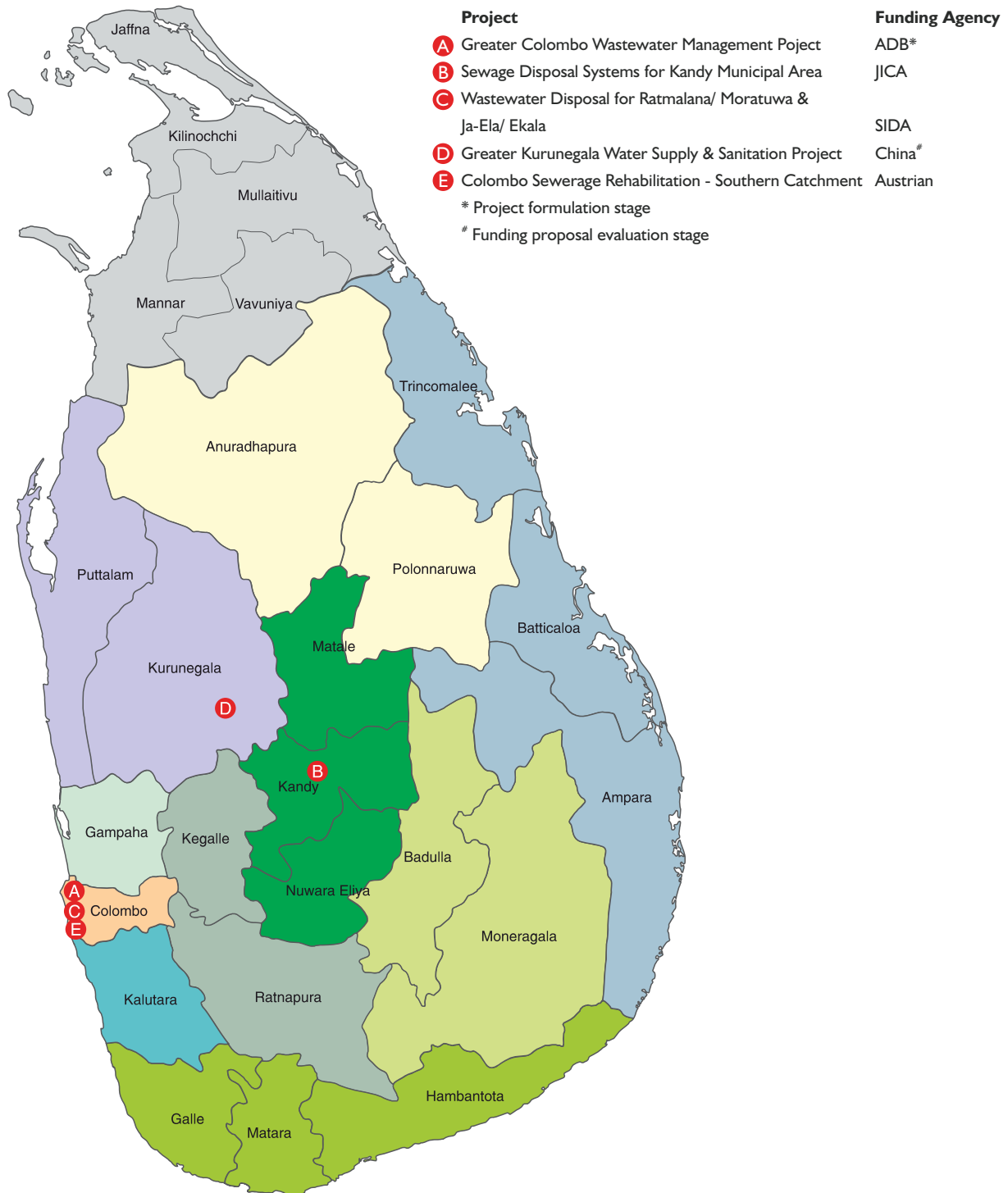
The remaining work of the rechargeable jobs will be completed in 2010.

Under institutional development activities review of the Sewerage Planning & Design Manual, Sewerage Rate Book for 2011, updating the O&M Manual, updating the Sanitation Sector Development Plan will be continued in the year 2010. Stakeholder comments have been obtained to finalize the Draft National Policy on Sanitation. It is expected to finalize the policy in 1<sup>st</sup> half of 2010. The contribution which has been given in 2009 for the 4<sup>th</sup> SACOSAN Workshop to be held in February 2011 will be continued in 2010.



## Major Sewerage Projects

### Location Map of Foreign Funded Projects under Preparation/ Construction/ Augmentation during 2009



## PROJECTS UNDERTAKEN WITH ASIAN DEVELOPMENT BANK ASSISTANCE

### Greater Colombo Wastewater Management Project

The project encompasses the rehabilitation of wastewater pump stations at Kolonnawa, Dehiwala and Mt. Lavinia. It serves 838,000 people in Kolonnawa, Dehiwala and Mt. Lavinia areas. TCE is Rs. 13.3 billion. Project period is from 2010 to 2014. Project preparation work including MOU between CMC and NWSDB for cross boundary flows and inviting proposals for the selection of Design and Construction Supervision Consultant was carried out during the year. Physical work will be started in 2010.

## PROJECTS UNDERTAKEN WITH SWEDISH ASSISTANCE

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

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

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



Pipe laying in Kandawala Mawatha

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.

The study for providing subsidy for House Connection and Off-network Sanitary is in progress and the World Bank appointed Consultant has submitted the Feasibility Report and it was presented to the NWSDB. It was agreed to submit a proposal for Ecological Sanitation Pilot Project funded by SIDA by the same Consultant appointed by the World Bank. The overall physical progress was 34% at the end of 2009.

## PROJECTS UNDERTAKEN WITH JICA ASSISTANCE

### Kandy City Wastewater Management Project

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

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

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

Treatment process is oxidation ditch and TCE is Rs. 15,000 million. Physical progress of the project at end of 2009 is about 16%.

Among important achievements are;

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

## PROJECTS UNDERTAKEN WITH AUSTRIAN ASSISTANCE

### Colombo Sewerage (Southern Catchment) Rehabilitation Project

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

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



Construction of Wellawatte New Pump House

The main scopes covered under this project are rehabilitation of two main sewer lines approximately 8 km in length, leading to Wellawatte pumping station and construction of new pump house at Wellawatte. Status of the project at the end of 2009 were; almost 8 km sewer lines have been rehabilitated along Galle Road, Duplication Road, Havelock Road, Devose 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, 98% of man hole rehabilitation is completed, design works of the Wellawatta pump house was completed and piling works of the Wellawatta new pump house and excavation were completed. Physical and financial progress at the end of 2009 were 63% and 68% respectively.

## PROJECTS TO BE PURSUED IN 2010

### Greater Kurunegala Water Supply & Sanitation Project

The project consists of two packages; one for water supply and the other one for introduction of sewerage. The two packages consist of expansion of water supply capacity from 6,500 cu.m./day to 14,000 cu.m./day to serve a population of 62,000 within 28 square km area and introduction of sewerage facility to treat 4,500 cu.m./day of wastewater generated by 39,000 beneficiaries within 9 square km of key area of the city to prevent pollution in drinking water sources.

Major components of the package for water supply

- Construction of a gravity weir across Deduru Oya (4 m high and 100 m long)
- Upgrading existing intake (6,500 cu.m./day to 14,000 cu.m./day)
- Supply and laying 500mm dia 9 km long raw water transmission main
- Upgrading existing treatment plant capacity 9,000 cu.m./day to 14,000 cu.m./day
- Expansion of distribution network and two storage reservoirs

Major components of the package for sewerage

- Construction of Gravity Sewer Network (95 km) including 3,500 initial property connections
- Construction of force mains with lifting stations (approximately 5 km)
- Construction of a 4,500 cu.m./day capacity wastewater treatment plant

The project proposal was prepared in 2004 and Denmark Government offered financial support to this proposal in 2005. Tenders were called and it was expected to award the respective contract in 2008. However, at that stage, DANIDA took an abrupt decision and informed that financial support cannot be provided to this project. The revised estimated cost is US\$ 70 million. Funding proposal by China is being evaluated.

In addition, the preparatory activities such as land acquisition, relocation of families and environmental permits etc. are currently in progress. Apart from main activities, technical support is being provided by the project to minimize pollution in city area. Small scale wastewater treatment plant and septic tank systems etc have been already constructed in various organizations as per the guidance given by the project.



*Wastewater Treatment Plant in a Service Station*



ಕಲಿಕೆ ಕಲಿಕೆ





## **Drinking water has to meet quality standards until it reaches the customer**

Purified water has to be distributed to customers with adequate pressure. The supplied water quality has to be maintained until it reaches the customer. The picture shows the elevated water tower of 1,500 cu.m. capacity at Mariyawatte, Gampola constructed under the Kandy South Water Supply Project

**Water is precious; use it sparingly**

## Development Works

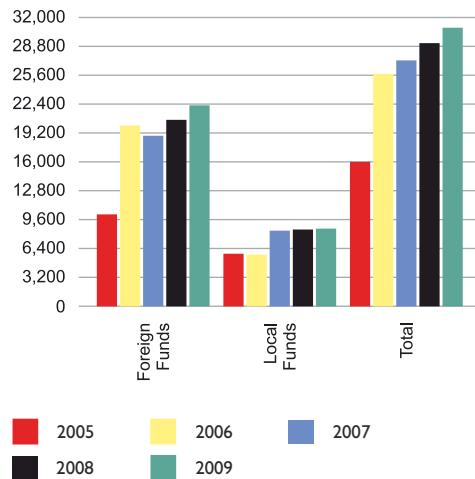
“The NWSDB continued to rehabilitate and improve existing water supply schemes using Rs. 471 million of its own finances in 2009”

### Financial Sources

The NWSDB was provided with Rs. 19,631 million as foreign funds for capital works on water supply and sewerage projects. The GOSL contribution was Rs. 6,485 million as counterpart funds. In addition, Rs. 920 million of local consolidated funds were allocated for small and medium water supply projects. For the reconstruction of tsunami-affected water supply systems, a sum of Rs. 2,632 million in foreign funds and Rs. 1,192 million in local counterpart funds were provided.

### Capital Budget Allocations

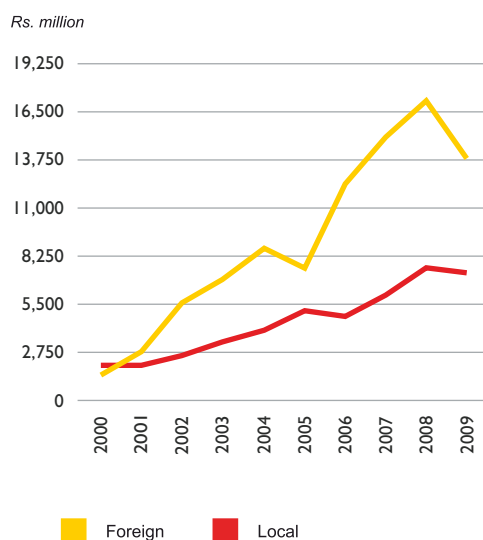
Rs. million



### Utilization Of Capital Funds

Capital fund utilization stood at 69% in 2009, where as it was 87% in 2008. Delays in disbursement of local funds by the Treasury and procurement delays could be some reasons for lesser progress during 2009.

### Capital Fund Utilization

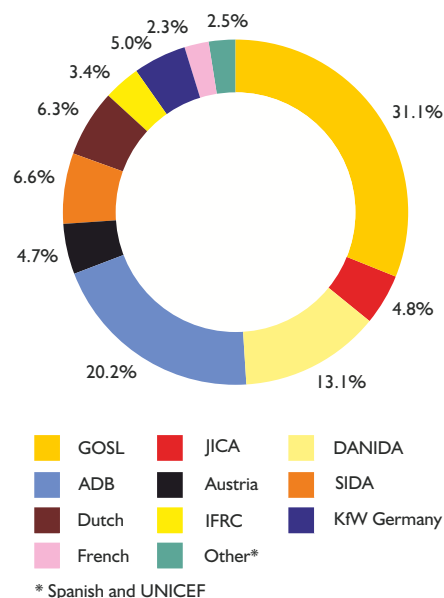


### Comparison of Capital Fund Utilization 2008/ 2009

Description	2008		2009	
Foreign Component (Rs. million)	17,394	84.2%	13,838	62.2%
Foreign Aid Related Domestic Component (Rs. million)	6,421	92.3%	6,348	82.7%
Consolidated Funds for Local Projects (Rs. million)	1,546	100.4%	950	103.3%
<b>Total</b>	<b>25,361</b>	<b>87.0%</b>	<b>21,136</b>	<b>68.5%</b>

Arrangements will be made to set off the money advanced by the NWSDB for locally funded small and medium water supply projects with the debt service payments to the General Treasury.

### 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. 471 million of its own finances in 2009. These funds were used to improve the quality and quantity of water supplies, maintain NWSDB assets and undertake related support services in operational activities. Priority was given to improvements in schemes where donor assistance or major funding was not available.

## RURAL WATER SUPPLY AND SANITATION

Main activities carried out for development of rural water supply and sanitation are described here briefly.

A large scale community participatory rural water supply project being implemented was secondary towns and rural community based water supply and sanitation project (more details in page 27).

Rural water supply project proposals: obtained PAC approval for rural water supply projects proposals for Polonnaruwa, Matale and Kurunegala Districts. Proposals for Uva Province have been prepared and PAC approval to be obtained. Proposals for Uthuru Wasanthaya program has been sent to the Ministry of Resettlement and Disaster Relief Services to cover Vavuniya, Mullative, Mannar and Jaffna Districts.

### Establishment of Rural Water Supply Units

Polonnaruwa, Ampara, Vavuniya and Badulla District Rural Water Supply and Sanitation (DRWSS) were identified in this year to establish units. Funds were obtained from UNICEF to held four seminars among stakeholders to publicize the nature of services available from the DRWSS units in those Districts. Continued necessary back up support for communities who runs their own water supply schemes through already established 12 units in 2008. All guidelines and training modules for rural water supply and sanitation were distributed among DRWSS units and they were published in NWSDB web site too. Resources for RWS units have been identified to provide though UNICEF funds under the capacity building program.

Proposed mechanism for assets transferring system for rural water supply schemes was prepared for Board of Director's approval. Board paper has been prepared to revise the present CBO bulk rate and it was already sent to Board approval. Water quality surveillance program for rural water supply schemes was initiated in August 2009 by the Board though District RWS units with the support of Ministry of Healthcare and Nutrition. Public Health Inspectors (PHIs) collect water samples and delivered to respective laboratories of NWSDB at the District level. Cost for water samples testing were born by O&M budget of the NWSDB.

## GROUNDWATER

During the year under review, the work related to ground water activities were, hydro-geological and geophysical investigations for hand pump and productive tube wells, drilling of deep and shallow tube wells, installation of new hand pumps, pumping tests for productive tube wells, flow measurements, water jetting activities and dug well cleaning in Northern area. Progress was completion of 461 hydro-geological investigations, 651 tube wells (deep and shallow), 84 pumping tests, 564 hand pump repairs and rehabilitations, 186 hand pump installations, 119 well cleaning activities, 9 wells developments, 8 water jetting activities, 4 flow measurements and 573 dug well cleaning activities.

Out of 622 deep wells drilled for providing water supplies for dry zone rural communities during the year, 492 were successful resulting in a success rate of 79%.

## RESEARCH AND DEVELOPMENT

The R&D Section conducted the following activities in the year under review.

- Developed a sand sieving machine - An electrically driven sand sieving machine was developed to get the required grading of sand by changing the sieve sizes. The constant sieving action of the machine produces better quality sand than manual sieving.
- Awareness on Algae problem - A training programme was organized for the chemists on 'Nuisance algae in water supply projects in Sri Lanka' in collaboration with Department of Zoology, University of Sri Jayawardanapura. This training which focused on enhancing the knowledge in identification and enumeration of Algae in different water sources is very appropriate in solving the emerging algae related problems in the dry zone. Two identification studies 'Algae removal efficiency of Microstrainer at Polonnaruwa' and 'Algae identification study at Labugama and Kalatuwawa storage tanks' were completed



*Microstrainer in action - Polonnaruwa*



- Removal of Hardness & Alkalinity of Water Treatment Plant Puttalam - Several problems were identified in the treatment process of the Puttalam water supply scheme. One filter, out of two cannot be operated due to hardening of green sand which was used for filter media originally, the problem was identified as deposition of Calcium Carbonate in the filters due to excess alkalinity present in raw water. High Iron and manganese concentration in the ranges 1.5 to 0.8 mg/l respectively in raw water is also a problem.

A model plant has been designed to carry out the softening process. Calcium Hydroxide is used as the softening agent to remove hardness by sedimentation step with subsequent Hydrochloric acid addition to adjust the pH in clarified water. Due to the high pH required for the softening process, the iron and manganese get oxidized and removed during the subsequent rapid sand filtration step. This softening and pH correction processes are being experimented in a pilot plant at site.



Pilot Aeration

- Study on Gravel Flocculation - The present two types of flocculators (Baffle & Mechanical) need space and hence are expensive. In order to develop low cost option, gravel flocculators are being tried especially in developing countries for small plants. As this is relatively a different approach, an experimental setup based on filter columns received under JICA assistance is implemented to confirm the outcome. The experiment is being conducted by changing the size of the gravel & the raw water flow rate to optimize the output variables.
- Study on Pebble matrix filter at Kataragama - The infrastructure has been completed under the World Bank funds. The objective was to achieve 80 to 90 percent removal of turbidity without chemical use by using Pebble Matrix Filter concept. The filters could not provide expected result due to some cracks identified at the filter nozzle deck and the pebbles not being of same expected size of 50 mm. Considering the difficulty in finding the pebbles and specially pebbles of same size for this work it is proposed to do further model testing with artificial filter media, namely burnt clay balls.
- Study on Konduwatuwana WTP - As Konduwatuwana Tank water treatment system had developed some treatment problems creating unacceptable treated water quality in sporadic manner, a research study was initiated to evaluate the performance of all the unit treatment processes against the design parameters. Efficiency and necessity of pretreatment steps, oxidation and adsorption on coagulator & flocculation process and subsequent filtration step are studied in detail. The final outcome would be to propose how to improve the present treatment process. The study comprised of identification of the impact of pre treatment process on the Dissolved Air Floation (DAF) unit process with respect to manganese, algae and related organic removal. Identification of algae, their enumeration and assessing the toxin levels developed due to blue green algae within the treatment process were also covered in this study.
- Study on WTPs having source as Irrigation Tanks - A trend of increased counts of algae and high concentrations of Manganese are noted in irrigation tanks of Sri Lanka. This is a threat to safety and acceptability of tanks as source of safe water for drinking. As some of the already designed unit operation systems of treatment facilities of Ampara water supply scheme are having problems, a research project was initiated to study these treatment process problems and to recommend improvements to the unit operation modules to be implemented in future treatment plant designs for similar raw waters. This study focuses on the effect of pretreatment techniques, such as oxidation and adsorption, on the efficiency of coagulation flocculation process. Chlorination and powdered activated carbon are the selected oxidant and adsorbent in this study. Fate of manganese and algal toxins in the treatment system are specially considered in this study, for which four sessions of sampling have been completed.
- Contamination of Pesticide Residues and Toxic Metals - Emerging spread of diseases such as chronic renal failure in the North Central Province and the suspected reservoir pollution due to agricultural activity created the need for this kind of research study to establish the safety of such water for drinking even after the conventional treatment. A pilot research study was proposed and commenced for the Nuwarawewa, collecting first sampling. This study has been focused to analyze the trace toxic metals and persistent organic pollutants such as pesticides in waters of irrigation reservoirs in North Central Province in Sri Lanka.

- Pollution study at Bomura-Ella Reservoir at Nuwara Eliya - The study identified the pollution source of Bomuruella Reservoir which feeds Uma Oya. This water is used for drinking by several villages Ambagasduwa, Lunuwatta, Welimada, Uva Paranagama and Keppetipola downstream. Identified pollution sources are leachate from Moonplains landfill, vegetable washing, waste water discharges etc. It is concluded that a high organic pollution level prevails in the reservoir and at present the natural decay within the oya is reducing it to the Sri Lanka drinking water standard value at Ambagasduwa intake. There is no serious pollution due to heavy metals detected in the reservoir. Finally it is recommended to implement catchment preservation program to mitigate pollution of this valuable surface water source especially caused by human activities. Final Report is being prepared.



Bomuru Ella Reservoir - Nuwara Eliya

- Rainwater Monitoring Programme - Study was done to assess the quality of rain water for drinking and the results revealed that all water parameters are upto the Sri Lanka drinking quality standards with pH in the range 6.5 to 6.8. The main drawback is high coli form levels which could be removed at domestic level by boiling, chlorination or bio sand filtration.

## INFORMATION TECHNOLOGY

The IT Division is responsible for implementation of IT related functions including organizing, monitoring and supervision of IT related activities.

During 2009, it was mainly involved in the Enterprise-wide IT Solution Project. The solution was developed by M/s Co-options Technologies, India. The IT Division facilitated the contractors to implement the solution at the pilot area. The IT Division had to supervise the contractor's activities and ensure the satisfactory completion of the project works. Since the success of the project depends on the Cooperation of various user departments and subject matter experts, the coordination among these staff and the Contractors was a major task handled by the IT Division.

The solution consists of 11 major modules covering important business functions of the NWSDB.

The IT Division successfully completed the project works and the solution was taken over from the Contractors. The IT Division has initiated actions and it was strengthened and well equipped to implement the solution island-wide and maintain the solution using the in-house staff/ resources. Rs. 20 million worth equipments were procured for improving the IT infrastructures.

Under the IT project, the Hand Held Devices were introduced to the Meter Readers in Kotte area. The application for the device was developed with the software modules of the IT Solution. The devices were officially launched in Kotte area with the participation of the Hon. Minister for Water Supply and Drainage and several other distinguished guests.

In addition, to the major works handled during 2009 improvements to existing IT infrastructure facilities and other routine functions were also carried out.

The online payment system was in operation and NWSDB customers continued to pay their water bills using Credit Cards through HSBC.

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

The Call Centre was in operation and certain enhancements were done to the system. SMS technology was incorporated to Call Centre facility. When the complaint is lodged at the Call Centre regarding pipe leaks or service breakdowns, a SMS is send to the relevant Area Engineer/ District Engineer.

The Virtual Private Network (VPN) connecting the Island-wide office network was expanded during 2009. The VPN now covers most of the Island-wide office, except a few including Jaffna and Vavuniya. Email system of the NWSDB was in operation during 2009. 300 email accounts available at present for the NWSDB staff.

### *Future Focuses:*

The development lab has been established at the IT Division and several key staff members have been recruited to lead the in-house team. With these enhancements, IT Division will carry out future developments/ improvements in-house. The preparatory works are now in progress for this purpose.

It has been identified the requirements of hardware for the Island-wide implementation of the IT Solution procurement and installation of this hardware in future is a phased out plan.

After implementing the IT solution Island-wide, it is expected that most of the business functions of the NWSDB will depend on the IT Solution. Infrastructure, reliability of various software/ hardware components and connectivity will be of vital importance to the NWSDB. Considering this, it has been planned to implement a network monitoring solution for the NWSDB. This will facilitate proper monitoring and quick resolution of the faults/ defects in the IT infrastructure.

The training will be a major factor in the success of the implementation and operation of the IT Solution. Therefore, it is planned to carry out training programs for end users and various levels of staff including IT staff.

In addition, it is planned to introduce SMS technology for various operational aspects such as obtaining water meter readings, reservoir water level monitoring, sending customer reminders etc.

## WATER QUALITY

### Progress on Implementation of the Water Quality Surveillance Programme

- A Circular has been issued, indicating the implementation strategies of water quality surveillance
- 15 Water Safety Plans have been prepared in Kandy Region
- Conduct training and awareness programme on water conservation and catchment protection for regional level stakeholders in Kandy and Ratnapura Regions.
- Radio programme on water conservation and catchment protection for school children and public in Kandy Region

### Water Quality Monitoring by the Central and Regional Laboratories

Raw water and purified water samples are tested for basic chemical, physical and microbiological parameters, as appropriate. In special cases, water samples are tested for Total Organic Carbon (TOC), metal/ heavy metal and algae. Results are scheduled on monthly basis for the review of respective provincial DGMs and other sectional heads for any remedial action. Wastewater quality analysis is also done for wastewater treatment plants operated by the NWSDB. The quality of chemicals used for water purification is also tested before accepting the stocks. These tests are carried out on Alum, Lime, Poly Aluminium Chloride (PAC) and Bleaching Powder. Pesticide residue testing in drinking water samples and analysis for dissolved TOC commenced in last year were continued in this year. In order to investigate the

contamination by pesticide residues in drinking water reservoirs, studies were continued in Nuwara Wewa in North Central Province. Established an Algae testing unit with digital microscope received from WHO. Algae analysis was also continued in several reservoirs used as sources. Monitoring of the raw water quality for drinking water sources to prepare Water Quality Indices, commenced in 2009 starting with Kelani River and Kalu Ganga. Preparation of Laboratory manual completed in 2009. Some of modern instruments used for water quality analysis at the Central Laboratory are Gas Chromatography with Mass Detector and Atomic Absorption Spectrometer with Graphite Furnace.



*Atomic Absorption Spectrometer with Graphite Furnace*

## SOCIOLOGICAL ANALYSIS

Main activities carried out by Sociological Unit attached to the Policy & Planning Division are listed below.

- Facilitated sociological research on piped WSS carried out by University of Colombo
- Conducted training programme on social aspect related to PI Manual for Engineers, Sociologists, Chemists and Technical Officers, those who are involved in data collection.
- Consumer consultation communities were formed in Kandy Region by Regional Sociologist in order to Safe Guard the water supply system in terms of quantity and quality.
- Prepared guidelines, for the compensation to fishermen who will be affected due to construction of the proposed sea outfall in Angulana - Rathmalana.
- Public consultation meetings were held in order to aware the fishermen on advantages of wastewater treatment facilities.
- Implementation of three-tier system on hand pump wells in RSCs.
- Conducted several public awareness programmes on water conservation and NRW reduction.
- Carried out a special study on non-payment of bills in Moratuwa area.
- Preparation of planning guidelines for small-scale WSSs.

## CONSTRUCTION SUPERVISION/ MONITORING

Construction Section in the head office monitors the financial progress and physical progress of the decentralized capital projects handled by RSCs. Based on the findings, the Board management was made aware in time, on the physical and financial progress of the GOSL funded projects. Actions necessary for effective and efficient use of the local capital budget was recommended and forwarded to the top management. Furthermore, this Section advised the RSCs whenever they sought - advice on contractual issues for supply/ works contracts.

Apart from monitoring the financial and physical progress of the projects executed by RSCs, this Section continued to carry out the following schemes directly during 2009, as well.

- Water Supply Scheme in CHICO Plant
- Boossa Prison Camp Wastewater Disposal Scheme
- Sewerage Treatment Plant at Kalubowila Teaching Hospital
- Sewerage Treatment Plant at Kaldemulla Tsunami Site Ratmalana
- Maintenance of Sewerage Treatment Plant at Modarawila
- Rehabilitation works in the Telewala Training Centre, Ratmalana

AGM (Construction) or Chief Engineer (Construction) participated in all special Technical Evaluation Committee meetings convened by all the Addl. GMs during the year. AGM (Construction) served in a special committee appointed by the General Manager to resolve contractual issues pertaining to some of the contracts during 2009. Also, continued with the preparation of a contract administration manual for usage of Contract Administration and Project Management.

## PERFORMANCE OF PROVINCIAL OFFICES

Development works in water supply and sanitation sector carried out in the Provinces have been included in appropriate sections depending on the sector, funding source and status of work. New projects are originated from the Provincial Offices. As representatives of the Project Review Committee, the Provincial Staff closely coordinate the planning and regulatory procedures of new projects. Some main activities/ projects which are not included in aforementioned sections are summarized below.

### Western - Central

There were four rechargeable projects under the purview of Western - Central. WSP for Torrington Playground with TCE of Rs. 7 million was completed. Water supply to Sri Lanka Army at Manning Town Housing Scheme with TCE of Rs. 15 million was having 20% physical progress and awaiting balance funds from the Army. Online Booster Pump House Nawala (Rs. 24 million) and water supply to Havelock City housing scheme ( Rs. 7 million) were the other two.

### Western - South

There were 13 rechargeable projects under the purview of Western South. The designs, drawings and bid documentation were completed for office buildings at Matugama, Pilaminawatte, RSC (Western - South) office and Area Engineer/ OIC office at Moratuwa. The 5S concept was initiated in the RSC (Western - South) office. Seminars were conducted for changes in attitudes of the staff. Awareness programmes were conducted for School children in Panadura - Horana and Kalutara Regions on the "importance of conservation of water".

### Western - North

There was one rechargeable sewerage project under the purview of Western - North. Replacement of old Asbestos Cement pipes was conducted in Kelaniya area for a stretch of 3 km. Pumps were purchased for Minuwangoda and Meerigama. Training programmes were conducted on preventive maintenance for Engineers, OICs and Engineering Assistants (Civil/ Mechanical/ Electrical). PAC approval was obtained for the rehabilitation of transmission main from Church Hill to Towns North of Colombo area. Pre-feasibility of Katana and design of 1,000 cu.m. sumps were in progress.

### Southern Province

The Southern RSC has carried out 6 feasibility studies and prepared proposals, out of which 5 have been approved by PAC. Two of them, Bentota and Angunakolapalassa have been forwarded to the Treasury. Construction of 6 GOSL funded WSPs were under the direct supervision of the RSC.

Transmission main from Ambalantota to Hambantota in Hambantota WSS along the main road was necessary to be diverted due to the construction of Hambantota new Harbor. This was completed in November 2009 and necessary funds (Rs. 73 million) was provided by the Ports Authority. A new water supply scheme was designed and constructed by RSC for the proposed Botanical Garden in Hambantota. Funds for this scheme (Rs. 65 million) were provided by Departments of Botanical Gardens in Sri Lanka.



Two sociological surveys were carried out in Galle and Tangalle WSS in order to find reasons for “less interest for obtaining service connections”. Sociologists attached to the RSC further carried out Socio Economic surveys for planning of new WSS for Deniyaya, Urubokka, Katuwana and Angunakolapalassa. They also engaged in awareness programmes for consumers who use public stand posts. Matara Manager's office and Malimbada WTP received special skill certificates under National Productivity Awards.

#### **Eastern Province**

A feasibility study was carried out for Wenela. Other works that have been identified and in progress were Veloor, Wendrasanpura, Sumethankapura, Wedrasanpura, Thampalagamuwa and Agbopura. P&D works of most of the above projects have been completed. Certain works were held up due to non-availability of funding. The RSC office was shifted to Batticaloa. The Staff was reshuffled and there are vacancies in the cadre which are yet to be filled.

#### **Sabaragamuwa Province**

Kiriella project was under pre-feasibility stage which was intended to provide water to 8,000 beneficiaries through a 1,800 cu.m./day WTP, with full treatment. The TCE is Rs. 263 million. Similarly WSP for Kolonna for 40,000 beneficiaries, Ruwanwella for 110,000, Balangoda for 39,000, Madole for 4,700 and University of Sabaragamuwa were at planning stage. Funding has to be identified for all these schemes. TCEs are Rs. 1,382 million, 2,445 million, 2,317 million, 81 million and 991 million respectively.

#### **Uva Province**

Board approval was obtained for Badulla - Hali Ela - Ella integrated WSP and Mahiyanganaya WSP and PAC report was in preparation for Bandarawela - Diyatalawa - Haputale integrated WSP. Welimada intake improvement was 8% completed and a boundary fence around Haputale and Diyatalawa intakes was proposed, establishing framework for water source security. Improvements were ongoing in Ambagasduwa WTP while proposed for Girandurukotte and Diyatalawa WTPs. Energy audits were done for Diyatalawa, Bandarawela and Badulla WSSs and electricity tariff of Badulla WSS was transferred to correct and economical category.

#### **Central Province**

There were several WSPs in planning stage for which funding sources were not identified. Kotmale River side WSP intended for 10,000 beneficiaries. TCE is Rs. 400 million. PAC approval was obtained for this project. Secondly, for Pathadumbara WSP intended for 723,000 beneficiaries having TCE of Rs. 8,742 million, Cabinet approval was to be obtained. Thirdly, for Palapathwela WSP intended for 60,250 beneficiaries having TCE of Rs. 3,070 million, PAC approval was to be received. Fourthly, for Pupuressa WSP intended for 85,445 beneficiaries, TCE was yet to be finalized and Pre-feasibility Report was being prepared. Nuwara Eliya Remaining Towns Water Supply and Sanitation Project, Coodogolle WSP and Hataraliyadda WSP.

#### **North Western Province**

Two rechargeable projects were under the purview of the RSC. They were Industrial Zone Puttalam WSP and Udappuwa WSP. Four WSPs were commissioned namely Sandalankawa, Samurdhigama, Karukkapone and Dankotuwa. Last two projects were commissioned partially. 423 small WSSs are operated by CBOs in the Province. An infrastructure development project was implemented during the year. The Alawwa Package Treatment Plant was commissioned. Camps were conducted for supporting Internally Displaced Persons in the Region.

#### **Northern Province**

Four rechargeable projects, two North East Community Restoration and Development Projects (NECORD) and two UNICEF projects were carried out under the purview of Northern RSC. Out of these two NECORD projects and one UNICEF project have been completed. Water supply facilities were provided to about 300,000 Internally Displaced Persons in the area. The water was supplied to them through, bowsers, internally laid pipe lines, tube wells (new or rehabilitated) and shallow wells. New intakes too were constructed. The increased demand in hospitals were met through bowser supplies and shallow wells. Quality of water supplied to IDP camps and the existing schemes was tested and monitored.

#### **North Central Province**

Four rechargeable projects were initiated. Feasibility studies are in progress for Anuradhapura WSP Phase II, Lankapura and Horowpathana feasibility studies for Padaviya, Thambuttegama and Eppawala have been completed. This was initiated due to rapid increasing water demand in the area. Funding source has not been identified. Altogether, five training programmes were conducted including an awareness programme on Avian flue, Salmonella and other water borne diseases.



# Our Employees, Our Strength

“NWSDB’s Manpower Development & Training Division continued to provide training opportunities to employees during 2009, as in the past”

## Staff Strength

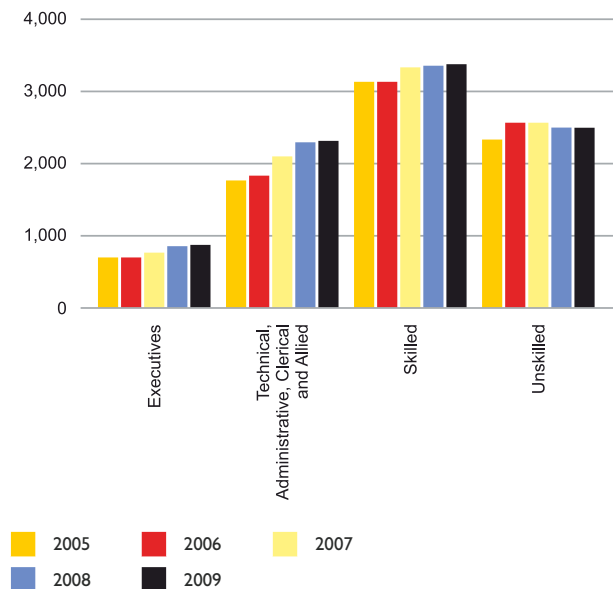
Staff	2008	2009	Variation (%)
(a) Permanent*	8,638	8,569	(0.8)
(b) Casual	198	308	55.6
(c) Contract	147	137	(6.8)
(d) Trainee	23	49	113.0
Total	9,006	9,063	0.6

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

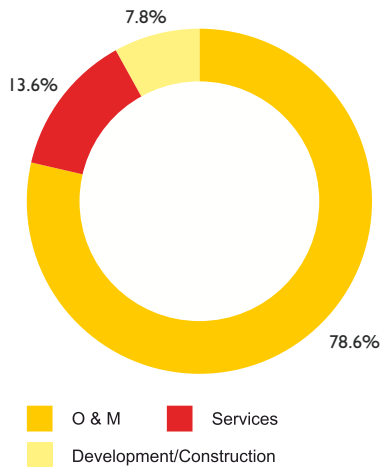
There were 137 contract and 357 casual and trainee employees in addition to a permanent staff of 8,569 at the end of 2009. Most contract employees were recruited for work on foreign funded projects.

There were 413 permanent, 219 casual, 60 contract and 43 trainee recruitments of various staff categories during January to December 2009. In the same period there were 482 permanent, 109 casual, 70 contract and 17 trainee terminations which includes retirements, resignations, vacated posts and deaths in different categories of staff. This resulted in a increase of 57. The 49 trainees are Plant Technician Apprentices, who likely to be made permanent later.

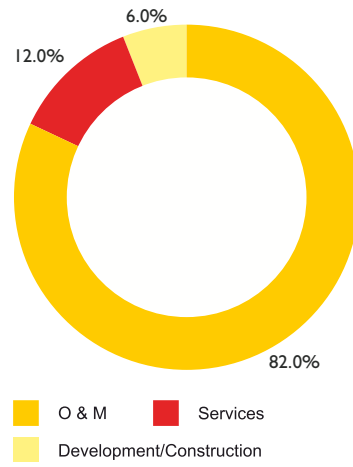
## Distribution by Key Job Function



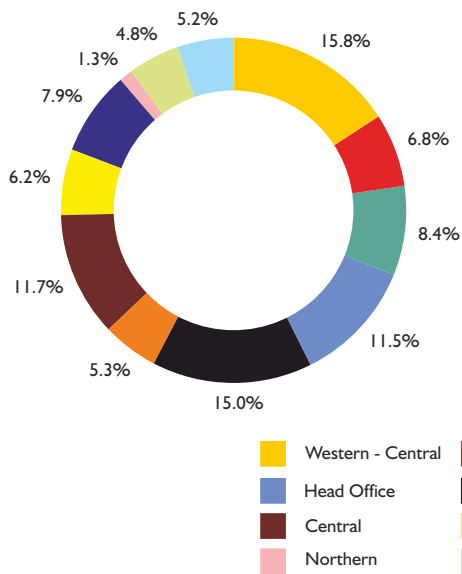
**Staff Distribution by Key Job Functions - 2008**



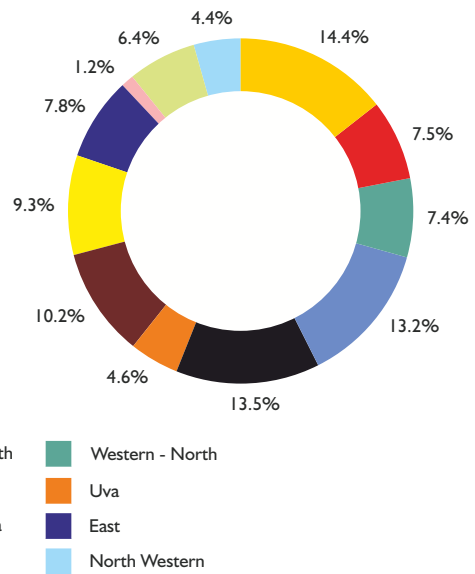
**Staff Distribution by Key Job Functions - 2009**



**Staff Distribution by Location - 2008**



**Staff Distribution by Location - 2009**



## STAFF REMUNERATION AND BENEFITS

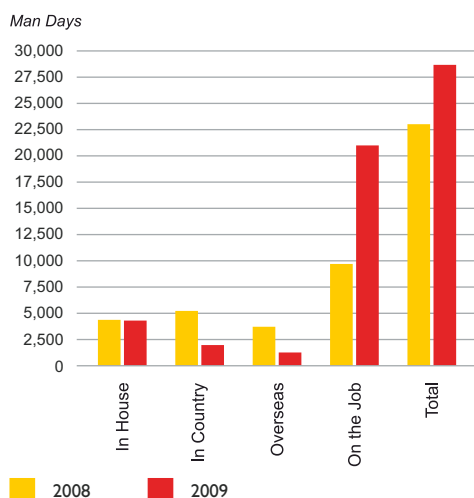
### Comparison of Staff Remuneration in 2008 and 2009

Description	2008 Rs. million	2009 Rs. million
Salaries	4,247	4,347
Contribution to Employees' Provident Fund	374	390
Contribution to Employees' Trust Fund	93	98
<b>Total</b>	<b>4,714</b>	<b>4,835</b>

### Staff Benefits

- An annual bonus of Rs. 23,000 inclusive of a productivity incentive was paid.
- 22% salary increase was given to all employees with effect from 2009.11.01.
- Encashment of unused medical leave was continued.
- 3,148 loans at concessionary interest rate (2,933 ten months loans and 215 twelve months loans) [approximately Rs. 596,712,195] have been disbursed among employees.
- 245 employees were felicitated for their unblemished services exceeding 20 or 25 years, at the world water day ceremony held in the Bandaranayake Memorial International Conference Hall (BMICH) in 2009.
- Approximately Rs. 2,651,808 has been spent for reimbursing medical expenses of employees for indoor and out-door treatment.
- 182 casual/ contract employees have been made permanent in their posts in 2009.
- Home to office transport facilities were made available on selected routes to employees at a concessionary rate.
- Death donation to permanent employees (approximately Rs. 990,000).
- Approximately Rs. 397,535 has been paid as compensation for accidents.
- Local/ foreign training facilities to employees.
- Tea allowance of Rs. 500 for employees instead of tea being provided to them twice a day.

## MANPOWER DEVELOPMENT AND TRAINING



The Manpower Development & Training Division continued to provide training opportunities to the employees of the NWSDB, during 2009, as in the past. Training programmes were conducted during 2009 to cover all categories of staff from managers up to operative staff. Based on the priority training needs identified through the senior and line managers, employees in various categories were provided with training through the following approaches.

### Formal In-house Training Courses, Seminars and Workshops

This division conducted 110 in-house training programmes, during 2009, where 636 Managerial Staff, 133 Supervisors, 390 Clerical and Allied grades, 397 Operatives and 1,132 mixed group employees were included. Some training programmes were held at our Regional Offices. Programmes relating to the following areas were conducted during this period.

- Water quality monitoring
- Water and wastewater treatment
- Construction management
- Tender procedures
- Leadership
- Report writing
- Auditing
- Disciplinary procedures
- Administrative procedures
- Financial rules & regulations
- Material management
- Commercial activities
- Customer relations
- Clerical skills
- Computer applications
- Management skills
- Familiarization programmes for new recruits
- Awareness and refresher programmes

#### *Training at other Training Institutions in the country*

170 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 on project management, contract management and in the mechanical and electrical engineering fields.

#### *Overseas Training/ Official Visits*

Overseas training was provided to 53 employees of the NWSDB with financial support from the ADB and JICA. In addition the Manpower Development and Training Division facilitated official visits for 62 officers in respect of inspection visits, meetings, seminars etc.

#### *On-the Job Training*

On-the Job training was provided to 193 Apprentices - Undergraduates, Special Apprentices, National Diploma in Technology (NDT)/ Higher National Diploma in Engineering (HNDE) trainees, Craft Apprentices, Technical College trainees, Institute of Chartered Accountants, Vocational Training Authority, National Apprentices & Industrial Training Authority (NAITA) trainees.

#### *Special events during the year*

- Training programmes were conducted in-house by obtaining the services of external experts in the areas of administration, management and tender procedures which has reduced the in country external training cost.
- A Seminar on 'Construction Project Management' conducted for contractors' engineering staff.
- A workshop on water and wastewater treatment for the technical staff of the BOI.
- A training programme on analytical techniques in water quality management for the North Western Provincial Council staff.
- Established networking facility within the division
- Developed a database for overseas and in house training of all the NWSDB staff. Processing of the data is in progress
- Successfully implemented 5S concept within the MD&T division utilizing institutional development funds.

#### *New Focus*

- Extend the developed database for external training and on the job training to other forms of training.
- Introduce new activities under the institutional development programme.

## Special Focus

“The Corporate Plan for 2007 - 2011 addresses the issue of UFW reduction under goal 2. Action plans have been drawn up and detailed activity lists were prepared for 2009 along with the costs involved,”

### Reduction of Unaccounted for Water (UFW)

The Corporate Plan for 2007 - 2011 addresses the issue of UFW reduction under goal 2. Action plans have been drawn up and detailed activity lists were prepared for 2009 along with the costs involved. The provincial offices were implementing the activities thus identified as follows;

#### *Action taken to reduce UFW in the Western Province*

A Project Appraisal Report for the implementation of a strategic approach for UFW reduction in the Western Province has been prepared for a period of five years from 2009 to 2013. The Board has approved this project proposal and the total cost of the project is Rs. 2,290 million. Under this project, it is targeted to bring down the UFW to 20% in the Western Province. Every RSC has prepared an implementation programme and started preliminary activities. In this project proposal there are 8 action paths of which description and progress are given below.

#### 1. Review Organization Arrangement of Colombo City Distribution Management and to re-organize:

Rearrangement of Colombo city distribution management was completed to handle reduction of UFW in an effective manner. The management of O&M was changed from central point operation to ownership management zones which were newly established. Under this reorganization Colombo city was divided into eight Officers In Charge under four Area Engineers. Zone officers were given responsibility for around 5,000 connections. They would carry out routine O&M in addition to which preventive maintenance would be implemented. The Zone Officer is responsible for the needs of the zone to ensure the customers are delighted by the trouble free water supply with high quality of service, in accordance to the customer charter. Since the number of customer connections are limited, the distribution area covered is less. This will result in saving on travel time, which was utilized to respond to customer needs. This management change was begun in early part of 2009 with many shortcomings which was due to financial constraints and inability to rent an office space in required areas.

#### 2. Implement pilot projects as many as possible in order to enhance capacity building and create awareness among entire staff:

Pilot areas have been selected in Colombo 6, Battaramulla and Kotte areas. There are many staff involvements in various aspects of NRW. Monthly progress monitoring meetings are held and the experience is shared. Awareness has been created among staff.



In addition to the above pilot studies with the concept of zoning arrangement in Colombo city JICA grant was initiated after lengthy discussions. Under JICA Grant two pilot zones have been selected in Borella and Kotahena where the zone officers improve their capacity in NRW reduction activity. Opportunities are given for other zone officers also to get involved and see how they could bring betterment to their zones. Enthusiasm shown by the zone officers is remarkable.

3. Initiate one or more projects in Colombo City to replace pipes in Colombo City which are beyond economical repairs:

Tender documents have been prepared to replace 120 km of deteriorated pipes, but tenders were called to replace 56 km due to limitations of funds.

4. Review the strength of the NRW Section and take steps to strengthen it to play the role of NRW Management Effectively:

JICA has offered to provide Technical Cooperation for this. There will be an expert for 36 months, who will be working in the field and providing training to the NWSDB staff. Two pilot areas were identified. All Engineering Assistants have been identified for training on a rotational basis.

5. To prepare work program for activities in preventive approach in order of priority:

One of the identified functions of Manager (Development) in Colombo City is carrying out preventive maintenance work. Detailed work program was finalized. It was implemented Action path I above.

6. Review of Specifications:

Specifications of water meters, ferrules, stop taps have been reviewed by a committee.

7. Strengthening of legal section to follow up legal activities in NRW control and speed up court cases:

Legal facility was obtained from the private lawyers

8. Review present incentive schemes for meter readings:

Meter reader incentive was reviewed

*Action taken to reduce UFW in the Southern, Uva, Sabaragamuwa & Eastern Provinces.*

The NWSDB has allocated Rs. 62 million for 2010 to reduce UFW by implementing activities such as replacing low depth pipes, bundle pipes and other related activities in RSCs.

*Action taken to minimize UFW in the Central, North Central, North Western and Northern Provinces*

Rs. 50 million was allocated in 2009 for Northern Central, 15 million each for Central, North Central and North Western and 5 million for Northern to reduce UFW.

*Central Province*

Active leak detection at night (75 nos.), rehabilitation of sectional valves (57 nos.), installation of new valves (06 nos.), replacement of defective meters (8,297 nos.), repair of pipe breakdowns (19,418 nos.), conducting of house to house surveys (10,050 nos.), replacing of bundle/ under depth pipes (19 km), fixing of bulk water meters (07 nos.), carrying out 24 hour flow tests (25 nos.) and step testing (08 nos.).

*Activities planned for 2010:*

Installation of signal systems for reservoir water level indicators (30 locations), fixing and replacing of air valves (120 nos.), survey works for improvements (250 km), replacing defective water meters/ meter sealing/ stop cocks/ ball valves/ unions etc (15,000 nos.), relaying of weak pipelines (30 km) under pilot zoning programme, activities such as new valve installation/ existing valve rehabilitation (30 nos.), installation of zoning valves with valve chambers (06 nos.), supply and fixing of bulk water meters (20 nos.), installation of zoning bulk meters with meter chambers (40 nos.), 24 hour flow measurements and step testing (5 locations per month), continued investigations and rectifications for physical losses have been planned. Surveys for identification and rectification of non-physical losses (continuously) is another programme commenced recently.

*North Central Province*

Replaced 3,481 defective meters, Rectified 4,912 leaks in distribution mains, 3 detected illegal connections and replaced 4,000 m of old pipe lines (all the connections attached to the old pipe lines were transferred to the newly laid pipes).

*North Western Province*

Supply and installation of signal systems to prevent reservoir overflows in three WSSs namely Narammala, Dambadeniya and Giriulla. Replaced 2,760 m bundled pipes and Asbestos Cement pipes and 6 bulk meters, checked zero bill premises in Alawwa, Wariyapola and Polgahawela. Selected Polgahawela scheme for more detailed study under the pilot project for 2010.

#### Northern Province

290 leaks were attended and 89 water meters were installed to stand posts. Tender has been called for old pipe replacement. Improvement of Karaveddy and Kytes WSSs and supply of leak detective equipment are planned for 2010.

#### Energy Management Programme

The Energy Management Programme of the NWSDB is aimed at improving the efficiency of energy usage in WSSs as well as in buildings in order to reduce the operating costs. There is a conservative savings potential of around Rs. 150 million according to studies done by various agencies. This programme was initiated in 2004 and since end 2008 the planning and co-ordination function of the programme has been vested with the M&E Services Division. Energy audits for selected schemes will be carried out in 2010. Based on the results of the energy audits, necessary mitigatory measures will be carried out through the procurement and installation of necessary equipment. Procurement and installation works for the schemes in which energy audits have already been completed in 2009 will also be carried out in 2010.

Energy saving actions have been stipulated in the Energy Business Plan prepared in collaboration with the USAID, for the areas of planning, design, construction, O&M and organizational policy making with a bias towards enhanced energy efficiency. A JICA funded energy conservation programme for all schemes in the island is being processed with the Sustainable Energy Authority and JICA consultants. If the project is approved by JICA, feasibility studies will be carried out in 2010 followed by actual implementation work.

#### Twining Programme between NWSDB - Sri Lanka and Jamshedpur Utilities & Services Company Ltd. (JUSCO) - India

Under this programme the following activities were carried out.

- A pilot NRW reduction programme in Modara area was implemented and is in progress.
- A Twining team comprising twelve delegates from the NWSDB was sent to JUSCO India for training on Energy Conservation and NRW reduction in November 2009 for a period of one week.
- The ADB reviewed the benefits derived from the twinning arrangement in June/ July 2009.

#### Institutional Strengthening ADB TA No. 7078

The TA has been formulated to support the GOSL and the NWSDB efforts to improve water sector utilities' management, especially financial management, and regional operations within the context of recent sector reforms and policies, including operationalization of credible regulation. Four specific outputs to be delivered are;

##### *Regional Benchmarking and Development Planning*

Regional benchmarking will lead to the collection, analysis, and comparison of key provincial performance data (technical, financial, institutional, and customer service). It will serve as an effective management, monitoring, and planning tool to help address localized problems and improve overall performance. Once operating baseline are determined, diagnoses, targets, time-bound action plans, and financial requirements will be determined in the form of a development or business plan for each of the 11 projected RSCs.

##### *Capacity Development for Decentralized Service Delivery*

Activities include, (i) preparation of training needs assessments for each RSC: (ii) development of training programs and manuals in the fields of management of operations, capital investment planning, accounting and financial management, auditing, and non revenue water and (iii) delivery of the training programs across the country.

##### *NWSDB Asset Management and Planning*

Based on information collected from the RSCs, baseline data will be reviewed and analyzed at the national level. Subsequently, through a process of consultation and review of the existing corporate plan and its targets as well as regional development plans, the TA will develop a 5 year asset management plan for NWSDB as an organization. NWSDB's corporate and business plan may be updated based on the outcomes of the consultation and financial constraints identified, if any.

##### *Facilitating Internal Monitoring and Regulation*

To catalyze the implementation of internal monitoring systems as well as technical and economic regulation, the TA will support NWSDB in developing and implementing an agenda, including working plans and schedules. Activities and associated manuals to be prepared including implementation and monitoring systems, reporting mechanism, protocols, and reviews. The activities are expected to lead to NWSDB's first submission for a rate review and the regulator's first review and approval. As part of the program, the following activities are envisaged: (1) short-term placements in established regulatory bodies in the

region, (ii) focus training, and (iii) on-the-job advisory services for the preparation of reporting systems and reviews.

The TA is estimated to cost \$ 1 million equivalent. The cooperation fund for the Water Sector will provide \$ 50,000 equivalent on a grant basis; ADB will administer the grant. ADB will provide \$ 700,000 equivalent on a grant basis from ADB's TA funding program. The Government will contribute the remaining \$ 250,000 including office accommodation and utilities, counterpart staff, background reports, and workshop facilities.

#### **Institutional Capacity Building Technical Assistance (ICBTA - DANIDA)**

The project focuses on building the capacity of NWSDB's RSCs to manage, operate and maintain the infrastructures, in the context of increasing decentralization of functions to the RSCs, as set out in NWSDB's Corporate Plan 2007 - 2011 and the associated action plans. It is based in RSC Central, Kandy and is also working at the NWSDB's Head Office in Ratmalana, Colombo. The work at Head Office is to improve Head Office support to RSCs, especially via improved planning and design of projects and improving the Management Information System. The project started on 1<sup>st</sup> September 2008 and will run until 31<sup>st</sup> October 2011. Under the capacity building of RSC staff the following activities were completed;

- (i) Curriculum Development Training - curricula were prepared for Operators, OICs, Pipe Fitters and Clerks.
- (ii) Training for preparation of Job Description - Job descriptions were drafted for WTP Operators, WTP OICs, Pipe Fitters and Clerks
- (iii) Training provided - 15 training programmes were conducted (one day trainings) were provided for 3,000 participants
- (iv) completed the updating of Procedure Manual (PI).

#### **Water Supply for Internally Displaced Persons (IDPs) in Northern Area**

In May 2009 about 300,000 IDPs flocked to Vavuniya from battle areas within a short period and they were settled in temporary built hut in Manik Farm where any basic facility was not available initially. At the beginning the most important requirement was water and NWSDB was entrusted with the responsibility. Even though it was a big challenge to the North Central Region, with the collective effort of all regions/ sections of the NWSDB, this task was carried out, amidst lot of shortcomings and difficulties.

Activities mainly carried out in this task to face the situation were: 1) Operation of 150 water bowsers to provide water to camps at the beginning, 2) Construction of 260 tube well hand pumps, 3) Installation of 13 prefabricated (package) water treatment plants, 4) Cleaning and disinfection of existing dug wells, 5) Supplying and placing of 1,300 water tanks with capacities of 1,000 and 5,000 liters, 6) Construction of 5 semi permanent intakes in Malwathu Oya and Kallar and installation of Electrical and Mechanical equipment and 7) Construction of internal distribution system of about 42 km in length and laying of pumping main from Malwathu Oya to IDP camps within a very short time.

On this effort now the total requirement for all IDPs, 10,000 cu.m./day has been met and operation and maintenance activities of all the above facilities are handled by NWSDB staff in Vavuniya. Ongoing projects / activities to cater for the increasing water demand with the resettlements / IDPs are: 1) Installation of pretreatment plant in intake 1 and 2 in Malwathu Oya, 2) Construction of water tower (Balance Work) in Pallimunai, 3) Rehabilitation of Killinochchi, Kankasanthurai and Chunnakam water supply schemes, 4) Well cleaning and repairing of tube wells in Killinochchi and Vavuniya districts, 5) Establishing of an OIC office with staff in Thunkai, 6) Construction of a Manager Office at Vavuniya, 7) Construction of Point Pedro water supply scheme, 8) Augmentation of Karavadi water supply scheme and 9) Urban water supply and sanitation project in Mannar and Vavuniya Districts under ADB funds.



*Package WTPs at Manik Farm*

# Report of the Audit and Management Committee

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

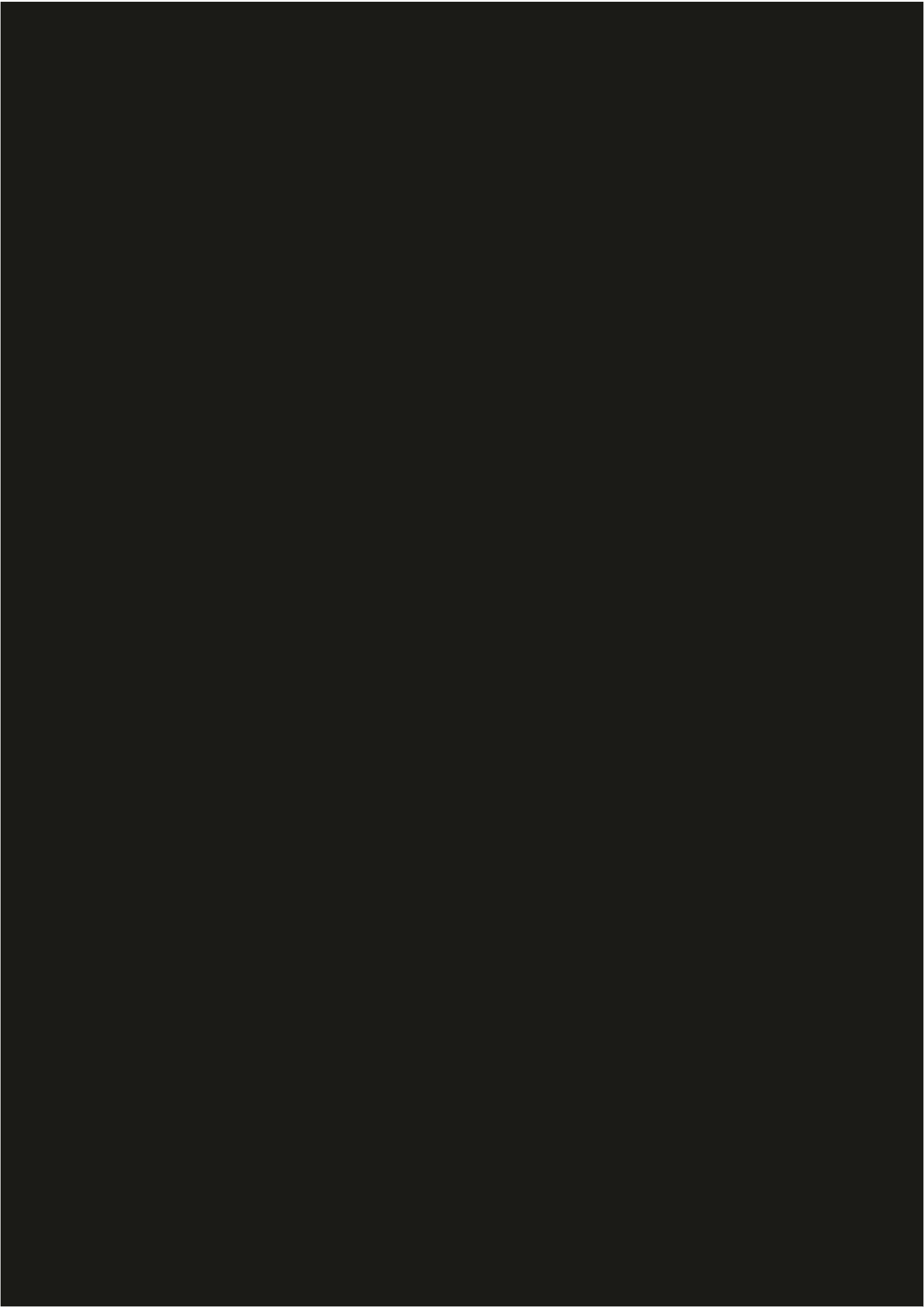
- |   |             |
|---|-------------|
| 1. Mr. D. Vidanagamachchi<br>Board Member                   | - Chairman  |
| 2. Dr. A. Uthumalebbe<br>Vice Chairman                      | - Member    |
| 3. Dr. (Mrs.) Damitha De Zoysa<br>Board Member              | - Member    |
| 4. Dr. P. G. Mahipala<br>Board Member                       | - Member    |
| 5. Mr. K. L. L. Premanath<br>General Manager                | - Member    |
| 6. Mr. H. Ariyasena<br>DGM (Personnel & Administration)     | - Member    |
| 7. Mr. D. Thotawatte<br>DGM (Finance)                       | - Member    |
| 8. Mr. W. A. J. Weerasinghe<br>Actg. Chief Internal Auditor | - Member    |
| 9. Mr. K. K. Chandrasiri<br>Board Secretary                 | - Secretary |

Matters arisen from the Auditor General's report 2006 and 2007 were followed up during this year too. It has been a major function of the Audit and Management Committee to follow up the matters pointed out in the Auditor General's Report 2008 during this year. In particular, the Committee focused its great attention on the following matters.

1. Preparation of register of assets.
2. To take action to carry out more systematically and expedite the work connected to unreconciled control accounts based on the matters pointed out by the Auditor General in regard to such accounts.
3. The Committee drew its special attention to the audit of the water supply projects and instructions were issued on their shortcomings. Great attention was drawn to accounting, preparation of annual accounts and submission of them for audit and necessary instructions were given in this regard.
4. The Committee took action to formulate guidelines to carry out internal audit activities. Services of an external instructor were sought for this purpose.

5. Instructions were given as to how internal administration systems should be improved to avoid shortcomings having followed with up the matters arisen from the audit queries made as per the improved annual audit plan.
6. 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.





# Financial Statements

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75	Statement of Changes in Equity
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77	Notes to the Financial Statement
90	Auditor General's Report for the year ended 31st December 2009

# Income Statement

<i>For the year ended</i>		Revised Budget 2009	Actual 2009	Actual 2008
	Note	Rs.	Rs.	Rs.
Sale of Water	3	10,148,188,000	9,669,975,867	6,743,217,327
Less: Direct Operating Expenses	4	(6,350,575,806)	(6,321,949,712)	(6,088,841,694)
<b>Operating Profit on Sale of Water</b>		<b>3,797,612,194</b>	<b>3,348,026,155</b>	<b>654,375,633</b>
Other Operating Income	5	1,894,673,000	1,397,317,115	1,391,118,020
Administration Overheads	6	(2,071,606,194)	(2,062,268,144)	(1,895,309,365)
Depreciation	7	(1,395,188,000)	(1,409,852,073)	(1,397,510,699)
Other Operating Expenses	7	(327,964,000)	(1,089,308,312)	(468,138,615)
<b>Profit/(Loss) from Operation Activities</b>		<b>1,897,527,000</b>	<b>183,914,742</b>	<b>(1,715,465,025)</b>
Finance Cost	8	(1,229,000,000)	(1,568,941,934)	(1,192,769,345)
Non-Operating Income	9	100,000,000	48,782,302	59,918,167
<b>Profit/(Loss) from Ordinary Activities before Tax</b>		<b>768,527,000</b>	<b>(1,336,244,891)</b>	<b>(2,848,316,204)</b>
Taxation	10	(159,481,000)	(89,009,061)	(66,609,224)
<b>Net Profit/(Loss) for the year</b>		<b>609,046,000</b>	<b>(1,425,253,952)</b>	<b>(2,914,925,428)</b>

The accounting policies and notes on pages 77 to 89 form an integral part of the financial statement.

Colombo  
26th February 2010

# Balance Sheet

As at 31st December		2009	2008
		Rs.	Rs.
<b>ASSETS</b>			
<b>Non-Current Assets</b>			
	Note		
Property, Plant & Equipment, Net - At Cost	A	63,086,406,877	55,197,086,364
Capital Work in Progress	11	72,814,706,861	60,344,145,322
Investments	13	76,886,680	90,861,180
		<b>135,978,000,418</b>	<b>115,632,092,867</b>
<b>Current Assets</b>			
Non-Operating Assets	12	158,650,039	190,886,620
Inventories	14	3,305,965,042	3,081,287,559
Trade & Other Receivables	15	4,300,728,729	5,250,015,335
Deposits and Advances	16	4,765,970,605	5,422,015,734
Investments	17	303,704,405	423,129,076
Cash & Cash Equivalents	18	624,867,296	822,671,654
		<b>13,459,886,117</b>	<b>15,190,005,979</b>
<b>Total Assets</b>		<b>149,437,886,535</b>	<b>130,822,098,845</b>
<b>EQUITY AND LIABILITIES</b>			
<b>Capital and Reserves</b>			
Asset taken over from Government Dept.		185,480,387	185,480,387
Equity Capital		58,445,824,673	54,560,196,683
Capital Grants	19	67,189,901,163	56,142,135,415
Capital Recovery Fund	20	2,150,618,551	1,818,551,821
Staff Welfare Fund		13,116,170	14,696,841
Revaluation Reserve		309,763,136	309,763,136
Accumulated Profit/(Loss)		(9,560,236,671)	(7,804,496,661)
		<b>118,734,467,409</b>	<b>105,226,327,623</b>
<b>Non-Current Liabilities</b>			
Loan Payable	21	20,136,678,223	18,113,326,220
Other Deferred Liabilities	22	3,187,709,705	2,167,292,016
		<b>23,324,387,929</b>	<b>20,280,618,236</b>
<b>Current Liabilities</b>			
Creditors	23	2,173,439,944	1,347,166,755
Loan Capital Payable	24	2,255,632,239	1,410,624,834
Loan Interest Payable		1,895,510,466	1,456,959,311
Non Operating Liabilities	12	115,455,778	115,455,778
Other Payable	25	938,992,770	984,946,308
		<b>7,379,031,197</b>	<b>5,315,152,986</b>
<b>Total Equity and Liabilities</b>		<b>149,437,886,535</b>	<b>130,822,098,845</b>

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

**S. C Amarasinghe**  
Chairman

**K. L. L. Premanath**  
General Manager

**D. Thotawatte**  
DGM (Finance)

25th February 2009

# Cash Flow Statement

As at 31st December		2009	2008
	Note	Rs.	Rs.
<b>Cash Flows from/(used) in Operating Activities</b>			
Net Profit/(Loss) before Tax		(1,336,244,891)	(2,848,316,204)
<b>Adjustments for</b>			
Interest Income		(48,782,302)	(59,918,167)
Profit/Loss on Disposal Assets	7	(12,696,209)	-
Depreciation		1,409,852,073	1,397,510,699
Retiring gratuity provision		1,012,860,343	391,458,675
interest Expense	8	1,568,941,934	1,192,769,345
<b>Operating Profit before Working Capital Changes</b>		<b>2,593,930,949</b>	<b>73,504,349</b>
(Increase)/ Decrease in Inventories		(224,677,483)	(478,836,442)
(Increase)/ Decrease in Debtors, Receivable & Deposits		1,637,695,135	(1,705,425,607)
Increase/ (Decrease) in Creditors & Provisions		907,386,833	1,876,256,182
Cash Generated from Operations		4,914,335,433	(234,501,518)
Tax Paid	10	(89,009,061)	(51,609,224)
Disallowed VAT paid to Inland Revenue		(1,197,517,236)	(2,747,811,438)
Gratuity Paid	22.1	(121,242,157)	(80,977,252)
<b>Net Cash from Operating Activities</b>		<b>3,506,566,978</b>	<b>(3,114,899,432)</b>
<b>Cash Flow from/ (used in) Investing Activities</b>			
Investment in Fixed Assets		(21,768,367,550)	(17,838,136,993)
Sale proceeds for disposal assets		13,489,207	-
Investment Income		48,655,482	59,331,418
(Investment)/ Withdrawal of Investments		133,399,170	451,885,483
<b>Net Cash Flows used in Investing Activities</b>		<b>(21,572,823,691)</b>	<b>(17,326,920,092)</b>
<b>Cash Flows from/ (used in) Financing Activities</b>			
Equity Capital during the Period - Net	3,885,627,990		
- Vat disallowed	1,197,517,236		
- set off against F/ assets	<u>663,936</u>	5,083,809,162	8,994,095,489
Foreign Grant during the period - Net	19 11,047,765,748		
- set off against F/ assets	<u>472,331,634</u>	11,520,097,382	10,072,441,776
New Loans		2,885,522,745	2,651,188,553
Loan Repayments		(17,163,337)	(351,435,854)
Loan Interest Paid		(1,603,813,597)	(585,925,992)
		<b>17,868,452,354</b>	<b>20,780,363,972</b>
<b>Net Increase in Cash &amp; Cash Equivalents</b>		<b>(197,804,358)</b>	<b>338,544,448</b>
Cash & Cash Equivalent at the beginning of the year		822,671,654	484,127,206
<b>Cash &amp; Cash Equivalent at the end of the period</b>		<b>624,867,296</b>	<b>822,671,654</b>

The accounting policies and notes on pages 77 to 89 form an integral part of the financial statement.



# Statement of Changes in Equity

As at 31st December 2009

	Asset from Department Rs.	Capital & Grants Rs.	Capital Recovery Fund Rs.	Revaluation Reserve Rs.	Staff Welfare Fund Rs.	Accumulated Profit/Loss Rs.	Total Rs.
Balance at 31.12.2008	185,480,387	95,358,472,900	1,487,418,856	309,763,136	11,709,173	(4,555,450,599)	92,797,393,852
Grant received during the year	-	15,343,859,199	-	-	-	-	15,343,859,199
Net Profit/(Loss) for the year	-	-	-	-	-	(2,914,925,428)	(2,914,925,428)
Transfers to/(from) during the year	-	-	331,132,966	-	2,987,669	(334,120,635)	-
Balance at 31.12.2009	185,480,387	110,702,332,099	1,818,551,822	309,763,136	14,696,842	(7,804,496,662)	105,226,327,623
Grant received during the year	-	14,933,393,737	-	-	-	-	14,933,393,737
Net Profit/(Loss) for the period	185,480,387	125,635,725,836	1,818,551,822	309,763,136	14,696,842	(7,804,496,662)	120,159,721,360
Transfers to/(from) during the year	-	-	-	-	-	(1,425,253,952)	(1,425,253,952)
Balance at 31.12.2010	185,480,387	125,635,725,836	2,150,618,551	309,763,136	13,116,170	(9,560,236,671)	118,734,467,409

The accounting policies and notes on pages 77 to 89 form an integral part of the financial statement.

Colombo  
25th February 2010

## Segmental Gross Profit - 31<sup>st</sup> December 2009

Sources	Activities	Water Service	Sewerage	Ground Water	Total
<b>GROSS INCOME</b>					
Sale of Water -					
	Metered Sale	9,549,004,592	-	-	
	Bulk Sales	139,875,613	-	-	
	Bowser Supply	37,985,243	-	-	
		9,726,865,448	-	-	
Less: Rebates					
		(56,889,581)	-	-	
		9,669,975,867	-	-	
Other Income					
		388,465,456	96,076,611	27,203,786	
		10,058,441,323	96,076,611	27,203,786	10,181,721,720
<b>Less: Direct Cost</b>					
Personnel Cost -					
	Permanent	2,615,281,012	113,247,073	83,635,555	
	Casual	17,738,665	533,268	50,570	
		2,633,019,677	113,780,341	83,686,124	2,830,486,142
Pumping Cost					
		1,999,545,772	21,082,083	5,177,829	2,025,805,684
Chemical Cost					
		416,629,792	4,443,175	628,601	421,702,108
Repairs & Maintenance					
		461,369,037	11,519,444	12,683,954	485,572,435
Establishment Expenses					
		203,284,958	7,761,123	18,765,668	229,811,749
Rent, Rates, Taxes, etc.					
		306,976,163	17,685,106	3,910,324	328,571,593
		6,020,825,398	176,271,813	124,223,900	
<b>Gross Profit for the year</b>					
		4,037,615,925	(80,195,202)	(97,020,114)	3,859,772,007

# Notes to the Financial Statement

## 1. Corporate Information

### 1.1 General

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

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

### 1.2 Principal Activities and Nature of Operations

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

### 1.3 Number of Employees

The number of permanent and contract employees, as at the end of the year were 9025 (2008 - 8919). The number consists of those who were paid salaries as at 31st December 2009.

## 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 of the Balance Sheet Data (SLAS 12)

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

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

## 2.2 Valuation of Assets and their Measurement Bases

### 2.2.1 Property, Plant & Equipment (SLAS 18)

#### i. Cost

Cost of Properties, 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.

#### 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 expenditures are recognized in the Income Statement as an expense as included.

#### iv. Restoration Costs

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

#### v. Depreciation (SLAS 8)

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

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

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

#### vi. Rehabilitation Costs

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

#### vii. Government Grants (SLAS 24)

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

Amount in VAT receivable A/C should be setoff against the VAT output, but Inland Revenue is not allowed to setoff the same. Therefore, it was setoff against the Government grants. In the year 2009 it is Rs. 798,479,941.

#### 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 a short-term period for the purpose of organizational activities.

#### 2.4 Liabilities and Provisions

##### Liability

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

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

#### 2.4.1 Retirement Benefit Obligations (SLAS 16)

##### a) Defined Benefit Plan - Gratuity

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

#### b) Retirement Benefit Cost

However, under the payment of gratuities Act No. 12 of 1983, the liability to an employee arises only on completion of 5 years of continued service. Gratuity is defined in 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. 394,863,862.34 and ETF - Rs. 98,715,974.43.

#### d) Arbitration

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

#### 2.4.2 Provision

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

#### (a) Provision for Bad Debts

Following percentages are applied for provision of bad debts.

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

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

#### (b) Contingent Liabilities & Commitments

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

Low Case	Court	Value
5584/Cash	District Court - Mt. Lavinia	1,000,000
7599/M	District Court - Galle	100,000
7298/L	District Court - Kegalle	1,000,000
525/2008	Supreme Court	50,000,000
0187/08	LT - Galle	100,000
73, 74, 75, 77, 78, 79, 80, 82, 83, 84, 85	LT - Batticaloa	1,100,000
12/322/96	Appeal Court	3,397,988

#### (c) Irrecoverable Staff Loans

A Provision has been increased to write off irrecoverable staff loans to employees who expire whilst in service by Rs. 3,192,315.

#### 2.5 Trade and Other Payables (SLAS 15)

Trade and other payables are stated at the cost.

#### 2.6 Income Statement

##### 2.6.1 Revenue Recognition (SLAS 29)

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

#### a) Sale of Water (Normal Water Sales)

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

#### b) Other operating Income

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

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



**b) Interest Income**

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

**c) Dividends**

Dividend income is recognized on cash basis.

**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.

	31.12.2009	31.12.2008
	Rs.	Rs.
<b>3. Sale of Water</b>		
Metered Sales	9,549,004,592	6,672,310,189
Bulk Sales	139,875,613	83,856,566
Bowser Supply	37,985,243	39,205,638
Less: Rebates	(56,889,581)	(52,155,065)
	<b>9,669,975,867</b>	<b>6,743,217,327</b>
<b>4. Direct Operating Expenses</b>		
Personnel Cost	2,830,486,142	2,633,355,899
Pumping Cost	2,025,805,684	2,104,778,364
Chemicals	421,702,108	436,027,228
Repairs & Maintenance	485,572,435	454,778,478
Establishment Expenses	229,811,749	213,069,370
Rent, Rates, Taxes, Security & Other Expenses	328,571,593	246,832,355
	<b>6,321,949,712</b>	<b>6,088,841,694</b>
<b>5. Other Operating Income</b>		
Capital Recovery Charges	332,066,729	331,132,966
New Connection Income (Net)	315,880,823	339,952,632
Fees & Other Charges	778,480,783	695,505,165
Revenue Grants	(29,111,219)	24,527,257
	<b>1,397,317,115</b>	<b>1,391,118,020</b>
<b>6. Administration Overheads</b>		
Personnel Cost	1,501,223,118	1,327,153,705
Repairs & Maintenance	88,397,353	68,506,344
Establishment Expenses	293,280,628	269,487,064
Rent, Rates, Taxes, Security & Other Expenses	179,367,044	230,162,252
	<b>2,062,268,144</b>	<b>1,895,309,365</b>
<b>7. Other Operating Expenses</b>		
<b>Depreciation</b>		
Infrastructures	13,771,302	9,631,373
Buildings	126,582,833	123,359,719
Water Supply Scheme Structures	232,520,421	227,044,297
Plant & Machinery - Pumping & Treatment	622,090,749	599,114,962
Service/ Bulk Meters	8,546,779	9,169,568
Plant & Equipments - Distribution & Transmission	531,963,473	502,112,678
Mobile Equipments	7,671,201	7,793,733
Survey Equipments	608,270	608,270
Laboratory & Other Equipments	10,664,376	125,624,778
Furniture Fittings & Office Equipments	138,433,421	44,847,333
Passenger Cars	6,919,412	6,058,128
Van, Buses & Jeeps	8,839,250	9,207,835
Lorries & Trucks	49,886,212	49,733,537

	31.12.2009	31.12.2008
	Rs.	Rs.
Tractors & Trailors	2,511,891	1,798,693
Water Bowsers & Heavy Vehicles	120,642,430	122,451,287
Motor Cycles	998,995	1,018,340
	1,882,651,015	1,839,574,530
Adjustments for prior year depreciation	-	(4,512,326)
Amortization of Leasehold Land	196,628	51,188
<b>Total Depreciation</b>	<b>1,882,847,643</b>	<b>1,835,113,392</b>
Less: Depreciation for Grant Funded Assets	(472,995,570)	(437,602,693)
	1,409,852,073	1,397,510,699
Bad & Doubtful Debts	77,696,461	28,936,599
Provision for Irrecoverable Staff Loans	3,192,315	1,329,201
Provision for Obsolete Stock	(4,440,808)	46,414,139
Retiring Gratuity	1,012,860,343	391,458,675
	2,499,160,384	1,865,649,314
<b>8. Finance Cost</b>		
<b>Loan Description</b>		
IDA 1700	54,202,068	56,386,914
IDA 1041	21,368,740	23,403,858
French - Trinco	2,006,896	2,315,243
French - Negombo I	819,713	945,649
French - Negombo II	1,042,121	1,154,372
Negombo Augmentation	42,980,182	-
French - Kurunegala	1,592,559	1,669,986
French - Badulla	1,891,246	1,993,258
French - Ambatale	27,834,872	29,071,872
ADB 817	70,633,804	73,381,256
ODA	602,239	709,682
ADB 1235	91,921,638	94,227,916
ADB 1575	144,029,095	146,833,832
USAID	577,282	612,157
ODA Matara - Nilambe	39,378,404	40,864,381
OECF SLP 19	31,656,429	32,998,074
OECF SLP 37	102,634,102	105,892,327
OECF SLP 49	248,407,989	255,032,202
OECF SLP 55	466,323,825	454,200,284
OECF SLP 71	82,346,902	82,188,335
OECF SLP 66	8,296,490	8,770,694
Kalmunai	1,394,807	1,457,864
KfW Nawalapitiya/ Ampara/ Koggala	45,766,719	39,778,464
EDCF - Greater Galle Korean I	52,132,690	53,486,786
EDCF - Greater Galle Korean II	35,261,528	31,924,066
ADB 1757	4,955,634	5,072,237
ADB 1993	165,210,846	75,112,478
Nuwara Eliya - DANIDA	79,669,218	24,911,008
Kandy South - DANIDA	34,060,218	58,616,910

	31.12.2009	31.12.2008
	Rs.	Rs.
Greater Trincomalee	5,529,629	2,951,398
Ambalangoda/ Weligama/ Kataragama	14,371,742	14,206,204
Ambatale Remote Loan	11,051,180	11,466,262
Ambatale Refurbishment	9,872,537	10,306,992
Towns North of Colombo	1,763,940	731,514
Greater Colombo Rehabilitation	3,587,861	1,312,493
Kirindi Oya	7,023,184	2,079,886
Greater Kandy Stage II SLP - 90	2,265,918	756,949
Kelani Right Bank	83,430,597	11,835,346
Local Loans	2,844,009	1,169,484
Colombo North	6,589,613	-
French - Anuradhapura	36,768,334	-
	<b>2,044,097,076</b>	<b>1,759,828,631</b>
<b>Less: Capitalized Interest on Construction Projects</b>		
ADB 1575	-	-
OEFC SLP 55	-	(220,654,236)
OEFC SLP 71	-	(82,188,335)
KfW - Nawalapitiya, Ampara & Koggala	-	(39,778,464)
EDFC Greater Galle Korean II	(35,261,528)	(31,924,066)
ADB 1993	(165,210,846)	(75,112,478)
Nuwara Eliya - DANIDA	(79,669,218)	(24,911,008)
Kandy South - DANIDA	(34,060,479)	(58,616,910)
Greater Trincomalee	(5,529,629)	(2,951,398)
Ambalangoda/ Weligama/ Kataragama	(14,371,742)	(14,206,204)
Towns North of Colombo	(1,763,940)	(731,514)
Greater Colombo Rehabilitation	(3,587,861)	(1,312,493)
Kirindi Oya	(7,023,184)	(2,079,886)
Greater Kandy Stage II SLP - 90	(2,265,918)	(756,949)
Kelani Right Bank	(83,430,597)	(11,835,346)
Negombo Augmentation	(42,980,182)	-
	<b>1,568,941,934</b>	<b>1,192,769,345</b>
<b>9. Other Non-Operating Income</b>		
Investment Income	48,782,302	59,918,167
<b>10. Taxation</b>		
Economic Service Charge	89,009,061	60,000,000
Income Tax	-	6,609,224
	<b>89,009,061</b>	<b>66,609,224</b>
<b>11. Capital Work in Progress</b>		
Construction work	51,007,831,186	45,553,766,555
Rehabilitation	21,806,875,674	14,790,378,767
	<b>72,814,706,861</b>	<b>60,344,145,322</b>

9 A Schedule of Fixed Assets as at 31.12.2009

Code	Description	Rate of Dept.	Cost of Fixed Assets as at 01.01.2009	Addition During the Year 2009	Disposals	Cost of Fixed Assets as at 31.12.2009 (E)	Fully Depreciated Items as at 31.12.2009 (F)	Depreciable Assets (G)	Depreciation 01.01.2009 (H)	Depreciation for Disposals/ Adj. for depreciation (I)	Depreciation for the year 2009 (J)	Depreciation as at 31.12.2009 (K)	Amortization for Year 2009 (L)	Fixed Assets Written Down Value 31.12.2009 (E - K - L)
			(A)	(B)	(C)	(A+B+C)	(F)	(E - F)	(H)	(I)	(J)	(H - I + J)	(L)	(E - K - L)
101	Land - Freehold		1,253,417,205	190,436,040	-	1,443,853,344	-	1,443,853,244	-	-	-	-	-	1,443,853,244
102	Land - Leasehold		5,795,756	6,480,000	-	12,275,756	-	12,275,756	-	-	-	-	196,628	12,079,128
105	Infrastructure	2%	483,768,652	451,161,076	-	934,929,728	2,200,000	932,729,728	23,348,706	-	13,771,302	37,120,008	-	897,809,720
106	Building - Freehold	2%	6,167,985,957	512,137,379	-	6,680,123,336	-	6,680,123,336	1,196,043,426	-	126,582,833	1,322,626,259	-	5,357,497,078
108	Structures	1.67%	13,595,466,885	1,241,478,195	-	14,836,945,081	-	14,836,945,081	1,513,312,758	-	232,520,421	1,745,833,179	-	13,091,111,902
111	Plant & Eq. Pmp. Trt.	5%	12,565,483,605	1,889,490,366	-	14,454,973,970	640,800,563	13,814,173,407	4,264,474,016	-	622,090,749	4,886,564,765	-	9,568,409,205
113	Service Meter	10%	31,022,714	-	-	31,022,714	26,317,724	4,704,990	31,017,884	-	(955,564)	30,062,320	-	960,394
114	Bulk Water Meter	10%	86,990,693	19,651,739	-	106,642,432	-	106,642,432	24,906,643	-	9,502,343	34,408,986	-	72,233,446
115	Plant & Eq. Trans. & Dist.	1.67%	30,066,627,436	5,128,324,867	-	35,194,952,303	-	35,194,952,303	3,920,592,230	-	531,963,473	4,452,555,703	-	30,742,396,600
116	Mobile Equipment	10%	139,157,308	7,320,652	-	146,477,960	65,006,687	81,471,273	120,630,051	-	7,671,201	128,301,252	-	18,176,708
117	Survey Equipment	10%	8,289,895	-	-	8,289,895	2,207,196	6,082,699	5,654,363	-	608,270	6,262,633	-	2,027,262
118	Laboratory	10%	114,470,807	50,508,312	-	164,979,119	21,662,206	143,316,913	59,827,955	-	10,664,376	70,492,331	-	94,486,789
119	Other Equipment	10%	1,430,917,950	24,847,684	-	1,455,765,634	506,249,307	949,516,327	901,233,926	-	92,710,600	993,944,526	-	461,821,109
131/132	Furniture & Fittings	10%	542,588,889	55,098,907	-	597,687,796	109,121,050	488,566,746	299,824,068	-	45,722,821	345,546,889	-	252,140,907
141	Motor Vehicles, Cars	14.3%	66,056,416	12,889,859	2,305,000	76,641,275	22,469,886	54,171,388	50,893,076	2,305,000	6,919,412	55,507,488	-	21,133,787
142	Van, Busses & Jeeps	14.3%	152,192,253	7,829,892	360,001	159,662,144	92,471,795	67,190,349	125,567,810	360,001	8,839,250	134,047,059	-	25,615,085
143/144	Lorries & Trucks	10%	716,174,747	126,778,127	5,594,699	837,358,175	241,831,909	595,526,266	412,750,743	5,594,699	49,886,212	457,042,256	-	380,315,919
145	Tractors & Trailers	10%	31,168,422	16,552,800	247,201	47,474,021	12,949,295	34,524,726	17,436,144	247,201	2,511,891	19,700,834	-	27,773,187
146/148	Water Bow, Hwy. Veh.	10%	1,341,599,477	14,364,754	4,419,051	1,351,545,180	128,111,602	1,223,433,578	638,889,721	3,626,054	120,642,430	755,906,098	-	595,639,082
147	Motor Cycles	14.3%	10,266,076	606,971	30,003	10,843,044	3,144,815	7,698,229	5,951,258	30,003	998,995	6,920,250	-	3,922,793
149	Leasehold Vehicles	14.3%	-	17,003,532	-	17,003,532	-	-	-	-	-	-	-	17,003,532
	Total		68,809,441,142	9,772,961,152	12,955,955	78,569,446,339	1,874,544,035	76,677,888,771	13,612,354,777	12,162,957	1,882,651,015	15,482,842,835	196,628	63,086,406,877



	31.12.2009	31.12.2008
	Rs.	Rs.
<b>12. Non-Operating Assets</b>	158,650,039	190,886,620
Non-Operating Liabilities	115,455,778	115,455,778
	<b>43,194,261</b>	<b>75,430,842</b>

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

<b>13. Investments</b>		
HDFC Shares	208,742	208,742
HDFC Investment for Staff Housing Loans	74,139,609	88,292,402
Bank of Ceylon Saving - I	1,655,075	1,541,051
Bank of Ceylon Saving - II	883,254	818,986
	<b>76,886,680</b>	<b>90,861,180</b>
<b>14. Inventories</b>		
Stock at Main Stores	213,247,142	297,923,345
Stock at Site Stores	3,078,020,128	2,828,053,033
Goods in Transit	2,035,788	1,149,233
Stock Adjustment	54,635,314	576,087
	3,347,938,373	3,127,701,698
Provision for Obsolete Stock	(41,973,331)	(46,414,139)
<b>Total Inventories at Cost</b>	<b>3,305,965,042</b>	<b>3,081,287,559</b>
<b>15. Trade &amp; Other Receivables</b>		
Advance to Staff - Traveling	1,865,166	488,207
Advance to Staff - Salaries	764,859	(69,672)
HDFC Receivable	29,770	32,770
Festival Advances	10,943,704	11,064,131
Advance to Meter Readers	11,133	-
Loans to Employee's - Distress	1,196,195,476	-
<b>Less: Irrecoverable Employee's Debts Provision</b>	<b>-</b>	<b>1,056,904,523</b>
Loans to Employee's - Vehicle	18,532,294	20,037,861
Loans to Employee's - Special Advance	122,604	124,004
Loans to Employee's - Tsunami	1,686,480	3,559,525
Casual Salary - Advances	1,799,755	149,500
Special Incentive Advances	27,855,183	25,898,124
VAT Receivable	458,763,913	325,070,906
VAT Receivable from Inland Revenue	-	1,735,615,725
WHT Receivable	40,005	-
Trade Debtors - Water	2,628,712,930	
CMC Debtors	28,519,949	
Sewerage Debtors	97,606,077	
Other Debtors	62,820,334	
	<b>2,817,659,291</b>	
<b>Less: Provision for Bad Debts</b>	<b>(419,828,578)</b>	<b>1,810,870,406</b>

	31.12.2009	31.12.2008
	Rs.	Rs.
Debtors Collection Control	165,495,718	255,405,477
Suspense Debtors	72,992	71,292
Receivable on Interest & Others	8,377,940	8,251,121
Installment Debtors - New Connection	47,012,170	25,020,229
Installment Debtors - N/C (Low Income)	(36,671,146)	(28,478,794)
	<b>4,300,728,729</b>	<b>5,250,015,335</b>
<b>16. Deposits and Advances</b>		
Rechargeable Project Work	395,985,044	462,459,571
Advance to Suppliers	44,757,378	15,173,537
Advance to Contractors	74,490,859	68,382,106
Cash Advances Head Office	1,196,472	1,402,312
Cash Advances Regions	1,784,691	2,831,574
Other Advances	6,450,000	6,450,000
Advance to Contractors (Local Contract)	2,343,305,184	2,251,206,433
Advance to Contractor (Special Projects)	1,650,273,294	2,518,141,681
Pre Payments	1,468,299	235,171
Special Dollar Account	133,722,027	-
Other Short Term Deposits	101,722,027	84,012,970
Employees Security Deposits	2,757,461	3,269,517
Electricity Deposits	8,155,597	8,384,597
Telephone Deposits	66,267	66,267
	<b>4,765,970,605</b>	<b>5,422,015,734</b>
<b>17. Investment</b>		
Treasury Bills	100,000,000	275,000,000
Fixed Deposits	53,286,694	39,355,625
Savings Account with People's Bank - Ratmalana	46,058	36,747,178
Savings Account with Bank of Ceylon - Ratmalana	51,798	49,237
Savings Account with Bank of Ceylon - Dehiwala	12,009,223	2,235,078
Savings Account with Bank of Ceylon - Dehiwala	138,310,633	69,741,958
	<b>303,704,405</b>	<b>423,129,076</b>

	31.12.2009	31.12.2008
	Rs.	Rs.
<b>18. Cash &amp; Cash Equivalents</b>		
Main Current Accounts	174,002,326	488,480,154
New Connection Accounts	43,896,138	46,893,376
Main Collection Account	302,330,046	137,015,689
Internal Cash Transfer Account	5,113,855	20,086,438
Cash Imprest Head Office	156,629	1,793,641
Sub Collection Accounts	16,375,184	23,007,538
Cash Imprests Regions	6,906,777	7,250,986
Cash in Transit	47,973,458	116,182,755
<b>Cash Balance at the End</b>	<b>596,754,413</b>	<b>840,710,577</b>
Adjust:		
New Connection Control Account	3,309,017	(3,444,318)
Water Bill Collection Control Account	24,803,865	(14,594,605)
<b>Cash &amp; Cash Equivalents</b>	<b>624,867,296</b>	<b>822,671,654</b>
<b>19. Capital Grants</b>		
Foreign Grants	66,851,379,463	55,803,638,715
Local Grants	338,521,700	338,496,700
	<b>67,189,901,163</b>	<b>56,142,135,415</b>
<b>20. Capital Recovery Fund</b>		
Balance at beginning of the year	1,818,551,822	1,487,418,856
Amount appropriated during the year	332,066,729	331,132,966
	<b>2,150,618,551</b>	<b>1,818,551,821</b>
<b>21. Loan Payable</b>		
Foreign Loans through Treasury	19,517,083,197	17,493,155,898
Local Loans	124,859,451	125,434,747
Interest Payable	494,735,575	494,735,575
	<b>20,136,678,223</b>	<b>18,113,326,220</b>
<b>22. Other Deferred Liabilities</b>		
Retiring Gratuity Provision	2,333,955,232	1,442,337,046
Customer and Employee Security Deposits	853,754,473	724,954,970
	<b>3,187,709,705</b>	<b>2,167,292,016</b>
<b>22.1 Movement of Retiring Gratuity Provision</b>		
Balance at the beginning of the period	1,442,337,046	1,131,855,622
Add provision for the period	1,012,860,343	391,458,675
	<b>2,455,197,289</b>	<b>1,523,314,298</b>
Less: Gratuity Payments during the period	(121,242,157)	(80,977,252)
	<b>2,333,955,232</b>	<b>1,442,337,046</b>
<b>23. Creditors</b>		
Rechargeable Work Customer Advances	1,072,039,002	916,577,991
440, 444 - Contractors Retention	1,084,803,972	430,588,764
Lease Hold Creditors	27,476,516	
Less: Interest in Suspense	(10,879,546)	-
	<b>2,173,439,944</b>	<b>1,347,166,755</b>

	31.12.2009	31.12.2008
	Rs.	Rs.
<b>24. Loan Capital Payable in 2009</b>		
IDA 1041	163,678,288	118,453,443
French - Trinco	20,556,464	15,417,348
French - Negombo I	5,037,467	3,778,101
French - Negombo II	4,490,036	3,367,527
French - Kurunegala	3,097,060	2,322,795
French - Badulla	4,080,480	3,060,360
French - Ambatale	56,321,059	37,109,988
ADB 817	155,799,463	109,008,591
IDA 1700	114,853,524	78,439,428
OECD - SLP 19	68,359,998	41,527,102
Kalmunai (Australia)	3,152,890	1,891,734
USAID	6,974,972	5,231,229
ADB (1235)	111,653,123	71,384,783
SLP 37	244,366,915	190,063,155
UDA - ADB	132,440,547	66,220,273
OECD - SLP 49	275,974,534	165,605,325
OECD - SLP 66	27,894,400	16,736,640
Greater Galle	67,704,794	40,622,877
ODA Hill Country	6,163,782	6,163,782
ADB 1757	5,830,157	3,498,094
OECD SLP 55	593,015,856	350,017,505
Matara/ Nilambe (ODA)	61,915,731	37,149,439
Ambatale Remote Loan	20,788,431	12,452,454
Ambatale Refurbishment Loan	18,102,275	10,861,365
Colombo North WSP	6,673,026	3,336,513
French - Anuradhapura	33,809,964	16,904,982
KfW Project Ampara	42,897,000	-
	<b>2,255,632,239</b>	<b>1,410,624,834</b>
<b>25. Other Payables</b>		
Creditors Control	139,058,407	117,707,587
VAT Payable	53,365,762	140,304,632
Security Deposit	623,931	503,931
Other Creditors	21,907,747	25,069,310
Refundable Tender Deposit	26,286,492	18,484,871
Salary Payables	100,773,472	495,627,080
With Holding Tax	2,075,584	2,176,702
VAT Payable to Inland Revenue	418,944,559	-
With Holding CIGF	1,080,577	-
With Holding VAT	4,135,047	7,050,238
Accrued Expenses	167,935,386	175,216,154
Provision for Cash Losses	1,075,000	1,075,000
Other Payables	1,730,805	1,730,805
	<b>938,992,770</b>	<b>984,946,308</b>

**26. Capital Commitments**

The committed Capital Expenditure for 2010 is Rs. 28,100 million for which the Government of Sri Lanka has allocated funds in the National Estimate.

**27. Outstanding Litigation**

In the opinion of the Directors and the Legal Officers pending litigation against the Board will not have a material impact on the reported financial results of the future operations of the board.

**28. Post Balance Sheet Events**

No events have occurred since the Balance Sheet date necessitating adjustments or disclosure in the accounts.

**29. Directors Interests in Contracts**

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

**30. Comparative Information**

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

**31. Directors Responsibility**

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



# Auditor General's Report for the year ended 31st December 2009



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கணக்காய்வாளர் தலைமை அபிப்பதி திணைக்களம்  
**AUDITOR GENERAL'S DEPARTMENT**



මගේ අංකය  
எனது இல  
No.

TH/D/NW &DB /  
2009

මගේ අංකය  
உமது இல  
No.

දිනය  
திகதி  
Date

24 November 2010.

TH/D/NWS&DB/2009  
November 2010

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 2009, in terms of Section 14 (2) (c) of the Finance Act, No 38 of 1971**

The audit of financial statements of the National Water Supply and Drainage Board (NWS&DB) for the year ended 31 December 2009, was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13 (1) of the Finance Act, No 38 of 1971. My comments and observations which I consider should be published with the annual report of the Board in terms of Section 14 (2) (c) of the Finance Act, appear in this report. A detailed report in terms of Section 13 (7) (a) of the Finance Act was issued to the Chairman of the Board on 14 June 2010.

### **1.2 Responsibility of the Management for the Financial Statements**

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

### **1.3 Scope of Audit and Basis of Opinion**

My responsibility is to express an opinion on these financial statements based on my audit. Audit opinion, comments and findings in this report are based on review of the financial statements presented to audit and substantive tests of samples of transactions. The scope and extent of such review and tests were such as to enable as wide an audit coverage as possible within the limitations of staff, other resources and time available to me. The audit was carried out in accordance with Sri Lanka Auditing Standards to obtain reasonable assurance as to whether the financial statements are free from material misstatements. The audit include the examination on a test basis of evidence supporting the amounts and disclosures in financial statements and assessment of accounting policies used and significant estimates made by the management in the preparation of financial statements as well as evaluating their overall presentation. I have obtained sufficient information and explanations which to the best of my knowledge and belief were necessary for the purposes of my audit. I therefore, believe that my audit provides a reasonable basis for my opinion. Sub sections (3) and (4) of 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.

## 2. Financial Statements

### 2.1 Opinion

So far as appears from my examination and to the best of information and according to the explorations given to me, I am of opinion that the National Water Supply and Drainage Board had maintained proper accounting records for the year ended 31 December 2009 and except for the effects on the financial statements of the matters referred to in paragraph 2.2 of this report, the financial statements have been prepared in accordance with Sri Lanka Accounting Standards, give a true and fair view of the state of affairs of the NWSDB as at 31 December 2009 and the financial results of its operation and cash flows for the year then ended.

### 2.2 Comments on Financial Statements

#### 2.2.1 Sri Lanka Accounting Standards

Following non-compliances with the Sri Lanka Accounting Standards (SLAS) were observed in audit.

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

Test checks revealed that expenses amounting to Rs. 502,299,461 incurred on water supply projects which had been discontinued subsequently had been continued to be shown under capital work-in-progress.

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

(i) Property, plant and equipment valued at Rs. 1,209,725,623 of which were used for operational activities commencing from the years 2007 and 2008 had been capitalized at the end of the year under review. However, depreciation thereon had not been made in the accounts for 2009.

(ii) Recurrent expenditure relating to rehabilitation works amounting to Rs. 20,411,589 had been accounted as work-in-progress instead of being charged against revenue.

(iii) Actual useful life had not been taken into consideration in determining the rate of depreciation on the computers and accessories.

(c) S.L.A.S -20

Interest amounting to Rs. 48,432,239 in respect of foreign loans obtained for several water supply schemes and capital works which had already been commissioned, had been capitalized instead of being charged against revenue.

#### 2.2.2 Accounting Deficiencies.

Following observations are made

(a) Debit balances in liabilities and revenue accounts amounting to Rs. 155,675,967 and credit balances in assets and expenditure accounts amounting to Rs. 6,573,471,760 had been shown in the accounts for the year under review appeared to be abnormal which distorted the actual financial result and financial position.

(b) According to the financial statements presented to audit, the value of Work-in-progress as at the end of the year under review amounted to Rs. 72,815 million. It was observed in audit that the Board had not introduced a suitable costing system, on the basis of absorption of overheads, for identification of actual cost on various components relating to each activity of the projects. Audit tests revealed that due to the absence of a satisfactory accounting system considerable number of items of work which had already been completed had been continued to be shown under work-in-progress resulting in the understatement of provision for depreciation. The following other audit observations are made in this connection

(i) Information relating to items valued at Rs. 58,343,267,618 shown under work-in-progress had not been made available to audit although called for.

(ii) Completed water supply projects and capital construction works valued at Rs. 7,578,603,504 had not been capitalized, and the reasons stated as non submission of completion reports, taking over certificates, fixed assets forms etc. However it was however observed at an audit carried out in respect of the Kandy Region that items valued at Rs. 53.7 million for which all requested documents had already been furnished had been continued to be shown under work-in-progress. It was further observed that works amounting to Rs. 14.3 million shown under work-in-progress had been abandoned.

(iii) The water supply schemes and sanitation units constructed at a cost of Rs. 6,995.8 million, which had already been handed over to the respective Community Based Organizations (CBO's) and Colombo Municipal Council had continuously been shown in the Financial Statement under capital work in progress.

- © Following observations are made in respect of property, plant and equipment valued at Rs. 63,086,406,876 represented 42.2% of the total assets.
- (i) The register of fixed assets in respect of assets valued at Rs. 53,608,083,436 were not made available for audit.
- (ii) According to a revaluation report of the Property, Plant and Equipment based on the accounts as at 31 December 2007 carried out by the Government Valuation Department, which was received by the Board in March 2010, the total revalued assets amounted to Rs. 48,178 million as against the sum of Rs. 52,406 million shown in the accounts as at 31 December 2007. According to the Government Chief Valuer the revaluation of Rs. 48,178 million included certain completed items erroneously shown in the work-in-progress account as at 31 December 2007. According to test checks carried out in audit, based on the revaluation report of the Chief Valuer the value of Property, Plant and Equipment had been overstated by Rs 6,000 million approximately in the accounts for the year under review.
- (d) Two sums of Rs. 1,072,039,022 and Rs. 395,985,044 had been shown in the financial statements for the year under review as customer advances and work in progress respectively relating to Re-chargeable works. Following observations are made in this regard.
- (i) Re chargeable capital works valued at Rs.67,800,040 which had been completed and handed over to the respective parties had been continued to be shown under work-in-progress.
- (ii) A proper cost accounting system had not been maintained to identify the actual cost incurred on each construction work. Hence it was not possible to comment in audit on the profitability of individual projects.
- (iii) A sum of Rs. 95,009,938 being abnormal debit balances in the Customer Advances Account had been set off against the actual credit balance without being identified.
- (iv) The Board had undertaken the construction of 283 Bore-holes in Nuwara Eliya and Badulla Districts on behalf of a private company during the year 2008 without obtaining an advance in accordance with the normal procedure. Particulars of expenses incurred by the Board and the payment made by the Company concerned in this connection had not been separately maintained to enable to ascertain the profitability of the work.
- According to a report made by the Committee appointed by the Board to look into the affairs concerning the work, the total amount recoverable from the Company concerned amounted to Rs. 73,074,990 whilst a balance sum of Rs. 30,653,616 remained to be recovered as at the end of the year under review. However, the receivable balance of Rs. 30,653,616 had not been disclosed in the Financial Statements.
- (v) Water supply works to Manik Farm Welfare Centre in Vauniya and Internal Displaced People (IDP) Centre in Jaffna had been undertaken by the Board. A sum of Rs. 228,898,174 had been charged against revenue during the year under review on the ground that such expenditure representing operation and maintenance expenses of the Board. However, a sum of Rs. 174,888,383 had been claimed from the Ministry of Nation Building and Estate Infrastructure Development by the Board which had not been taken into the accounts.
- (vi) Funds received from various public and private institutions for construction of water supply schemes had been accounted for as customer advances instead of being accounted for under Grants or Donations as the case may be. Further, the assets constructed out of these funds had been credited to the customer advances account instead of being capitalized under fixed assets.
- (e) Provision for bad debts relating to disconnected debtors had been overstated by Rs. 17.7 million due to incorrect computation.
- (f) Following deficiencies were observed in respect of maintenance of bank accounts.
- (i) Bank Reconciliation statements furnished to audit revealed that unidentified debit and credit balances aggregating Rs. 300,482 and Rs. 3,906,294 respectively had been brought forward for several years .

- (ii) A sum of Rs. 2,280,808 shown in Bank Reconciliation Statements as “Bank errors” in respect of four Bank accounts had not been adjusted for a long period.
- (iii) Long outstanding dishonored cheques amounted to Rs. 1,844,030 as at the balance sheet date had not been adjusted in the accounts.
- (iv) Cash balances made between bank accounts amounting to Rs. 11,872,622 had not been realized for a long period and cash erroneously shown in bank reconciliation statement without being identified..
- (v) Differences aggregating Rs. 4,987,389 observed between manually prepared cash books and computerized cash books in respect of four Bank accounts in the Ratnapura Region had continued to be carried forward for long periods in the Bank Reconciliation Statements.
- (g) Following observations are made in respect of Value Added Tax.
- (i) Audit test checks revealed that the VAT liability had been understated by Rs. 86,710,226 due to incorrect computation.
- (ii) VAT recoverable amounting to Rs. 28,533,669 in respect of local purchases which had been disallowed by the Commissioner General of Inland Revenue had not been adjusted in the accounts.
- (iii) Audit test checks carried out in respect of Kandy Regional Office revealed that a sum of Rs. 3,888,666 had been over charged as VAT from certain water consumers during the year under review. It was observed that the correct amount had been paid to the Commissioner General of Inland Revenue, whilst the excess collections had been retained by the Board
- (h) Grants received from various donor agencies to construct Rural Water Supply Schemes amounting to Rs. 4,917.9 million had been accounted for as grants and shown under equity instead of being shown under non current liabilities as the ownership of the total assets, that should be transferred to the relevant Community Based Organizations (CBOs) in accordance with the provisions in the project agreements. This erroneous accounting treatment had resulted in an overstatement in the position of net current assets of the Board.

### 2.2.3 Un reconciled Control Accounts

The following control account balances had not been reconciled with the corresponding subsidiary records, schedules etc. as at 31 December 2009

Description of Control Accounts	Amount as per Control Accounts Rs.	Amount as per Subsidiary Records Rs.	Diff. Rs.
Trade debtors	2,628,712,930	2,693,890,000	65,177,070
Festival advance	10,943,704	10,836,556	107,148
Distress loan	1,102,938,976	1,102,689,502	249,474
Advance to suppliers	665,296	754,063	88,767
Short term deposits	632,500	Nil	632,500
VAT receivable	1,289,645	485,088	804,557
New Connection installment debtors	100,628	590,772	490,144
Cash Internal transfer Control account	2,183,551	1,447,691	735,860
Customer security deposits	76,989,438	75,382,938	1,606,500
Customer advances for construction	166,555,960	167,532,550	976,590
VAT payable	22,658,457	5,136,791	17,521,666
With holding payable	253,589	122,397	131,192
With holding tax	7,151,931	10,532,741	3,380,810

### 2.2.4 Suspense Balances

Non operating debit balances aggregating Rs. 158,650,039 and credit balances aggregating Rs. 115,455,778 had been shown in the accounts under current assets and liabilities for a long period without being cleared. Service of a firm of chartered accountants had been obtained at a cost of Rs. 1,035,000 to reconcile these balances. Their report had been obtained in 2005. However, action had not been taken by the Board to effect the necessary adjustments in the accounts based on the report. According to the Deputy General Manager (Finance) ,adjustments had not been made due to reasonable doubt that certain un- reconciled balances might be connected with the fraud discovered by the Board. Considering these facts Audit and Management Committee had recommended to carry out a special investigation by using the internal staff of the Board. Therefore the payment of Rs. 1,035,000 made to the Firm of Chartered Accountants appears to be fruitless. However, internal staff for the proposed special committee for this investigation had not been nominated up to the end of April 2010 even after lapse of five years.

### 2.2.5 Accounts Receivable and Payable

Following observations are made.

- (a) There was no evidence to prove that adequate action had been taken by the Board for the recovery of advances amounting to Rs. 71,365,259 and according to the age analysis the above total advances remained outstanding for over one year, out of which a sum of Rs. 62,494,641 had remained outstanding for over three years.
- (b) A proper system had not been introduced by the Board to reconcile the debtors' collection control account balances with individual balances. Hence a sum of Rs. 6,522,947,537 had been shown as debit balances in seventeen accounts and a sum of Rs. 6,357,451,819 had been shown as credit balances in eight accounts without being reconciled. Test check revealed that there were instances where customer balance had been updated after two months. Therefore the accuracy of water debtor balances shown in the accounts could not be ascertained in audit.
- (c) Effective action had not been taken for the recovery or settlement of long outstanding mobilization advances aggregating Rs. 163,640,670 relating to construction works abandoned by the relevant contractors.
- (d) Water debtors relating to unpaid water bills as at the end of the year under review amounted to Rs. 2,693 million out of which Rs. 1,113.5 million or 41% had remained outstanding for over six months whilst a sum of Rs. 663 million representing 25% of the total had remained outstanding for over two years.
- (e) Water debtors in respect of stand posts and disconnected water connections had increased by 113% during the last four years. It was observed that the progress of recovery of debts was poor.
- (f) 71% of The Colombo Municipal Council (CMC) sewerage and other debtors aggregating Rs. 134 million had been outstanding for more than 3 years as at the balance sheet date and effective action had not been taken to recover the outstanding balances.

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

Instances of non-compliance observed in audit are given below.

Reference to Laws Rules, Regulations and Management Decisions	Non-compliance
(a) Finance Act No. 38 of 1971	
i. Section 13 (8)	The Governing Body, within 3 months after the receipt of the Auditor General's report in terms of Section 13 (7) (a) of the Finance Act should inform to the Auditor General on the course of action taken or proposed to be taken in respect of matters contained therein. However the comments of the Governing Body on the report of the Auditor General for the year 2008 had not been furnished even as at 31 March 2010.
ii. Section 14 (3)	The annual report in respect of the year 2008 had not been tabled in parliament.
(b) Public Administration Circular NO 41/90 of 10 October 1990	The fuel consumption of each motor vehicle had not been tested once in 6 months as required.
(c) Treasury Circular No 842 of 19 December 1978	Register of fixed assets had not been maintained as prescribed.

### 2.2.7 Lack of Evidence For Audit

Following items in the accounts for the year under review could not be satisfactorily vouched in audit due to non-availability of detailed schedules, age analysis, confirmations etc.



Item	Amount Rs.
Other Debtors	1,731,855
Supply advances	925,396
Investments	8,377,940
Colombo Municipal Council Debtors	28,782,127
Traveling Advance	1,293,050
Miscellaneous Advance	27,839,183
Advance to contractors	2,347,719,102
Short term Deposits	6,317,419
New Connection Control Accounts	825,928
Water Bill collection Control Accounts	41,290,498
Unclaimed Salaries	5,734,212
Accrued Expenses	26,753,224
Withholding Tax	1,032,770
Withholding Value Added Tax	4,151,680
Suspense Accounts - Debit	293,780,943
Suspense Account - Credit	452,024

### 3. Financial and Operating Review

#### 3.1 Financial Review

According to the financial statements presented, the working of the Board for the year ended 31 December 2009 had resulted in a net loss of Rs. 1,425,253,952 as compared with the corresponding net loss of Rs. 2,914,925,428 for the preceding year thus indicating a decrease of loss by Rs. 1,489,671,476 mainly due to revision of water tariff in 2009. The following table gives a summary of the financial results at various stages.

	Year ended 31 December	
	2009 Rs.	2008 Rs.
Profit before charging Overheads and other		
Operating expenses	3,348,026,155	654,375,633
Profit / (Loss) from operating Activities	183,914,742	(1,715,465,025)
Net Loss for the year before Tax	(1,336,244,891)	(2,848,316,204)
Net Loss for the year after tax	(1,425,253,952)	(2,914,925,428)
Accumulated Loss	(9,560,236,671)	(7,804,496,662)

Although particulars relating to previous four years shown that the Board had earned profits in respect of each unit of production, the accumulated net loss had continued to be increased as depicted in the following charts.

#### Financial Losses



#### Accumulated Losses



It was observed that, following reasons were attributed for the heavy losses suffered by the Board.

- High rate of Non Revenue Water (NRW). The all island rate for the year under review was 31%.
- Investment income had decreased by 18.6%
- Losses of Rs 80 million and Rs. 97 Million had been occurred due to the excessive maintenance cost of the sewerage and Ground water sectors respectively.
- Other operating expenses had increased by 132.7%
- Expenses incurred by the Board on behalf of a private company amounting to Rs300 million approximately had been charged against revenue in respect of Re chargeable works.

#### 3.2 Identified Losses

Due to lack of proper financial and internal control it was reported that cash frauds amounting to Rs. 171.94 million, Rs. 52.46 million Rs. 21.38 million and Rs. 1.8 million had taken place at Trincomalee, Kelaniya and Ampara Regional Office and Head Office respectively. Investigations in this connection are being carried out by the Criminal Investigation Department. However a sum of RS. 1.075 million had been refunded by the officers concerned in respect of the fraud at the Kelaniya Regional Office. The amount refunded had been shown in the accounts as a current liability whilst no other provisions had been made in the accounts with regard to these losses.

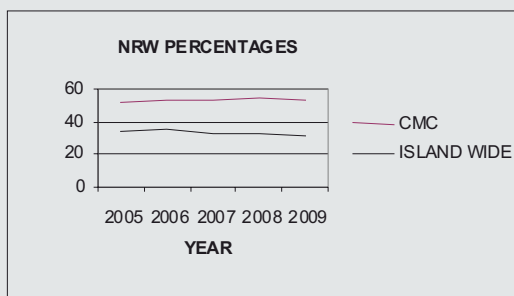


### 3.3 Operating review

#### 3.3.1 Non Revenue Water (NRW)

NRW had significantly contributed towards continuous losses suffered by the Board, It was observed in audit that out of the total quantity of water produced in 2009, NRW had been 139.3 million cubic metres costing Rs. 2,854.3 million. The NRW percentages for the last five years are given below.

NON REVENUE WATER					
	2005	2006	2007	2008	2009
	%	%	%	%	%
CMC	51.25	51.83	53.19	53.96	53.05
Island wide	33.83	34.37	33.09	32.13	31.07



Leakages, illegal connections, free water supply to stand posts and Tenement Gardens and administration losses attributed for the increase in NRW. Following observations are made in this regard.

#### (a) Leakages

Identification of NRW in each area was not possible by reconciling the quantity of water pumped into each area and the quantity billed for such area, due to non- installation of bulk meters or disfunction of installed meters in respect of water pumped into the distribution system. It was also observed that water leakages had stood at a high level due to usage of pipes which were not burstproof and 77% of the pipe system existing in the Colombo city had been installed over 55 years.

The main reason for leakages within the City of Colombo had been ascertained as 97% of the distribution system being consisted of old cast iron pipes. It was observed that reaction of various chemicals used for cleaning water for long periods had resulted in clogging pipes. Pressure absorbing covers had also not been laid over such pipes.

Usage of old pipe lines for distribution of water produced under new water supply schemes had resulted in pipe bursts due to high water pressure. In these circumstances attention needed to be drawn to install a new distribution system discarding the very old distribution system by preparation and implementation of a long term plan.

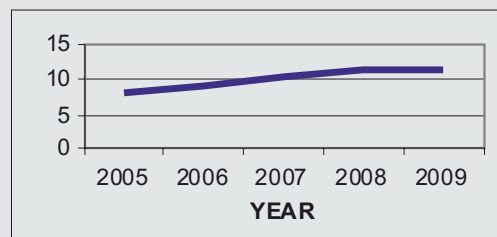
#### (b) Illegal Connections

Taking water for various purposes outside the metered connections of the Board are referred to as illegal connections. An investigation carried out on a test basis by the Board during the year under review had disclosed that the extent of losses incurred by the Board due to illegal connections had exceeded Rs. 19 million. However there was no evidence that effective measures had been introduced by the Board to prevent illegal connections.

The failure of the Board to reduce the extent of NRW had resulted in the current water consumers being compelled to incur an additional cost of Rs. 11.42 per unit of water consumed by them. The additional cost incurred in this manner had gradually increased year after year as shown below.

Year	Additional cost incurred on each unit of consumption Rs.
2005	8.19
2006	9.27
2007	10.37
2008	11.37
2009	11.42

#### Additional Cost on each unit of Consumption



### 3.4 Performance of the Foreign Funded Water Supply and Sanitation Projects

#### (a) Water Supply and Sanitation Projects

The Board had implemented 29 large scale water supply projects, 6 large scale sewerage projects, 7 Tsunami Rehabilitation projects and 39 small and medium water supply schemes utilizing local grants, foreign loans and aids. The utilization of funds in this regard during the year under review and two preceding years are shown below.

#### Year 2007

Project	Allocation Rs. M.	Utilization Rs. M.
Large Scale Projects	19,083	15,062
Small and Medium Scale Project	2,625	1,293
Tsunami Projects	5,872	1,705
Total	27,580	18,060
Fund utilization ratio		65.48%

#### Year 2008

Project	Allocation Rs. M.	Utilization Rs. M.
Large Scale Projects	23,610	19,308
Small and Medium Scale Project	1,555	1,540
Tsunami Projects	4,057	3,162
Total	29,222	24,010
Fund utilization ratio		82.16%

#### Year 2009

Project	Allocation Rs. M.	Utilization Rs. M.
Large Scale Projects	26,116	16,669
Small and Medium Scale Project	920	950
Tsunami Projects	3,824	3,517
Total	30,860	21,136
Fund utilization ratio		68.49%

The fund utilization ratio had decreased by 13.67% as compared with the previous year. The following common weaknesses were observed in respect of project activities.

- (i) Non recovery of expected revenue due to failure to reach the projected objectives
- (ii) Increase in expenditure due to delays in project implementation
- (iii) Failure to maintain an adequate accounting system in respect of projects.
- (iv) Non rendition of annual financial statements to audit in terms of the project agreements.

#### (b) Sanitation Facilities and Sewerage System

The sewerage system in the Colombo City is 75 years old and is being maintained by the Colombo Municipal Council. Supply of sanitation facilities by the Board is restricted to limited areas, of that, 7 housing schemes and 7 Government institutions, Dehiwala, Mt Lavinia, and Kolonnawa Municipalities, Hantana and Katharagama areas are included. Dehiwala - Mt.lavinia and Kolonnawa Municipalities had planned to provide 5,000 and 3,000 connections respectively, whereas only 2,168 and 1,339 connections had been given as at the end of the year 2009.

#### (c) Utilization of Rain Water

Two projects with foreign grants had been implemented to introduce Rain Water Harvesting through Community Based Organization (CBOs). The Board had supplied 15,386 rain water tanks as at end of the year 2009.

In a test audit check carried out, it was revealed that 80% of such tanks had not been made use of for rain water harvesting. It was also observed, that this situation had arisen due to lack of awareness of the people and selection of areas without having adequate rain fall.

### 3.5 Procurement and Utilization of Chemical

Test audit check revealed that internal control systems with regard to procurement, stocks maintenance and utilization of chemicals used for the purification of water were poor. Following observations are made in this regard.

- (i) Buffer stocks of chemicals had not been maintained resulting in new procurements being issued for usage prior to confirmation of the quality by way of tests, carried out by the laboratories of the Board.
- (ii) Chemicals delivered directly to Regional sub stores had been used before due authorization from the Board for such usage.
- (iii) Cost of the substandard chemicals, supplied by the contractors had been paid on the basis of adjusted rates. Audit test checks revealed that a sum of Rs. 93,249 had been overpaid in relation to contract for the supply of Alumina Sulphate
- (iv) Procurements had been continued to be made from contractors who had supplied sub-standard chemicals without exploring the possibility of procurement of standard chemicals from other sources.

### 3.6 Foreign Loans

The total liability of the Board relating to foreign loan balances and unpaid interest thereon amounted to Rs, 24,163 million representing 16 percent of the total assets as at the end of the year under review .

Following observations are made in this regard.

- (i) The loan interest amounting to Rs.2,041 million paid for the year under review represented over 1/3 of the operating and financial expenditure of the Board for the year.
- (ii) The position of repayment of loan installments and accrued interest thereon to be unsatisfactory, in that,
  - (a) Unpaid loan installments falling due in 2007, 2008 and 2009 amounted to Rs. 2,255.6 million
  - (b) Similarly, unpaid loan interest amounted to Rs. 3,352.4 million
  - (c) There was no evidence that necessary follow up action had been taken in respect of a sum of Rs. 494,735,575 shown under long term liabilities in the balance sheet as at 31 December 2009 on account of interest payable to the Treasury for the year 1999.

- (iii) Interest on loans amounting to Rs. 399,172,218 obtained towards the end of the year under review had not been reckoned and brought to account.
- (iv) The book balance of the foreign loans was Rs. 85,352,762 in excess of the corresponding Treasury balance. Action had not been taken to reconciled and adjust the accounts.

### 3.7 Production and Distribution of Clean Water

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

The Board had produced 449 million cubic metres of clean water during the year 2009. Comparison of this production with that of the year 2008 shows an increase of 2% as compared with the increase of 3.6% over the year 2007. The number of water service connections as at end of the year 2009 were 1,266,328 showing an increase 6.6% as compared with that as at end of the previous year. The increase as at end of the year 2008 was 10%. A situation in which certain areas were not supplied with adequate water had arisen

It was also observed that consumers had to wait for long periods for water connections due to the vast increase in demand for pipe borne water. At present 36.9% of the population are covered by pipe borne water schemes operated under the Board whilst it is expected to increase the coverage up to 45% by the year 2015. Although, the Board had prepared data relating to the supply of pipe borne water, there was no proper procedure for the collection and preparation of accurate data so as to ensure whether the overall water supply had been in accordance with the Government ten year Development Plan.

### 3.8 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.

#### **4. Systems and Controls**

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

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



**H. A. S. Samaraweera**  
**Acting Auditor General**

# Abbreviations

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





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