



**Water**... a dwindling natural resource **we** need to **conserve**

# 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

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



## NATIONAL WATER SUPPLY & DRAINAGE BOARD

The National Water Supply & Drainage Board had its beginnings 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.

In view of the vital importance of the operations of the Board, the Government set up a separate Ministry in 2007, to handle this subject. Thus today, the National Water Supply & Drainage Board functions under the Ministry of Water Supply & Drainage.

The National Water Supply & Drainage Board is the only organization coming under the purview of this Ministry.

Around 77% of the population has safe access to drinking water of which 32% 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 - 2007  
NATIONAL WATER SUPPLY & DRAINAGE BOARD**

In terms of Section 14 (2) of the Finance Act No. 38 of 1971, the Members of the Board have the honour to forward herewith the Annual Report and the Financial Statements of the National Water Supply & Drainage Board for the year ending 31st December 2007.

Yours faithfully,

**Channa Amarasinghe**

*Chairman*

National Water Supply & Drainage Board

# Chairman's Statement



“NWSDB made significant contributions in the social and cultural sphere relating to water supply and sanitation, improving the well-being and livelihoods of the nation and its people”

During the year 2007, the National Water Supply & Drainage Board continued its services to the people of Sri Lanka in the domains of water supply and sanitation. It also made significant contributions in the social and cultural sphere relating to water supply and sanitation, improving the well-being and livelihoods of the nation and its people. Consumer-awareness programmes on water wastage and conservation were continued in 2007, in addition to the Board's usual activities.

The new Corporate Plan 2007-2011 commenced implementation in the year under review. Quarterly progress was monitored and presented to the Board of Directors by the seven Monitoring Managers respectively charged with oversight of the seven goals specified in the Plan.

Implementation of ongoing capital projects and preparation of new project proposals for local and foreign funding continued in 2007. Other approved projects were initiated and implemented. Among these, the most noteworthy are the JBIC-assisted Towns North of Colombo Stage I, a major urban water supply project, the Australia-assisted Integrated Water Supply Project for Eastern Coastal Towns of the Ampara District (Phase II) and the ADB-assisted Third Water Supply and Sanitation Project, which extends water supply to rural areas. With the third ADB project, vast developments in water supply and sanitation for rural villages and small towns have been accomplished, utilizing the participatory and demand responsive approach. Community-managed water supply systems maintained by community-based organizations (CBOs) were provided with backup support, ensuring their sustainability. Taking into account all the above, by the end of 2007, NWSDB was maintaining 308 water supply schemes, delivering pipe-borne water to 32% of the population. The others meet their drinking water requirements using alternative means such as conventional wells, tube wells with hand pumps, rainwater harvesting and other simple systems.

Two major rehabilitation projects for the Greater Colombo area commenced, one for water supply with JBIC assistance and the other for sewerage with Austrian assistance. Another three major projects started in 2007 were the Towns North of Colombo Stage II, the Kandy sewerage project and Ratmalana-Moratuwa and Ja-Ela-Ekala sewerage project. I take this opportunity to thank the donor agencies and other financiers for their generous and continued assistance.

The capital budget for the NWSDB for 2007 was Rs. 27,250 million. Utilization stood at 77%, making the NWSDB one of the few public sector organizations to utilize its allocated capital funds satisfactorily.

As provision for safe drinking water is a significant component under the *Mahinda Chintanaya*, NWSDB contributes in every way possible to make this visionary approach to development a success. In keeping with the vision of Mahinda Chintanaya, the sub-programme *Randora* was launched in the Hambantota, Puttalam and Trincomalee Districts.

Measures to reduce non-revenue water were continued. The activities originally planned under the NRW-reduction project for Greater Colombo, though prematurely terminated, were streamlined and packaged into a new project. Meanwhile, *Randiya*, a special water supply programme for the urban poor, continued during 2007.

With due regard to the fuel crisis and environmental considerations, emphasis continued to be placed on reducing power consumption.

Maintaining the staff ratio per thousand service connections at a reasonable level was another important indicator of performance in 2007. By year's end this ratio had come down to 8.23.

The rehabilitation and reconstruction of tsunami-damaged water supply projects, initiated in 2005, continued in 2007 as well. The free delivery of temporary water supplies to refugee camps continued, this being considered as part of the Board's responsibility to the nation. Sewerage facilities for these camps were likewise free of charge. The Cabinet has now approved the introduction of a sewerage service charge.

Restructuring of the NWSDB was initiated in the year under review, with improvements to the existing structure - mainly dividing the whole operational area to three zones (Western, Southern/Eastern and Northern/Central) with an Additional General Manager for every zone and the provinces headed by Deputy General Managers. A separate division was established to handle sewerage activities, with an Additional GM as its head.

General Manager Eng. M. Wickramage retired in mid 2007 and Eng. K. L. L. Premanath assumed duties as his successor.

It was possible to make representation to the National Economic Council chaired by His Excellency the President on long-outstanding issues such as water sharing, water pollution, delays in land acquisition, VAT payments, non-availability of local funds on time for capital works, etc. Efforts are now being made to pursue these matters with the relevant entities.

The Ministry to which NWSDB belonged was changed in mid 2007 to the Ministry of Water Supply & Drainage.

A special word of thanks must be extended to the then Hon. Minister for Urban Development and Water Supply and the Minister for Water Supply & Drainage and the officers of both Ministries for their direction and guidance. Special thanks are also due to the General Manager and our staff for diligently attending to their work. Finally, along with the Board of Directors, I would like to request customers to bear with us for any lapses on our part with regard to water supply and sanitation services. We are endeavouring to provide an improved service on a continuing basis.

**Channa Amarasinghe**

*Chairman*

National Water Supply & Drainage Board

28th February 2008

# Corporate Plan 2007-2011

## IMPLEMENTATION STATUS

The NWSDB Corporate Plan 2007-2011 was prepared in September 2006 with assistance from JBIC. This was done with the participation of representatives of all stakeholder groups and our own staff at all levels. Now the Board is working steadfastly 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 first year of implementation.

It was specified that quarterly progress on the Corporate Action Plans be presented to the Board by the manager accountable for every 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 2007.

It is required to have timely review for the successful achievement of the goals, objectives and the targets set. Now, as we reach the end of the first year, it is time to review the Corporate Plan.

The review of the Corporate Plan will -

- determine whether the objectives and actions are in line with the required strategic direction;
- re-emphasize actions and activities;
- streamline the progress monitoring procedure; and
- incorporate necessary amendments to the Corporate Plan and finalize Action Plans for 2008 (with the active participation of the managerial staff and other stakeholders).

It is planned to hold a workshop in February 2008 for the above purpose.

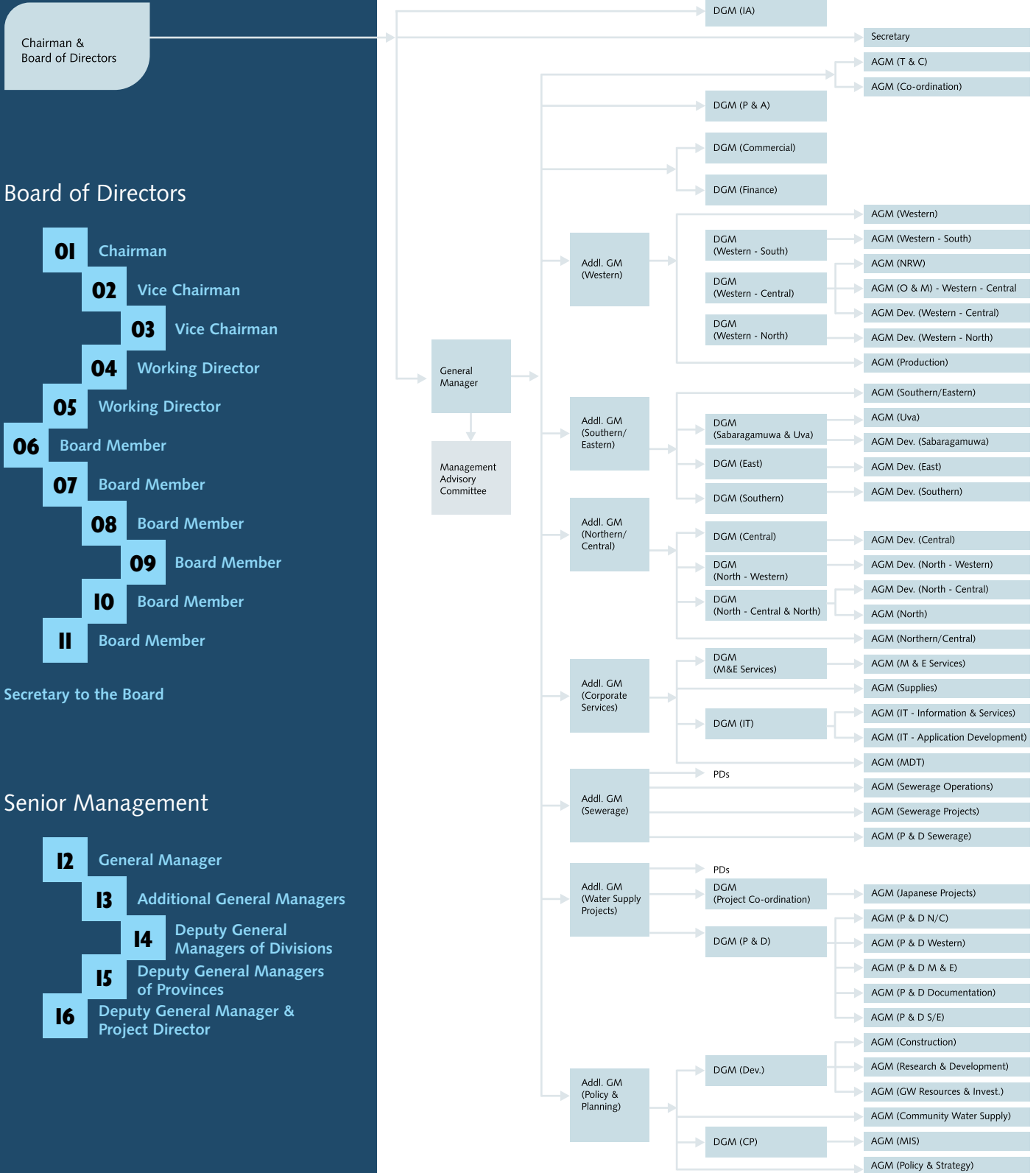


## PROGRESS TOWARDS STATED GOALS

| Goal  | Key Objectives   | Target End 2007 | Achievement End 2007 |
|---|--|-----------------|----------------------|
| 1. Increase water supply and sanitation coverage                                | 1.1 Pipe-borne water supply coverage   | 32.0%           | 32.0%                |
|   | 1.2 Piped sewerage coverage  | 2.5%            | 2.4%                 |
|   | 1.3 Access to safe drinking water supply coverage  | 76.4%           | 77%*                 |
|   | 1.4 Total sanitation coverage  |                 | 83.2%*               |
| 2. Improve operational efficiency   | 2.1 NRW (island-wide)  | 33.0%           | 33.09%               |
|   | 2.2 Total staff for 1,000 connections  | 8.3             | 8.2                  |
|   | 2.3 Expenditure on power consumption   | 23.0%           | 22.67%               |
|   | 2.4 Maintenance expenses   | 7.5%            | 5.11%                |
|   | 2.5 Establishment expenses   | 10.5%           | 9.5%                 |
| 3. Achieve customer satisfaction  | 3.1 Public awareness programmes to be carried out (schools/other)  | 20 Nos.         | 12 Nos.              |
|   | 3.2 Complaints unresolved  | 10%             | 7.3%                 |
| 4. Increase commercial viability  | 4.1 % of estimated bills to total number of bills  | 10%             | 12%                  |
|   | 4.2 Collection efficiency  | 100%            | 100%                 |
|   | 4.3 Accounts receivable from -   |                 |                      |
|   | (a) domestic and commercial institutions   | 60 days         | 60 days              |
|   | (b) Government institutions  | 65 days         | 65 days              |
| 5. Ensure greater accountability and transparency                               | Initiatives were taken to develop a whole range of management and business tools on human resource development, management information system and business plan. |                 |                      |
| 6. Promote Institutional Development  | 6.1 In-house training  | 150             | 113                  |
|   | 6.2 In-country external training   | 240             | 258                  |
|   | 6.3 Overseas training  | 75              | 68                   |
| 7. Provide facilities and service support to rural and marginalized communities | 7.1 Rural water supply by the NWSDB (managed by CBOs)  | 4.5%            | 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 except for Jaffna, Kilinochchi, Mullaitivu, Mannar and Vavuniya Districts.

# Our Key Players



## BOARD OF DIRECTORS

01. **Eng. S. C. Amarasinghe**  
B.Sc. Eng., DFip. Business Mgt., C.Eng., FIEE (Lond), FIE (SL)
02. **Eng. S. K. S. H. K. Suriyaarachchi** - up to 16.04.2007  
B.Sc. Eng., C.Eng., MIE (SL)
03. **Dr. A. Uthumalebbe** - w.e.f. 18.04.2007  
DIMS (Cey.), DFC (USA)
04. **Mr. A. L. W. Abeygunasekara** - up to 16.04.2007
05. **Eng. M. S. Nazeer** - w.e.f. 18.04.2007  
B.Sc. Eng. (SL), M.Sc. Eng. (UK)
06. **Mr. H. P. C. Herath**  
B.Sc. (Economics), MBA (Colombo)  
Secretary, Ministry of Local Government & Provincial Councils
07. **Mr. K. W. D. U. Dahanayaka** - up to 02.02.2007
08. **Dr. C. K. Shanmugarajah**  
MBBS, DFM  
Director (Environmental Health, Occupational Health & Food Safety), Ministry of Healthcare & Nutrition
09. **Mr. H. A. Amarasena**  
Attorney-at-Law
10. **Mr. D. Widanagamachchi**  
B.Sc. (Business Admin.) Sri J.  
Pg. Diploma in Public Admin, PIM.S.J.  
Director General (Department of State Accounts),  
Ministry of Finance & Planning
11. **Dr. (Mrs.) Damitha de Zoysa** - w.e.f. 26.10.2007  
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

## SECRETARY TO THE BOARD

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

The Board met on 17 occasions during the year 2007.

## SENIOR MANAGEMENT

12. **GENERAL MANAGER**  
**Eng. M. Wickramage** - up to 16.05.2007  
B.Sc. Eng. Hons., MIE (SL), C.Eng., MICE, DIC, M.Sc. (Lond.)  
  
**Eng. K. L. L. Premanath** - w.e.f. 17.05.2007  
B.Sc. Eng. (Hon.), DSE (Netherlands), M.Eng.  
(Const. Management), C.Eng., FIE (SL)
13. **ADDITIONAL GENERAL MANAGERS**  
**Eng. S. A. S. De Silva** (Water Supply Projects)  
B.Sc. (Eng.), DSE (Delft.) DBFA (ICASL), FIE (SL),  
MIRTE (Lond.), C.Eng.  
  
**Eng. A. H. C. Silva** (Southern/Eastern)  
B.Sc. Eng. (Hon.), P.G. Dip. S.E. (Delft.),  
P.G. Dip. Const. Pro. Mgt., M.Sc. (Delft.),  
FIE (SL), MICE (Lond.), C.Eng.  
  
**Eng. H. G. Thilakaratne** (Policy & Planning)  
B.Sc. Eng. (Hon.), MBA, MIE (SL), C.Eng., MIM  
  
**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.), Dip. in Sanit. Eng.,  
Dip. in Bus. & Fin. Admin., FIE (SL), MICE (Lond.)
14. **DEPUTY GENERAL MANAGERS OF DIVISIONS**  
**Eng. D. S. D. Jayasiriwardana** (Planning and Designs)  
B.Sc. (Eng.) Hons., C.Eng., FIE (SL),  
M.P.H. (Univ. of Hawaii)  
  
**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. A. W. Gunasekara** (Commercial)  
B.Sc. Eng. (Hon.), M.Eng., C.Eng., MICE (Lond.), MBA

**Eng. K. R. Dewasurendra**

(Project Co-ordination)

B.Sc. Eng. (Hon.), FIE, C.Eng.,

P.G. Dip. (Sanitary Eng. - Delft.)

**Eng. G. K. Simal** (Logistics)

M.Sc. Mech. Eng. (USSR), M.E. Hyd. (India),

C.Eng., MIE (SL), Exe. Dip. in Bus. Admin. (Colombo),

Dip. in HRM

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

B.Com. (Sp.), ACA.

**Eng. D. N. J. Ferdinando** (Development)

B.Sc. Eng. (Hon.), M.Eng., FIE (SL), MCIWEM (UK),

MICE (Con.)

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

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

M.Sc. (Eng.), FRG, MICE

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

B.Sc. (Business Administration) Sp.,

Dip. in Personnel Management

**Mr. W. A. J. Weerasinghe**

(Acting - Internal Audit)

15. **DEPUTY GENERAL MANAGERS OF PROVINCES**

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

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

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

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

University of New Zealand & Australia

**Eng. (Mrs.) T. P. Lamabadusuriya**

(Western - South)

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

C.Eng.

**Eng. D. U. Sumanasekara**

(North & North Central)

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

**Eng. (Mrs.) K. T. P. Fernando** (North Western)

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

M.Sc. in Water & Waste Engineering in UK

**Eng. J. R. B. Nadurana** (Eastern)

B.Sc. Eng. (Hons.), P. G. Dip. in Environmental Science

& Technology (Delft.), MIE (SL), C.Eng.

**Eng. (Mrs.) C. J. D. Perera** (Southern)

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

(Netherlands), Dip. Eng., C.Eng. (SL)

**Eng. N. M. S. Kalinga** (Sabaragamuwa)

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

Dip. Sanitary Eng. (Netherlands)

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

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

MBA

16. **DEPUTY GENERAL MANAGER & PROJECT DIRECTOR**

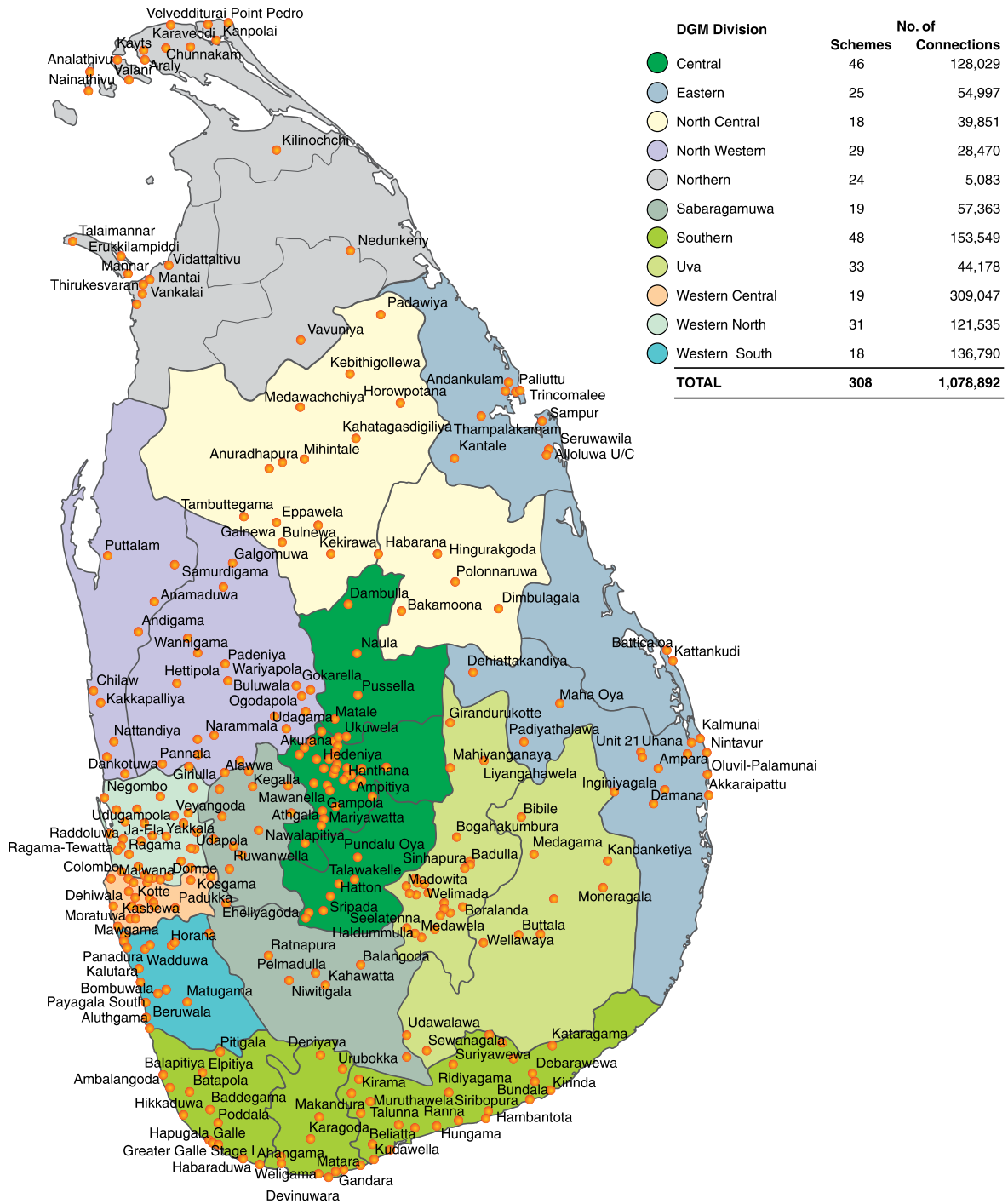
**Eng. P. R. L. Senevirathne**

(PD - WWDP - RM & JE)

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

Netherlands)

## DE-CENTRALIZED ADMINISTRATION









## **What Legacy Do we Pass Down?...**

A Tap in Disrepair? Water Down the Drain? It is a fact that water isn't as freely available as it was a while back. We need to save every drop... use every drop well... so that future generations may have more than a drop!

**Water is a Precious Resource. Let's Save It!**

# Our Performance

“Service levels to existing consumers were improved by commissioning several major and minor water supply projects in different parts of the country”

During 2007, the NWSDB focused on its new corporate action plans for the year, based on the Corporate Plan for 2007-2011. Quarterly progress was monitored and presented to the Board of Directors by the respective managers made accountable for the seven goals set out in the plan.

32% of the population had been covered with piped drinking water supplies by the end of the year, indicating that the newly-fixed target for pipe-borne water supply had been fully achieved.

89,497 service connections were provided during the year. 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.

The NWSDB was actively engaged in institutional development activities during 2007. Aspects of training, skills development, improving IT literacy, maintaining a friendly and work-oriented office environment and practising 5S principles were continued under the Institutional Development Programme.

The finances of the NWSDB were carefully managed to meet debt-service commitments on time. The facility to make consumer payments through the internet was further publicized and collection efficiency maintained at a very high level. Staff recruitments were kept under control, while the ratio of staff per thousand service connections was reduced to 8:20.

Non-revenue water (NRW) includes authorized but unbilled water supply to tenement gardens and public sanitary facilities. The NWSDB is compelled to continue this service, earlier provided by the CMC within the City of Colombo. If authorized but unbilled water supplies in Colombo City (estimated at 14% of the water supplied) are excluded, unaccounted for NRW in Colombo City would be 41.2%.

If the authorized but unbilled water supply in Colombo City is excluded, NRW in Greater Colombo and nationwide would be 32.7% and 31.2% respectively.

## GENERAL

There are 308 major, minor and small water supply schemes in operation under the NWSDB's purview. Out of these, 31 schemes cover major cities and 277 schemes cover townships and villages.



32% of the total population is covered with pipe-borne water, while 10% 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.

|  | 2006                | 2007               | Variation (%) |
|--|---------------------|--------------------|---------------|
| <b>KEY STATISTICS: WATER SUPPLY</b>  |                     |                    |               |
| Piped Water Production (million cu.m.)   | 398                 | 424                | 6.5           |
| Deep Wells (Nos.)  |                     |                    |               |
| (a) Drilled  | 646                 | 636                | (1.5)         |
| (b) Successful   | 516                 | 513                | (0.6)         |
| Non-Revenue Water (%)  |                     |                    |               |
| (a) Gr. Colombo  | 37.54               | 37.86              | 1.0           |
| (b) Regions  | 29.88               | 26.61 <sup>1</sup> | (12.1)        |
| (c) Island-wide  | 34.37               | 33.09 <sup>1</sup> | (3.7)         |
| Domestic Connections (Nos.)  |                     |                    |               |
| (a) Gr. Colombo  | 418,063             | 433,433            | 3.7           |
| (b) Regions  | 473,949             | 543,122            | 14.6          |
| <b>Total Domestic Connections</b>  | 892,012             | 976,555            | 9.5           |
| Public Stand Posts (Nos.)  |                     |                    |               |
| (a) Gr. Colombo  | 4,112               | 3,373              | (18.0)        |
| (b) Regions  | 4,034               | 3,626              | (10.1)        |
| <b>Total Public Stand Posts</b>  | 8,146               | 6,999              | (14.1)        |
| Non-Domestic Connections (Nos.)  |                     |                    |               |
| (a) Gr. Colombo  | 37,759              | 38,903             | 3.0           |
| (b) Regions  | 51,478              | 56,435             | 9.6           |
| <b>Total Non-Domestic Connections</b>  | 89,237              | 95,338             | 6.8           |
| <b>Total No. of Service Connections</b>  | 989,395             | 1,078,892          | 9.0           |
| Average Household Monthly Consumption<br>(cu.m. per house connection)              |                     |                    |               |
| (a) Gr. Colombo  | 18.28               | 18.99              | 3.9           |
| (b) Regions  | 14.25               | 13.81              | (3.1)         |
| Average Household Billing per Month (Rs.)  |                     |                    |               |
| (a) Gr. Colombo  | 402.12              | 418.66             | 4.1           |
| (b) Regions  | 199.65              | 192.79             | (3.4)         |
| Total Recurrent Expenditure (Rs. million)  | 5,937               | 7,186              | 21.0          |
| Development Expenditure (Rs. million)  | 17,124 <sup>2</sup> | 21,088             | 23.1          |
| Total Revenue (Rs. million)  | 6,947               | 7,424              | 6.9           |
| O & M Staff /1,000 Connections   | 6.68                | 6.41               | (5.1)         |
| Total Staff /1,000 Connections   | 8.75                | 8.20               | (4.0)         |
| Average O & M Cost of Water Production (Rs./cu.m.)                                 | 14.96               | 16.93              | 13.2          |
| Collection Efficiency  | 0.98                | 1.00               | 2.0           |
| <b>KEY STATISTICS: SEWERAGE</b>  |                     |                    |               |
| Sewerage Connections in Dehiwala-Mt. Lavinia Sewerage System                       | 1,694               | 1,900              | 12            |
| Sewerage Connections in Kolonnawa Sewerage System                                  | 850                 | 950                | 11.8          |
| 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                    | 4,631 <sup>3</sup>  | 4,631              | -             |
| <b>Total No. of Connections Maintained<br/>by Greater Colombo Sewerage Section</b> | 9,472               | 9,778              | 3.2           |

<sup>1</sup> 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.

<sup>2</sup> This figure has been corrected to give total development expenditure, since only the foreign component was given in the previous report.

<sup>3</sup> This figure has been corrected since it was erroneous in the previous report.

# Summary of Operations

“The total quantity of drinking water produced in 2007 was 424 million cu.m.”

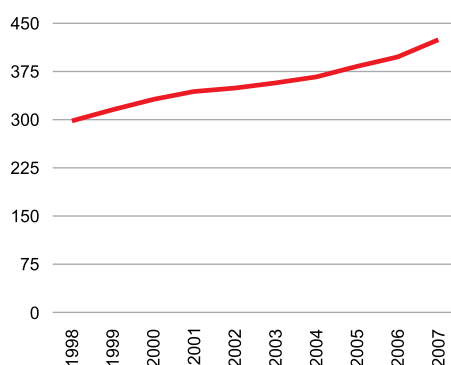
## WATER SUPPLY

### DRINKING WATER PRODUCTION

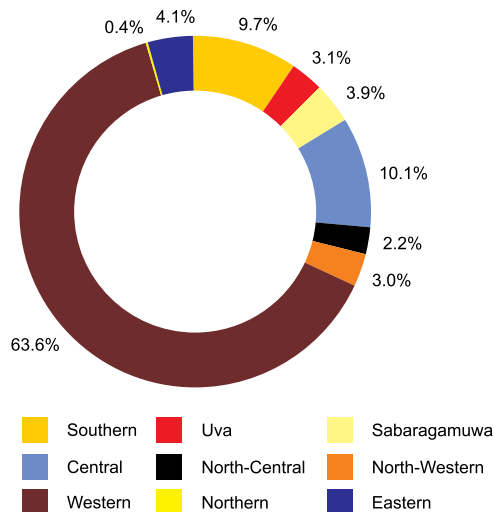
The total quantity of drinking water produced in 2007 was 424 million cu.m. The trend during the last 10 years is given in the chart. The Greater Colombo water supply system claims the major share of production through three centres at Ambatale, Labugama, and Kalatuwawa, amounting to 57.5% of the total water produced by the NWSDB. In the latter part of 2006 a fourth production centre was introduced.

### WATER PRODUCTION

million cu.m.



### WATER PRODUCTION BY PROVINCES

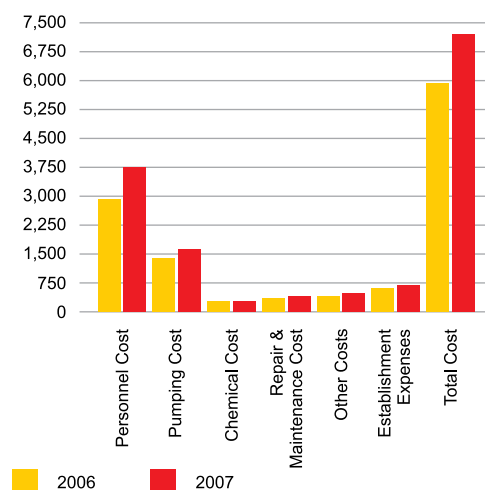


### Cost of Production:

Breakdown of the cost of production (Rs. million) in comparison with 2006 is shown below:

#### COST OF PRODUCTION

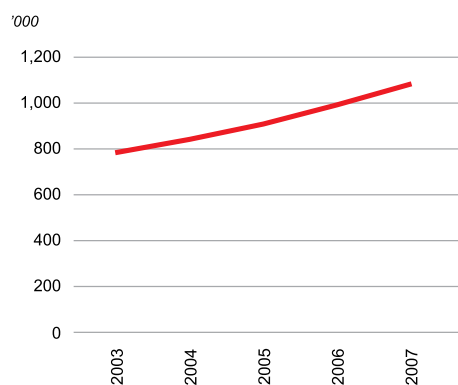
Rs. million



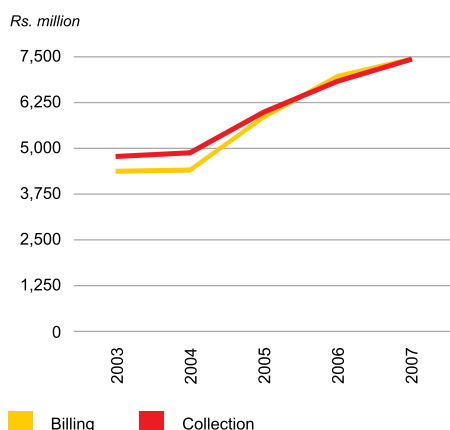
#### COMPARISON OF SERVICE CONNECTIONS

| Province          | No. of Connections<br>Province Wise |                            | Region       | No. of Connections<br>Region Wise |                            |
|-------------------|-------------------------------------|----------------------------|--------------|-----------------------------------|----------------------------|
|                   | As at end<br>December 2006          | As at end<br>December 2007 |              | As at end<br>December 2006        | As at end<br>December 2007 |
| Western - Central | 291,328                             | 309,047                    | Priority     | 2,243                             | 2,572                      |
|                   |                                     |                            | Colombo City | 113,209                           | 116,642                    |
|                   |                                     |                            | TEC North    | 109,638                           | 115,344                    |
|                   |                                     |                            | TEC South    | 66,238                            | 74,489                     |
| Western - North   | 114,318                             | 121,535                    | TNC          | 79,641                            | 85,120                     |
|                   |                                     |                            | Gampaha      | 34,677                            | 36,415                     |
| Western - South   | 127,435                             | 136,790                    | TSC          | 88,965                            | 81,542                     |
|                   |                                     |                            | Kalutara     | 38,470                            | 37,284                     |
|                   |                                     |                            | Panadura     | -                                 | 17,964                     |
| Central           | 113,711                             | 128,029                    | Kandy        | 113,711                           | 128,029                    |
| North-Western     | 26,218                              | 28,470                     | Kurunegala   | 26,218                            | 28,470                     |
| North-Central     | 33,363                              | 39,851                     | Anuradhapura | 33,363                            | 39,851                     |
| Sabaragamuwa      | 52,139                              | 57,363                     | Ratnapura    | 52,139                            | 57,363                     |
| Southern          | 137,469                             | 153,549                    | Hambantota   | 45,633                            | 51,849                     |
|                   |                                     |                            | Matara       | 49,158                            | 53,902                     |
|                   |                                     |                            | Galle        | 42,678                            | 47,798                     |
| Uva               | 39,662                              | 44,178                     | Bandarawela  | 39,662                            | 44,178                     |
| Northern          | 4,439                               | 5,083                      | Jaffna       | 4,439                             | 5,083                      |
| Eastern           | 49,313                              | 54,997                     | Ampara       | 27,774                            | 17,157                     |
|                   |                                     |                            | Trincomalee  | 21,539                            | 23,986                     |
|                   |                                     |                            | Akkaraipattu | -                                 | 13,854                     |
| <b>Total</b>      | <b>989,395</b>                      | <b>1,078,892</b>           | <b>Total</b> | <b>989,395</b>                    | <b>1,078,892</b>           |

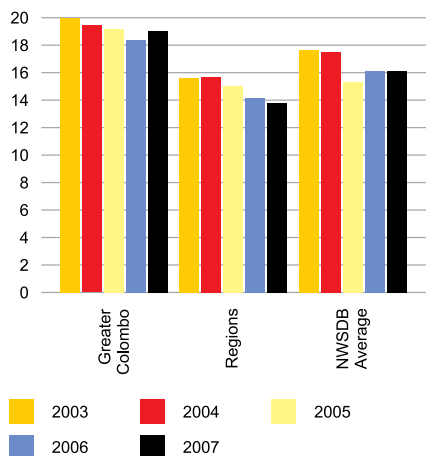
### GROWTH OF CONSUMERS



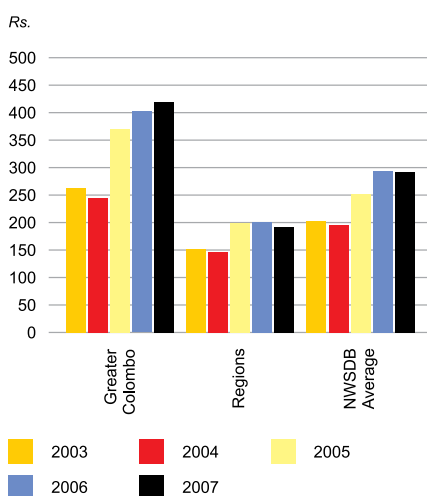
### COMPARISON OF ANNUAL BILLING AND COLLECTION



### AVERAGE HOUSEHOLD MONTHLY CONSUMPTION CUM PER CONNECTION



### AVERAGE HOUSEHOLD MONTHLY BILL



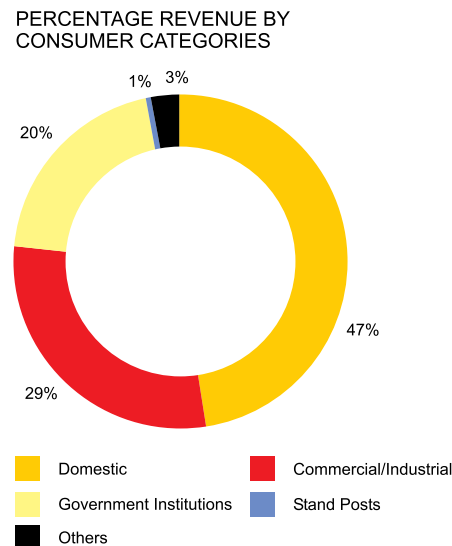
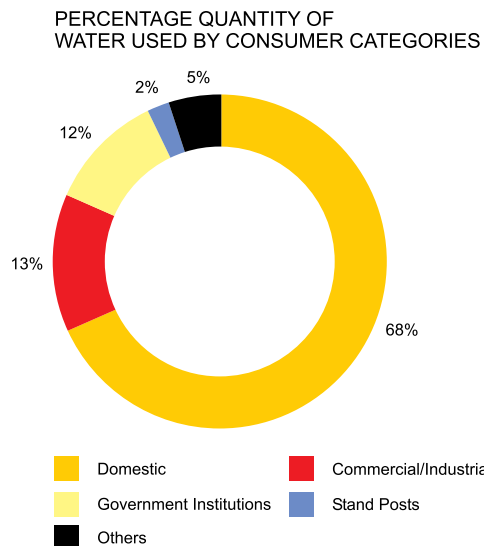
### BILLING STATISTICS

| Description                     | 2006  | 2007         |
|---------------------------------|-------|--------------|
| Billing Target (Rs. million)    | 6,572 | <b>7,164</b> |
| Actual Billing (Rs. million)    | 6,947 | <b>7,424</b> |
| Collection Target (Rs. million) | 7,256 | <b>7,933</b> |
| Actual Collection (Rs. million) | 6,816 | <b>7,418</b> |

### QUANTITY OF WATER SOLD AND REVENUE BY CONSUMER CATEGORIES (2007)

| Consumer Category  | Quantity Sold<br>cu.m. '000s | %             | Revenue<br>Rs. million | %             |
|--|------------------------------|---------------|------------------------|---------------|
| Direct billing (domestic, NWSDB quarters, Government quarters) | 181,488                      | 63.60         | 3,346                  | 45.08         |
| Schools  | 3,369                        | 1.18          | 17                     | 0.23          |
| Tenement gardens   | 9,963                        | 3.49          | 140                    | 1.89          |
| Public stand-post supply                                       | 5,603                        | 1.96          | 47                     | 0.63          |
| Government institutions, NWSDB premises                        | 30,274                       | 10.61         | 1,477                  | 19.90         |
| Commercial and industrial                                      | 27,217                       | 9.54          | 1,615                  | 21.76         |
| Tourist hotels   | 2,007                        | 0.70          | 116                    | 1.56          |
| Shipping   | 172                          | 0.06          | 50                     | 0.67          |
| Board of Investment  | 7,780                        | 2.73          | 376                    | 5.07          |
| Religious premises   | 3,541                        | 1.24          | 36                     | 0.49          |
| <b>Subtotal</b>  | <b>271.414</b>               | <b>95.12</b>  | <b>7,220</b>           | <b>97.28</b>  |
| Bulk billing   | 10,298                       | 3.61          | 114                    | 1.54          |
| Others <sup>4</sup>  | 3,626                        | 1.27          | 88                     | 1.19          |
| <b>Grand Total</b>   | <b>285,338</b>               | <b>100.00</b> | <b>7,422</b>           | <b>100.00</b> |

<sup>4</sup> All other billing categories have been grouped under 'Others'. Setting-off rebates have also been included in this category.



## 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 sewerage pump-houses and pumping mains of some National Housing Development Authority (NHDA) housing schemes and several Government institutions within the Greater Colombo area.

There are about 180 staff attached to the Greater Colombo Sewerage Section. The total operational and management cost per annum amounts to Rs. 145 million. Income from institutions is Rs. 93 million approximately.

### *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 1,900.

### *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 950 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.

#### (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 the Dehiwala-Mt. Lavinia and Kolonnawa sewerage schemes is disposed of via two sea outfalls, one at Wellawatte and at the other at Mutwal.









# The Tragedy of Pollution...

Our goal could well be to make sights such as this a rarity... After all, we are in the business of supplying clean water... and keeping drainage routes separate altogether.

**Water is a Precious Resource. Let's Save It!**

# Water Supply

“The total value of water supply works undertaken by the P & D Section in 2007 amounted to Rs. 3,395 million”

## GENERAL

### PLANNING AND DESIGN SECTION

Project reports, identification reports, pre-feasibility reports and feasibility reports were prepared, and design, final drawings and documentation works carried out for augmenting or rehabilitating existing works as well as for new works. A report on the progress of sewerage works of the Planning and Design (P & D) Section is included under the general section on sewerage.

The total value of water supply works undertaken by the P & D Section in 2007 amounted to Rs. 3,395 million. These include works carried out under capital funds, rechargeable projects and relevant proportions of the values of feasibility studies and design reviews of foreign-funded projects. The approximate population expected to be covered in these projects amounts to 1,187,000.

The work outputs in different sections are as follows. Details of water supply schemes are given in the following pages under different headings depending on their funding arrangement and states of progress.

| Subsection/Region           | No. of Water Supply Schemes Handled in 2007 |
|-----------------------------|---|
| Colombo Metropolitan Region | 7   |
| Southern and Uva            | 17  |
| Central and North-East      | 20  |

### Documentation and Quantity Surveying

The Documentation and Quantity Surveying Section is headed by the Assistant General Manager (Documentation). This section comprises of two subsections, Documentation and Quantity Surveying. These are headed by the Chief Engineer (Documentation) and the Chief Quantity Surveyor respectively.

#### Documentation (Subsection)

This subsection comprises of a Chief Engineer, Engineer, two Engineering Assistants, a Stenotypist and Office Labourer. Its function is to prepare and regularly update tender documents for contracts to be carried out by the NWSDB. In 2007, this subsection updated all standard tender documents based on Tender Board decisions and Government circulars and prepared new tender documents for the supply and laying of pipes. It also prepared civil construction documents in a format compatible with ICTAD standard bidding documents for different financial ranges. Tender documents for the supply of aluminium sulphate and lime were drafted based according to NPA guidelines. A standard tender document for water meters was prepared and Tender Board approval was obtained.



Through co-ordination with the Standard Tender Document Revision Committee, necessary approvals for the revision were obtained.

### Quantity Surveying (Subsection)

This section comprises of a Chief Quantity Surveyor, three Quantity Surveyors, two Assistant Quantity Surveyors, a Quantity Surveying Assistant, Engineering Assistant and Office Labourer.

During the year under review, this subsection completed 54 Bills of Quantity (BOQs) for the supply and laying of pipes, ten BOQs for water supply retaining structures, 14 BOQs for sewage treatment plants and 14 BOQs for office buildings. It also rated 82 BOQs. Updating of the Water Board Rate Book for 2007 was undertaken at the beginning of the year and again at the end of the year for 2008. New prices were obtained from various suppliers to update the rate book. Extra Work Orders and Variation Orders

prepared by the RSCs were checked, and site inspections carried out to obtain details for these Variation Orders.

### Drawing Office

The Drawing Office plays a vital role in the Planning and Design Section, supplying drawings for the detail designs and feasibility studies carried out for water supply and sewerage schemes. In 2007, the office completed 2,257 drawings.

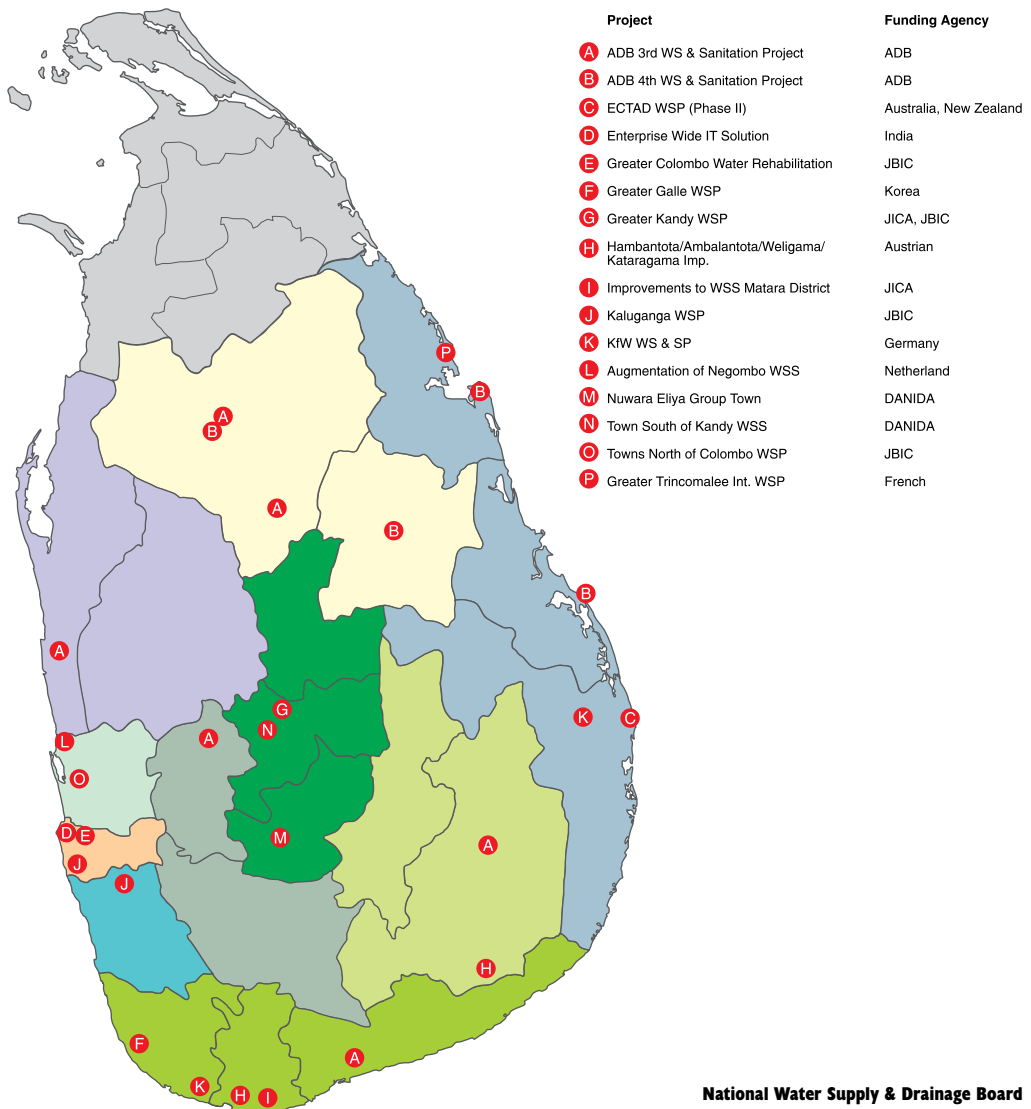
The Plan Printing Section plays a major role in respect of the P & D Section and outside sections, providing copies of plans whenever required. In 2007, the section printed 6,581 prints for the P & D Section and 691 prints for other sections.

### Surveying Section

41 sites were surveyed during the year: in all, a total of 348.8 km of longitudinal surveys and 36 site surveys were undertaken. The work included 174 longitudinal-survey days and forty site-survey days.

## MAJOR WATER SUPPLY PROJECT ACCOMPLISHMENTS

### LOCATION MAP OF FOREIGN-FUNDED PROJECTS UNDER CONSTRUCTION/AUGMENTATION DURING 2007



**PROJECTS UNDERTAKEN WITH ASIAN DEVELOPMENT BANK ASSISTANCE**

**1. Third Water Supply and Sanitation Sector Project  
Rural Water Supply and Sanitation**

Water supply and sanitation activities in rural villages and small towns in the Districts of Anuradhapura, Kalutara, Kegalle, Hambantota, Puttalam and Moneragala were continued utilizing the participatory and demand-responsive approach.

The major activities completed by the year 2007 were the rural water supply programme and the institutional water supply and sanitation programme.

**RURAL WATER SUPPLY: COMPLETED PROJECTS**

| Cumulative               | 2007                    |
|--------------------------|-------------------------|
| 886 village sub-projects | 45 village sub-projects |
| 46 small town projects   | 12 small town projects  |



Rain Water Harvesting Tank provided under Hambantota Rural Water Supply Scheme



Kakkapalliya Water Treatment Plant

Under the institutional water supply programme, 210 institutions have been covered.

Under the sanitation programme, 80,232 latrine units were completed.

Completed small scale water supply schemes are maintained by CBOs. District water and sanitation units are being established at NWSDB's district offices to provide back-up support.

*Sustainability:* A workshop on the sustainability of rural water supply and sanitation activities was held on 9th August 2007.

*Project Completion:* A project completion workshop was held on 14th December with representative participation by all stakeholders.

**Urban Water Supply Schemes**

Under this component of the ADB project, six urban water supply schemes were constructed in the Kalutara, Kegalle, Puttalam, Anuradhapura, Hambantota and Moneragala Districts. The Kalutara scheme was commissioned in 2005, while the others were commissioned in 2007.

**URBAN WATER SUPPLY SCHEMES COMPLETED**

| District   | Scheme       | Estimated Population Served |
|------------|--------------|-----------------------------|
| Puttalam   | Kakkapalliya | 37,000                      |
| Kegalle    | Kegalle      | 75,000                      |
| Hambantota | Ranna        | 58,000                      |
| Moneragala | Wellawaya    | 48,800                      |

Additionally, the Kekirawa water supply scheme had reached 85% completion by the end of the year.

**Anuradhapura Group Town Water Supply Project (AGTWP)**

The main components of the AGTWP were commissioned in 2005. Four small towns under the programme were commissioned in 2007. Also in 2007, an automatic system was introduced to operate the pumps.

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

The objective of the project is to provide safe water to 829,000 people and sanitation facilities to 171,500. To meet the revised cost estimate of US\$ 175.2 million, two supplementary loans (2276 SRI SF and 2275 SRI) were negotiated with the ADB. These loans became effective during the year under review.



Hambantota Pipe Laying

## PROJECT BENEFICIARIES

| Sub-Project  | Population to be Served (2025) |            |
|--------------|--------------------------------|------------|
|              | Water                          | Sanitation |
| Batticaloa   |                                |            |
| <i>Urban</i> | 270,000                        | 10,000     |
| <i>Rural</i> |                                | 3,500      |
| Muttur       |                                |            |
| <i>Urban</i> | 52,000                         | 10,000     |
| Hambantota   |                                |            |
| <i>Urban</i> | 100,000                        | 7,500      |
| Polonnaruwa  |                                |            |
| <i>Urban</i> | 85,000                         | 2,500      |
| <i>Rural</i> | 161,000                        | 69,000     |
| Anuradhapura |                                |            |
| <i>Rural</i> | 161,000                        | 69,000     |

### The major components of this project include:

#### **Hambantota**

Augmentation of the existing water supply system

- Salinity barrier at Ambalantota across Walawe Ganga
- Water intake (31,500 cu.m.) adjacent to existing water-treatment plant (15,000 cu.m.)
- Treated-water transmission system (54 km)
- Elevated towers (6 Nos.)
- Distribution system (148 km)

#### **Batticaloa**

New urban water supply system

- Raising of the bund of Unnichchai Dam by 1.5 m
- Water intake (80,000 cu.m.) at Unnichchai Reservoir
- Water-treatment plant (40,000 cu.m.) at Vavunathivu
- Treated-water transmission system (37 km)
- Elevated towers (7 Nos.)
- Distribution systems (261 km)

Sewerage system for Batticaloa Hospital and Prison

Urban sanitation for 2,000 families

Drainage system (3.5 km) to Kattankudy and Batticaloa towns

#### **Polonnaruwa**

New water supply system

- Intake (60,000 cu.m.) from Mahaweli River at Manampitiya
- Water-treatment plant of 13,500 cu.m. capacity

- Augmentation of existing water-treatment plant
- Treated-water transmission main (21 km)
- Elevated towers (3 Nos.)
- Distribution system (141 km)

Urban sanitation for 500 families



Completed Rain Water Harvesting Tank at Anuradhapura

#### **Muttur**

New water supply system

- Water intake (20,000 cu.m.) on right bank of Mahaweli Ganga at Neelapola
- Water-treatment plant (8,500 cu.m.) at Pachchanoor
- Treated water transmission (9 km)
- Elevated towers (2 Nos.)
- Distribution system (127 km)

## PROJECT BENEFITS (RURAL COMPONENT)

| District     | Type of Facility                                    | Areas Covered  |
|--------------|---|--|
| Anuradhapura | - Water Supply<br>- Sanitation<br>(14,000 latrines) | 117 GNDs<br>Rambewa, Mihintale,<br>Ipalogama, Palaga in Galnewa,<br>Thalawa, Nuwaragampalatha<br>(East) and Rajanganaya PSs  |
| Polonnaruwa  | - Water Supply<br>- Sanitation<br>(14,000 latrines) | 92 GNDs in Manampitiya,<br>Aralaganwila, Pansalgodelle,<br>Medirigiriya (New Town) &<br>Medirigiriya (Old Town),<br>Hingurakgoda, Alahera -<br>Bakamoona and<br>Thamankaduwa |
| Batticaloa   | - Water Supply<br>- Sanitation<br>(800 latrines)    | Manmunai West in<br>Unnichchai PS  |

**Other components of this project are:**

- a national public-awareness and education campaign on the need for a water tariff, demand management, conservation of water, hygiene and health education related to water and sanitation;
- awareness and education of CBOs on conservation of water, hygiene and health education related to water and sanitation (for rural component); and
- training and capacity-building of key water-sector institutions.

**Progress on Urban Water Components of the Project**

Ten major contracts have been awarded out of a total of 16, and construction of all works under these 10 contracts is now under way.

**Progress on Rural Water Supply Components**

These are given in the accompanying table.



*Pump House Galwanguwa - Ipalogama*

**RURAL COMPONENT PROGRESS**

|              | Point Sources | Pipe Scheme (Small) |
|--------------|---------------|---------------------|
| Anuradhapura | 90% completed | 68% completed       |
| Polonnaruwa  | 85% completed | 85% completed       |
| Batticaloa   | 65% completed | None                |

**Progress on Rural Sanitation Components**

- First batch: 95% complete in Anuradhapura and Polonnaruwa Districts; 25% complete in Batticaloa District.
- Second batch: Commenced in June. In progress.

The project had achieved physical progress status of 21% and financial progress of 19.4%. Completion of the project is expected by 2010.

**3. ADB-Assisted Tsunami-Affected Areas Rebuilding Project**

This project is to supply drinking water for tsunami-affected areas in the Batticaloa, Hambantota and Muttur Districts. The project target includes providing additional temporary or permanent distribution- and transmission-system and headworks improvements to existing schemes. The permanent distribution extensions are to be provided with community-based water supply and individual sanitation facilities under the ongoing Secondary Towns Water Supply and Sanitation Project.

**Hambantota**

Improvements were effected to the Ranna, Kirinda, Hambantota, Bundala and Wakkamulla water supply schemes, with headworks improvements, new transmission system and extended distribution systems.

**Batticaloa**

The Koralai Pattu North, Manmunai North, Manjanthuduwai, Arayampathu, Kalawanchikudi and Kallar water supply schemes were identified for improvements or new schemes, as required, and tenders have now been awarded.

**Muttur**

Fifteen shallow wells have been constructed. Construction of rainwater harvesting tanks (32 in all) was 20% complete by year's end.

The overall value of work done during the year was Rs. 87.4 million.

**PROJECTS UNDERTAKEN WITH JBIC ASSISTANCE**

**1. Greater Kandy Water Supply Project Phase I and II**

As a measure to solve the drinking water shortage in the Greater Kandy Area, the Greater Kandy Water Supply Project was proposed. It is to be implemented in three phases, funded by a special Yen loan from the JBIC.

**Phase I, Stage I**

Phase I of the project was successfully implemented on a priority basis under Stage I to provide water supply facilities to Pathadumbara, Kandy Four Gravets, Akurana, Pujapitiya and Harispattuwa Pradeshiya Sabha areas in order to resolve the acute water shortage in these areas. The works under this phase serve 381,000 people (including the floating population of Kandy City, estimated at 100,000). Construction commenced in November 2004 and was completed in December 2006.



### **Phase I, Stage II**

All identified works under Phase I could not be implemented in Stage I due to a scarcity of funds. All such work, including improvements to the treatment plant and distribution network, has been included under Stage II.

The object of this stage is to improve the service level for 194,400 people in the Greater Kandy Area, which includes the Kandy Municipal Council (KMC) area, Ampitiya, Rajapihilla, Kulugammana, Nugawela, Heerassagala, Meekanuwa, Mullepihilla, Elhena, Gohagoda, Kondadeniya and Thelambugahawatta. Total cost of the stage is Rs. 4,200 million and it is expected that work will be completed in 2012. The consultancy contract for design review and construction supervision has been awarded and reviewing work is now in progress.



*Intake of Greater Kandy WSP*

### **2. Towns North of Colombo Water Supply Project, Stage I**

The Towns North of Colombo Water Supply Project is designed to extend water supply services to six towns in the northern part of Greater Colombo: Mahara, Ragama, Welisara, Kandana, Ja-Ela and Ekala.



*Mahara Tower, Reservoir and Pump House*



*Ambatale Pump House*

The total cost of Stage I of the project is Rs. 5,724 million. Construction activities commenced in 2002 and Stage I work, comprising a treated-water transmission system from Ambatale to Ekala and headworks at Ambatale, Church Hill, Ragama, Welisara, Kandana and Ja-Ela, together with limited distribution networks in these areas, was completed in 2007. Ten thousand connections have been provided in the Ja-Ela, Kandana, Ragama and Welisara areas.

Several of the Stage II works - construction of a tower and reservoir at Mahara, a reservoir with yard piping at Ekala and a transmission line from Welisara to the Muthurajawela development area - have also been completed.

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

Stage II of this project includes headworks and distribution-network expansion at Mahara, Biyagama, Ja-Ela, Kandana, Welisara, Ragama and Ekala - the distribution systems omitted in the areas where implementation was under Stage I. Stage II works will contribute towards a total consumer coverage of approximately 200,000. The total cost of the project is Rs. 6,490 million. It commenced on 27th November 2007.

The consultancy contract for design review and construction supervision on this stage has been awarded and reviewing work is now in progress.

### **4. Kalu Ganga Water Supply Project: Phase I, Stage I**

The objective of this project is to develop the Kalu Ganga as a new water source to meet increasing demand in the southern Greater Colombo area, which includes Moratuwa, Keselwatta, Panadura, Bandaragama and Horana. Stage I of the project, now under implementation, will provide improved water services to a population of 400,000 and provide 20,000 new service connections.



Overhead Tower - Plant Water System



Flocculation and Sedimentation Tanks

Detailed designs were completed in September 2000. Stage I of this work will produce a total quantity of 60,000 cu.m./day of water from the treatment plant and make it available in the identified areas via transmission mains, reservoirs and towers. The construction of the intake, treatment plant, pumping main and main reservoir were completed and commissioned in October 2006. Finishing works continued thereafter. The total cost of the project is Rs. 12,000 million. Completion is planned for August 2008.

#### PROJECT UNDERTAKEN WITH KOREAN ASSISTANCE

##### Greater Galle Water Supply Project, Stage II

The Export Development Cooperation Financing Agency of Korea is providing the Government of Sri Lanka with US\$ 14.8 million (equivalent Rs. 1,498 million) by way



Galle Water Treatment Plant

of a soft loan to implement Stage II of the Greater Galle Water Supply Project. The major component of this project is to lay 390 km of distribution mains. The physical work commenced in December 2005. The revised date of completion is 29th August 2008.

160,000 people will benefit from improved or entirely new water supply facilities when this project is commissioned. Owing to funding restrictions, only 261 km of pipelines will be laid under Phase I of Stage II. These will be laid in the Akmeemana, Bope Poddala, Hikkaduwa and Habaraduwa Pradeshiya Sabha areas at a cost of Rs. 2,711 million. Arrangements have been made to lay the remainder of the distribution system with assistance from the same funding agency under Stage II, Phase II for a total cost of Rs. 1,032 million. Physical progress as at December 2007 was 70%.

#### PROJECTS UNDERTAKEN WITH DANIDA ASSISTANCE

##### 1. DANIDA Tsunami Project

The Government of Denmark provided total grant assistance worth DK 50 million (Rs. 875 million) in terms of tsunami-related programme assistance in 2005. The new Siribopura-Hambantota water supply scheme, expansion of the Kalmunai-Kallar-Ampara water supply scheme and augmentation of the Kalutara water supply scheme were undertaken under this programme. In total, the three projects have provided connections to 3,200 tsunami-rehabilitation housing units.

All these projects were implemented over a period of two years and successfully completed in May 2007.

Also under the project, a rainwater-harvesting programme covering 1,000 housing units was launched in the Ampara District.

##### 2. Nuwara Eliya District Group Water Supply Project (Hatton, Ginigathena, Maskeliya)

This project is implemented under DANIDA mixed credit. The contractor mobilized in December 2006 and the project will be completed by May 2009.



Site Organizing at Nuwara Eliya

The total estimated cost of the project is Rs. 3,310 million. It is expected to provide water supply facilities to 96,000 households in Ginigathhena, Rikillagaskada-Hanguranketha, Maskeliya, Walapane-Nildandahinna, Ragala and Hatton-Dickoya.

Progress as at the end of 2007 was 60, 55, 20 and 20% respectively on the first four of the above schemes. Work on the last two schemes commenced in February 2008.

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

This project will address the water requirements of 350,000 people by 2025. It covers the Uduuwara and Yatinuwara DS Divisions and parts of Gangawata Korale, Udapalatha and Ganga Ihala. Towns served by the project include Peradeniya, Pilimalalawa, Kadugannawa, Murutalawa, Danture and Gampola, Ulapne and Welamboda. The project cost of Rs. 7,250 million is funded jointly by the Governments of Denmark and Sri Lanka. The project has two main components.

The service facilities for the area extending from Peradeniya to Kadugannawa consist of a weir across the Mahaweli River extracting 32,000 cu.m. of water and a treatment plant located at Meewatura, adjacent to the weir. Treated-water will be distributed using 13 new and 4 existing ground reservoirs in the service area. Water will be transmitted to these reservoirs by means of a 40-km transmission network. The water will be distributed to consumers via a 300-km distribution network of pipes.



*Establishment of Cofferd Dam*

Service facilities for the Gampola, Ulapane and Welamboda areas consist of three water sources. The intake at Paradeka will be augmented to a capacity of 6,000 cu.m.; new treatment facilities will be constructed at Atabage; 8,000 cu.m. will be extracted from the Ulapane Oya and treated; and at Elpitiya, 7,000 cu.m. will be extracted and treated. A water-transmission network of 20 km, a water tower, three new reservoirs and three existing reservoirs will serve consumers via a 100 km pipe network.

New technologies, such as the use of high-density polyethylene pipes for water transmission, full automation of the headworks using SCADA systems and provision of 19,000 service connections, with pipe laid so that consumers may receive the intended services immediately after the scheme is commissioned are, together with reduction of water wastage, key features of this project.

The project commenced in June 2005. By September 2007, progress figures of 36% (physical) and 34% (financial) had been recorded. This vital project will be completed by June 2009.

### PROJECTS UNDERTAKEN WITH AUSTRIAN ASSISTANCE

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

The main objective of this Austrian-funded project is the provision of 28,000 new connections and service-level improvements to a population of 150,000 presently served by water supply in Hambantota, Ambalantota, Weligama and Kataragama.

Major activities are the construction of new treatment plants at Weligama, Ambalantota and Kataragama and studies on augmentation of the Badulla and Bandarawela water supply schemes. The project will be completed in March 2008. The total cost estimate on the project is Rs. 1,820 million. It was 98% complete by the end of 2007, with all three treatment plants commissioned.



*Weligama Water Treatment Plant*

#### 2. Kirindi Oya Water Supply Project

The service area under this project includes Lunugamvehera, Weeravila, Mattala, Dewramvehera, Beralihela and the proposed airport area in Weeravila. The total estimated cost is Rs. 1,707 million; on completion, about 83,000 people will benefit. The project is funded by the Government of Austria. The whole contract was awarded and the contract agreement signed during the year under review.



## PROJECT UNDERTAKEN WITH FRENCH ASSISTANCE

### Greater Trincomalee Integrated Water Supply Project

Following the damage caused by the 2004 tsunami, in January 2005 a French grant was provided to carry out a feasibility study for augmenting water supplies to the Greater Trincomalee Area. The study was completed in April 2005. A further requirement at this time was to serve two post-tsunami settlements on the coastal area near Trincomalee and two isolated locations in Pulmoddai and Echchilampattu. Total funding for this programme was provided under a French protocol amounting to 20.3 million Euros.

Under French RPE funding, the following works were undertaken: a new intake from the Mahaweli River at Kantalai, augmentation of the existing treatment plant and improvements to the existing intake, etc., at a cost of 10 million Euros. Part of the pipe supply, together with distribution improvements and the two isolated projects for Pulmoddai and Echchilampattu, were provided under French AFD funding to the value of 10.3 million Euros.

The objective of this project is to increase the production capacity of the Kantalai water-treatment plant to 12 MGD and increase the service level in the entire Trincomalee integrated water supply scheme.

Project components include

- construction of new intake and pump-house;
- laying a new raw-water main;
- laying a new transmission main;
- distribution system improvements;
- rehabilitation and augmentation of Kantalai WTP and service reservoirs;
- introduction of a SCADA system; and
- construction of new WSSs at Pulmoddai and Echchilampattu.

A consultancy firm was appointed in 2006. At present, procurement processes for works are ongoing. Physical work has yet to be started.

## PROJECTS UNDERTAKEN WITH KfW ASSISTANCE

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

Under this project, drinking-water facilities in the Ampara and Nawalapitiya Urban Council areas and part of the Habaraduwa Pradeshiya Sabha area (including the Koggala Export Processing Zone of the Board of Investment) will be substantially improved. The project is financed by the Government of Germany through KfW Bank by means of a soft loan, and also the Government of Sri Lanka. Total estimated project cost is equivalent to Rs. 2,662 million. The

contribution from the Government of Germany is 14.06 million Euros, while the Government of Sri Lanka contributes Rs. 845 million and the BOI a further Rs. 141 million. In all, about 87,000 consumers will benefit from this project.

The Nawalapitiya sub-project was ceremonially commissioned in December 2007, while the Koggala and Ampara sub-projects are scheduled to be completed within the first quarter of 2008. Overall physical progress as at 31 December 2007 was 93%.

**Ampara:** The project area covers the Ampara Urban Council area. The existing water supply is substantially augmented under the new project. The estimated total population served is 28,000.



Ampara Clear Water Tank

The main components of the project are -

- installation of intake pumps;
- laying a 350 mm-diameter DI raw water main;
- construction of a 6,500 cu.m./day-capacity treatment plant;
- construction of a 1000 cu.m.-capacity ground reservoir;
- construction of a high-lift pump-house and installation of high-lift pumps;
- laying a clear-water transmission main;
- rehabilitation of two existing water towers;
- extension of distribution system by another 15.5 km; and
- a leak elimination programme to reduce non-revenue water.

It is planned to extract water from Konduwatuwana tank.

**Nawalapitiya:** The project covers the Nawalapitiya UC area. The quantity of water distributed by the existing systems is not adequate for the township and the quality of water distributed is also unreliable. The new water supply project will address these issues holistically with a comprehensive system-improvement programme. The estimated total population served is 22,000.





*Nawalapitiya Intake Dam*

The main components of the project are -

- construction of intake;
- construction of 4500 cu.m./day-capacity treatment plant;
- construction of 1000 cu.m.-capacity water tower;
- construction of 1000 cu.m. and 450 cu.m.-capacity ground reservoirs;
- pump-house;
- laying of clear-water, gravity and pumping transmission mains;
- distribution network of 33 km; and
- construction of office and quarters.

**Koggala:** The project covers part of the Habaraduwa Pradeshiya Sabha area, including the Koggala Export Processing Zone, part of Habaraduwa Township, Koggala, Kathaluwa and Ahangama townships. The estimated total population served is 37,000. The total water demand is 7,800 cu.m./day. The treated water will be transmitted from Halloluwigoda ground reservoir, which has been built as a part of Greater Galle Water Supply Project. The project consists of 9.3 km of DI and PVC transmission mains and an approximately 26 km-long distribution network.



*Pressure Testing at Koggala*

## 2. Rehabilitation of Water Supply in Galle District

Owing to the damage caused by the 2004 tsunami, immediate relief works including the supply of water bowsers, water tanks, etc., were undertaken by the Government of Germany under Stage I of this project. As a follow-up to this, 14 km of DI transmission main from Baddegama Treatment Plant to the storage reservoir at Ambalangoda was supplied and laid. This work commenced in June 2005 and was completed in December 2007. All works under Stage I, except the transmission line, were completed in 2006. The pipeline was completed by the end of 2007 and commissioned. A total of 60,000 persons enjoy improved or new water supply facilities as a result. The total cost of this component is Rs. 710 million.

Furthermore, agreement has been reached with KfW Bank of Germany to augment the present capacity of the Baddegama water-treatment plant from 18,000 cu.m./day to 36,000 cu.m./day as Stage II of this project. By this, 14,000 water supply consumers in the coastal areas of Ambalangoda, Balapitiya, Piyagama and Galagoda will experience improved water supply. Design work is complete and all five major contracts have been awarded. Contractors had just mobilized by the end of 2007. The Stage II works are to be completed by the end of 2009. The total estimated cost of Stage II is Rs. 3,636 million.

## PROJECTS UNDERTAKEN WITH AUSTRALIAN ASSISTANCE

### 1. Integrated Water Supply Project for Eastern Coastal Towns of the Ampara District, Stage II

The aim of this project is to provide water supply facilities along the eastern coastal parts of Ampara District, covering the Akkaraipattu, Addalaichenai, Oluvil-Palamunai, Ninthavur and Maruthamunai townships. The project also supplies water to Irakkamam, situated in between Ampara and Akkaraipattu.



*Ampara Intake Bridge*

The design population covered by the project is 370,000. Total project cost estimate is Rs. 10,472 million. The foreign-aid portion of the project cost was funded by the Australian Government through EFIC/ANZ Bank.

Project implementation commenced in December 2002 and water supply service to the entire project area was commissioned during the year under review. Some remaining construction of buildings and other miscellaneous works is scheduled for completion during the first half of 2008.

#### **PROJECT UNDERTAKEN WITH UNICEF ASSISTANCE** **UNICEF Tsunami Project**

After the tsunami disaster, UNICEF came forward with considerable assistance for the water sector. This included much emergency assistance, which was very helpful. As immediate requirements were gradually met, the Fund agreed to provide financial assistance worth about US\$ 25 million for various identified needs of the water sector. The key interventions are as follows:

1. Augmentation of Tangalle urban WSS at a cost of US\$ 10 million. Work began in September 2006 and will be completed by the end of February 2008.
2. Construction of a new WSS for Thirukkivil at a cost of US\$ 12 million. Construction activities started in October 2006 and will be completed in December 2008.
3. A new WSS was designed for Mullaitivu town. Although all planning and design activities have been completed, tendering has not been possible due to the prevailing situation in the area.
4. Water supply to 2,000 families resettled in new settlements in the Kalutara District through nine small-scale rural water supply systems.
5. Preparation of water-safety plans on a pilot basis for three selected schemes in the Southern Province.

#### **PROJECT UNDERTAKEN WITH USAID ASSISTANCE** **Pottuvil-Ulle Water Supply Scheme (Tsunami Site)**

The Pottuvil-Ulle WSS is co-funded by USAID and IFRC. The total cost estimate is Rs. 1,400 million. This scheme will serve a population of 42,000 by 2025. The design of all headworks is carried out by USAID, while design of the distribution system is by the NWSDB's Planning and Design Section. Intake and treatment plant works are under construction. Design details of the distribution system have been handed over to IFRC for tender procedures.

#### **PROJECT UNDERTAKEN WITH RED CROSS ASSISTANCE** **Tsunami Rehabilitation Project**

IFRC, in association with the Sri Lanka Red Cross, signed a MoU with the Government to provide assistance for water supply projects worth US\$ 37 million. This includes water supply improvements in the Galle, Matara, Hambantota, Ampara and Jaffna Districts. Some of the major activities to be implemented are as follows:

1. water supply extensions to post-tsunami resettlement sites in the Galle and Matara Districts;
2. distribution system improvements in Weligama WSS;
3. new water supply scheme to Seenimodara area;
4. water supply distribution improvements in the Akkaraipattu and Oluvil area;
5. construction of new water supply schemes in the Pottuwil and Nindavur area.

The following activities were complete at the end of 2007:

1. Seenimodara and Moraketiyana water supply project in Hambantota District.
2. School rainwater harvesting in Hambantota area.
3. Chlorination project in Hambantota water supply scheme.

Cumulative physical progress as at the end of 2007 was 27%. 24.5% physical progress was achieved in the course of the year.

The following activity is still at the planning and design stage: Pottuvil water supply scheme in Ampara District.

The following activities are ongoing at present:

1. extensions from main road to resettlement areas in and around Galle;
2. meeting rural water supply requirements in the Galle area;
3. new transmission main from Wakwella to Beekka in Galle water supply scheme;
4. pipe-laying to resettlement areas, including Weligama-Midigama line and secondary pumping for the Kaburugamuwa and Mirissa areas in Matara District;
5. Weligama area distribution system in Matara area;
6. distribution improvements to Kudawella area (transmission main from Batigama to Naigala) in Matara District;

7. supply and laying of 85 km of distribution pipes and civil works in Akkarapattu;
8. Samanthurai Treatment Plant in Ampara District.

cost estimate of the scheme is Rs. 180 million. It is expected to serve a population of 12,750 by the year 2025. Construction activities are in progress.

## 2. Kinniya Water Supply Scheme

Kinniya WSS is funded by GOSL/STAART at a tentative estimated cost of Rs. 107 million. The population benefited by this project is about 40,000. Design work had been completed at the time of publication.

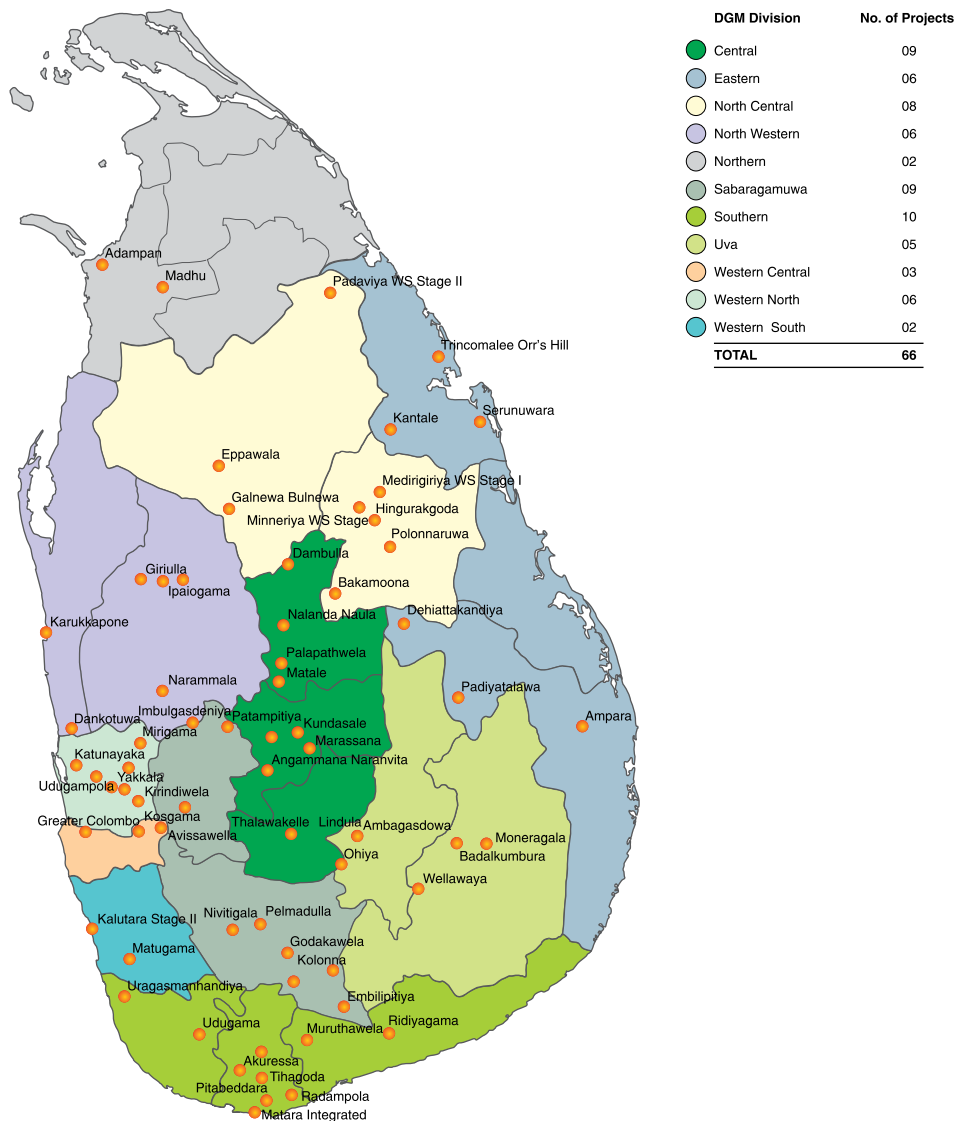
## PROJECTS UNDERTAKEN WITH STAART ASSISTANCE

### 1. Kalawanchikudi Water Supply Scheme

Under STAART financial assistance, the Kalawanchikudi Water Supply Scheme was proposed to serve tsunami-affected families in the Kalawanchikudi area. The tentative

## GOSL FUNDED SMALL AND MEDIUM SCALE WATER SUPPLY PROJECTS

### LOCATION MAP OF PROJECTS UNDER CONSTRUCTION/AUGMENTATION DURING 2007 FUNDED BY THE GOVERNMENT OF SRI LANKA



### GOSL FUNDING THROUGH SMALL-SCALE INFRASTRUCTURE REHABILITATION AND UPGRADING PROJECTS

Under the Capital Works Programme, 31 new water supply projects and rehabilitation and augmentation on a further 35 water supply schemes were carried out in 2007.

#### DISTRICT-WISE CAPITAL WORKS PROGRAMME 2007

| District         | Allocation 2007<br>Rs. million | No. of<br>Projects with<br>Allocation | Beneficiaries    |
|------------------|--------------------------------|---------------------------------------|------------------|
| Ampara           | 93.0                           | 3                                     | 45,000           |
| Anuradhapura     | 319.6                          | 4                                     | 30,000           |
| Badulla          | 7.5                            | 2                                     | 31,150           |
| Colombo          | 246.4                          | 4                                     | 105,900          |
| Galle            | 40.0                           | 2                                     | 11,300           |
| Gampaha          | 102.8                          | 4                                     | 241,750          |
| Hambantota       | 1.7                            | 1                                     | 6,000            |
| Kalutara         | 49.7                           | 2                                     | 30,000           |
| Kandy            | 256.4                          | 4                                     | 155,000          |
| Kegalle          | 88.5                           | 3                                     | 24,450           |
| Kurunegala       | 166.5                          | 4                                     | 90,000           |
| Mannar           | 7.0                            | 2                                     | 15,000           |
| Matale           | 227.0                          | 4                                     | 43,100           |
| Matara           | 257.0                          | 7                                     | 213,000          |
| Moneragala       | 106.0                          | 3                                     | 36,000           |
| Nuwara Eliya     | 13.7.0                         | 1                                     | 10,500           |
| Polonnaruwa      | 183.7                          | 5                                     | 55,000           |
| Puttalam         | 10.0                           | 1                                     | 2,500            |
| Ratnapura        | 281.0                          | 6                                     | 99,000           |
| Trincomalee      | 70.0                           | 3                                     | 50,000           |
| Inter Provincial | 30.0                           | 1                                     | 35,000           |
| <b>Total</b>     | <b>2,625.0</b>                 | <b>66</b>                             | <b>1,329,650</b> |

There were eighteen projects without allocation continuing from previous years, and nothing could be done in 2007. 59% of the above allocation was utilized during the course of the year.

### COMPLETED PROJECTS

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

|                         |  |
|-------------------------|--|
| Western                 | Kirindiwela*<br>Yakkala*<br>Udugampola<br>Kosgama*<br>Nittambuwa-Veyangoda<br>Oruwala-Koratota |
| North Central and North | Habarana<br>Nachchiduwa<br>Lolugaswewa   |
| North Western           | Kakkapalliya   |
| East                    | Nintavur, Irakkamam,<br>Akkaipattu,<br>Muruthamunai,<br>Oluvil-Palamunai                       |
| Southern                | Muruthawela<br>Makandura<br>Ridiyagama<br>Weligama   |
| Sabaragamuwa and Uva    | Yatiantota*<br>Udawalawa Treatment Plant*  |
| Central                 | Nawalapitiya<br>Greater Kandy (Stage I)  |

\* Partly commissioned

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

### **Akuressa Water Supply Scheme**

This new scheme intends to serve 15,000 people at a cost of Rs. 145.6 million.

At present, a raw-water pumping main and a treated-water pumping main have been almost completed and the laying of the distribution main has also been completed. Construction of the water-treatment plant is in progress.

### **Muruthawela Water Supply Scheme**

This scheme intends to serve 16,000 people at a cost of Rs. 525 million.

Project components such as treatment plant, elevated tower, ground reservoir, pumping main, transmission main and distribution systems for the Muruthawela, Weeraketiya and Walasmulla areas have been completed. Construction is ongoing on such remaining works as the culvert crossings and laying of the rider main.

### **Yakkala Water Supply Scheme**

The new treatment plant, which can supply 3,000 cu.m./day, will be constructed to the benefit of about 14,000 people. The project is being financed by the capital budget and is constructed at a cost of Rs. 204 million.

Having completed the project components, such as a 3,000 cu.m.-capacity treatment plant, 1,000 cu.m.-capacity water tower, sludge-drying beds and laying of the raw-water main, transmission main and distribution systems, as well as the construction of a chemical house, pump-houses and intake structure; and having supplied and installed high- and low-lift pumps and treatment-plant equipment and constructed a settling tank, the project is now progressing with balance works: the supply and installation of a submersible pump for settling tank recycling, the laying of PVC pipes for extensions and the installation of a mechanical flocculator.

### **Nittambuwa-Veyangoda Water Supply Scheme**

Raw water taken from Attanagalu Oya at the existing intake will feed a new treatment plant to be constructed to supply water to some 15,000 people in the Nittambuwa and Kalagedihena areas at a cost of Rs. 210 million.

Completed to date are the treatment plant, a water tower of 450 cu.m.-capacity, office building, chemical house and pump-house, raw-water main, transmission main and distribution system. High-lift and low-lift pumps have been installed. Repairs to the existing intake and treatment plant have also been completed, together with the supply and installation of air blowers, sludge pumps, chlorinators and mixing stirrers, a mechanical flocculator, settling tank and sludge-drying beds.

Supply and laying of PVC pipes for the Warana extension remain outstanding.

### **Kirindiwela Water Supply Scheme**

A new treatment plant capable of supplying 2,750 cu.m./day will be constructed at the existing plant site at Pugoda. The project is funded by the NWSDB under the capital budget and intends to serve a population of 8,000 at an estimated cost of Rs. 198 million.

Having completed project components such as a 450 cu.m.-capacity water tower, OIC's quarters, laying 30 km of PVC, DI and GI pipe works and gas chlorinators, the project is left with balance works such as the supply and installation of low-lift pumps and construction of the intake structure. Construction of the flocculator and channel is substantially complete.

### **Udugama Water Supply Scheme**

By 2020, this water supply scheme will provide pipe-borne water to a population of about 8,500 in Udugama town and suburbs. The design capacity of the scheme is 1,200 cu.m./day. Tentative estimated cost is Rs. 118 million. It is now under construction.

### **Dankotuwa Water Supply Scheme**

This project covers water supply to Dankotuwa, Wennapuwa, Nattandiya and a small area of Mahawewa, serving an estimated population of 25,000 by 2027. It is to be implemented in two phases.

Phase I covers 55% of the Dankotuwa, Nattandiya and Wennappuwa areas with a 43,000 cu.m./day-capacity full-treatment plant. Phase II covers part of Mahawewa and the remaining areas of Dankotuwa, Nattandiya and Wennappuwa with a 13,500 cu.m./day full-treatment plant.

Construction of the treatment plant and the laying of pipes are in progress.

### **Udugampola Water Supply Scheme**

This scheme is designed to supply drinking water to the Udugampola area by tapping borehole intakes located on the Pradeshiya Sabha premises. This scheme intends to serve a population of 5,750 at a total estimated cost of Rs. 43 million. Project components so far complete include boreholes and control rooms, water tower, gas chlorinators, transmission mains and distribution systems. Balance works are mainly related to the construction of the office building, which is almost completed.

### **Katunayake Water Supply Scheme**

This scheme is to be implemented in two stages. In Stage I, 1,000 cu.m./day will be supplied to the Katunayake Export Processing Zone and 1,000 cu.m./day to the Gallewatta distribution system to serve a population of 29,000 at an estimated total cost of Rs. 166.98 million.



Stage II of this scheme will be executed at an estimated cost of Rs. 185 million.

Having completed project components such as a 400 cu.m./day treatment plant, raw-water pumping main and two water towers of 450 cu.m. and 1,350 cu.m. capacity respectively, and undertaken the replacement of the old plant's high-lift pumps and the installation of new ones, the project is progressing with such balance works as the laying of the Gallewatta and Katunayake distribution systems and a pumping main to the Katunayake tower.

#### **Avissawella Water Supply Scheme**

The scope of the present project is an improvement of the existing water supply scheme to enhance its capacity to 6,000 cu.m./day. The tentative estimated cost for the improvement is Rs. 75 million. Improvements for the intake are under construction with some suggested modifications to enable completion of the work sooner.

#### **Kosgama Water Supply Scheme**

This scheme was commissioned in 2005 with a temporary intake. Designs for a permanent intake are now being produced by the P & D Section. Meanwhile, a supporting structure for the temporary intake is being executed by the Workshop. A tender for the civil works involved is also being prepared by the P & D section. An intake structure constructed in the Kelani River opposite Kosgama will be utilized for water supply to the Giridara area. These works are being handed by P & D at present. Currently, the Construction Section is running the treatment plant.

#### **Hanwella Water Supply Scheme**

This is a distribution extension with water obtained from Labugama-Kalatuwawa system. The works represent a single contract carried out by Transwater; of the 15 km to be laid, about 5 km has been completed. 5 km of laying has to be carried out on the High Level Road, and the Road Development Authority has insisted that NWSDB meet the cost of subsequent road repairs. This has been referred to P & D in order to prepare a tender document; the original scope of the contract to be handled by Transwater has been altered accordingly.

#### **Jalthara Ranala Water Supply Scheme**

Jalthara Ranala WSS will benefit 20,400 families in the Kaduwela and Homagama DS divisions. The project has been implemented in two phases. Design work on Phase I is already complete. The estimated cost for Phases I and II are Rs. 217.16 million and Rs. 1,513.00 million respectively.

#### **Mahawa-Nikaweratiya Integrated Water Supply Scheme**

The total cost estimated for this scheme is Rs. 890 million. It will serve an estimated population of 40,000 by 2025. Construction is now in progress.

#### **Serunuwara Water Supply Scheme**

The cost of this scheme is Rs. 418 million. The population benefited by it will number about 14,500 by 2026. Design works for the scheme are in progress, and pipe-laying is now being undertaken.

#### **Ambagasdowa Water Supply Scheme**

This scheme will provide pipe-borne water to a population of about 17,812 in the Ambagasdowa town area and suburbs by 2024. The design capacity is 3,000 cu.m./day at a tentative estimated cost of Rs. 185 million. The scheme is now under construction.

#### **Giriulla Water Supply Scheme**

Construction of towers, supplying of pipes and laying of pipelines is in progress.

#### **Chico Water Supply Scheme**

This is a 3MGD plant previously owned by the Steel Corporation. All tenders have been awarded and construction works are in progress. This is an urgent need to complete the project as early as possible, as Chico Plant is to be commissioned in the second quarter of 2008. After commissioning, the scheme is proposed to supply currently unsupplied areas in Malwana, Dompe and Biyagama, as well partly meeting demand from the Biyagama Export Processing Zone. Additionally, Athurugiriya and Korathota are to be covered by surplus production from the scheme.

#### **Nivitigala Water Supply Scheme**

This water supply scheme is a distribution expansion using water utilized from a stream connected with the Pradeshiya Sabha water supply. Works have been completed and the scheme is to be handed over to the Provincial Office (Sabaragamuwa), which will implement connections and transfer works.

#### **Pelmadulla Water Supply Scheme**

This is an augmentation of the existing Pelmadulla WSS. Old pipelines are to be abandoned and connections transferred to new lines. This work, too, will be handed over to the Provincial Office (Sabaragamuwa).

#### **Godakawela Water Supply Scheme**

This scheme belongs to the Godakawela Pradeshiya Sabha. The NWSDB Construction Section is involved in the laying of a distribution/transmission pipeline. Other works, such as the treatment plant, intake and M & E works, are handled by the Provincial Office (Sabaragamuwa). After completion, the scheme is to be managed by the Godakawela Pradeshiya Sabha.

#### **Yatyanthota Water Supply Scheme**

Originally, an intake was constructed in the Kelani River but had to be abandoned due to falling water levels. A new design was adapted by means of a weir in the Vee Oya, now under construction. In the meantime, supplies are being maintained through a temporary pontoon intake. The scheme is currently being administered by the Pradeshiya Sabha, which will take it over after completion.

#### **Embilipitiya Water Supply Scheme**

The existing scheme is being augmented with a treatment plant. Contracts are ongoing for treatment plant, office and water tower. The intake and associated M & E works are yet to be finalized by P & D.

#### **Udawalawe Water Supply Scheme**

This, too, is an augmentation of an existing scheme with a treatment plant. Contracts for the treatment plant, intake, transmission pipeline and M & E works are ongoing. Tenders for the distribution system have been finalized and are in various stages of procurement. The original cost estimate for the scheme has proved insufficient, however, and action will be taken to revise it accordingly.

#### **Kalutara Water Supply Scheme**

Stage I work has been completed and handed over to O & M. Stage II work involves the replacement of the present asbestos cement pipeline by DI at an estimated cost of Rs. 900 million. There are several tenders in various stages of procurement.

#### **Matugama Water Supply Scheme**

A PVC pipeline from Kethhena to Matugama was constructed in 1998-2001 but suffered frequent ruptures. It has now been decided to lay a new pipeline of DI. Meanwhile, as a short-term solution, the possibility of commissioning the existing pipeline after raising the valve chamber, installing air valves, etc., is being explored.

#### **Ridiyagama Water Supply Scheme**

This scheme will provide pipe-borne water to a population of about 5,000 in Ridiyagama town and suburbs by 2015. The design capacity is 1,300 cu.m./day and the tentative estimated cost Rs. 69.37 million. Construction is completed and the scheme has been handed over to the O & M Section.

#### **Thihagoda Water Supply Scheme**

This water supply scheme will provide pipe-borne water to a population of about 6,500 in Thihagoda town and suburbs by 2020. The design capacity is 1,750 cu.m./day and the tentative estimated cost is Rs. 154 million. The scheme is now under construction.

### **NEW INITIATIVES TO BE PURSUED IN 2008**

#### **1. WATER SECTOR DEVELOPMENT PROJECT II (JBIC) FOR COLOMBO AND KALUTARA AREAS**

Agreement was reached between the Governments of Japan (JBIC) and Sri Lanka (GOSL) for the implementation of a Water Sector Development Project (WSDP) under JBIC funding. The project was approved by JBIC in 2007 and the loan agreement was signed in September of that year between the ERD and the Government of Japan.

The Kalu Ganga Water Supply Project Phase I (Stage II), the Greater Colombo Water Rehabilitation Project and consulting services are sub-projects included under the Water Sector Development Project (WSDP) II.

#### **2. KALU GANGA WATER SUPPLY PROJECT PHASE I STAGE II**

The scope of the project includes construction of a 13.5 MGD-capacity treatment plant, a transmission main from the plant to Piliyandala and distribution in the Kesbewa and Horana areas. The duration will be two years. JBIC assistance has been secured under the 2008 Yen Loan package. Consultants have been appointed and design work is under way. Project activities will commence after the loan becomes effective in March 2008.

This project will benefit 400,000 people in the Colombo and Kalutara Districts of the Western Province at an estimated cost of Rs. 8,000 million. The phase will cover Gonapola, Kumbuka, Koralaïma, Kahathuduwa, Polgasowita, Kesbewa, Boralesgamuwa, Panadura, Ingiriya and Handapangoda.

#### **3. GREATER COLOMBO WATER REHABILITATION PROJECT**

Scope includes the construction of two service reservoirs at Elie House and Maligakanda and water supply facilities to the Kotikawatta-Mulleriyawa and Kolonnawa areas. The estimated cost is Rs. 4,785 million. A Project Director was appointed in October 2007. The project is expected to be completed by the end of 2011.

#### **4. SMALL TOWNS AND RURAL ARID AREAS IN PUTTALAM, CHILAW, VAVUNIYA AND MANNAR WATER AND SANITATION PROJECT (ADB FIFTH PROJECT)**

This project was designed to provide small towns and rural areas in Puttalam, Chilaw, Vavuniya and Mannar with water and sanitation facilities. Other outputs include the strengthening of community-based organizations established on participatory principles under previous projects.

#### **5. JAFFNA PENINSULA INTEGRATED WATER SUPPLY AND SANITATION PROJECT (ADB)**

The feasibility study for this project has been completed with ADB assistance. It covers the development of urban and rural water supply and sanitation in the Jaffna Peninsula, including a piped sewerage system for the Jaffna municipal area. The population served with water will be 600,000 and the project cost is estimated as US\$ 118 million. The present intermittent supply to the Jaffna Market area will be improved, with 24-hour supplies becoming available on completion of the project.

#### **6. 40 MGD-CAPACITY KELANI RIGHT BANK WTP (DANIDA)**

This is a top-priority project whose purpose is to improve water supply to the City of Colombo. It is intended to feed the distribution network laid under the Towns North of Colombo Project funded by JBIC. The project comprises a 40 MGD intake and a treatment plant of 40 MGD - capacity to be constructed on the right bank of the Kelani River at Ambatale.

There has been a long delay in implementation of this project. However, all contractual matters have now been resolved and implementation will commence by May 2008. Upon completion in 2010, there will be a substantial improvement in water supply to the Greater Colombo Area.

In order to ensure raw-water quality for the project, the construction of a salinity barrier is essential. Reinforcement of the river banks with sheet piles has been proposed, together with construction of a concrete apron for placing jute bags.

#### **7. AUGMENTATION OF NEGOMBO WS PROJECT (DUTCH FUNDING)**

This project aims to increase the capacity of the Negombo water supply scheme with another intake and additional treatment facilities. It is estimated to cost Rs. 5,424 million. The contract has been awarded but funds have not yet been released by the Dutch ORET programme. We are currently awaiting release of the funds in order to effect the contract and commence work.

An offer submitted by Biwater Contracting in this regard has been accepted by the Cabinet, which has awarded this company the tender for implementation on a design-and-build basis. A contract agreement has already been signed between the NWSDB and Biwater Contracting.

The project encompasses the construction of a new 12,000 cu.m./day-capacity treatment plant near the existing one at Bambukuliya, together with transmission and distribution systems to improve supplies to the presently-served area and supply currently unserved areas of Duwa, Pitipana and Kochchikade. It is expected that 21,000 cu.m./day will be supplied through the Towns North of Colombo Project to supplement this distribution system. The expected population to be benefited through this project by 2025 is 214,000.

#### **8. AMBATALE AND NEGOMBO WATER TREATMENT PLANTS (SPANISH)**

##### **Ambatale Plant: 10 MGD (50,000 cu.m./day)**

The Letter of Award was issued on 19th December 2007. The contract agreement remains to be finalized. In the meantime, the contractor has already commenced soil investigation and design work. It is expected that the contract will be completed within 18 months.

##### **Negombo Plant: (3,000 cu.m./day)**

Several environmental problems were encountered at the present treatment plant site. A new location has now been finalized.

#### **9. AMPARA ECTAD, PHASE III (AUSTRALIA)**

This project is considered as Phase III of the ongoing ECTAD project to supply unserved areas of Ampara District. It is proposed to construct 4.5 MGD and 2 MGD cu.m./day treatment plants to serve Dammana and Addalachchenai DS Divisions via a distribution system of 138.5 km. The project is to be funded by a credit facility from the Government of Australia.

The contract has been signed, but project activities are yet to commence as funds have not been released.

#### **10. REHABILITATION AND AUGMENTATION OF LABUGAMA-KALATUWAWA WTP (HUNGARY)**

The project includes the rehabilitation and augmentation of the Labugama and Kalatuwawa water-treatment plants (commissioned in 1886 and 1957 respectively) to improve treated-water quality and plant operational efficiency and to effect necessary repairs. The contract was signed in September 2007, but the Export Bank of Hungary has currently suspended credit, putting the project on hold. The construction period will be of two years duration, with completion expected in early 2010. The total project cost is 34.1 million Euros.



## **NEW PROJECTS IN THE PIPELINE**

### **1. GREATER DAMBULLA WATER SUPPLY SCHEME**

This project is to improve water supply facilities for fast-developing areas in Dambulla, Kandalama, Sigiriya and Habarana. Population proposed to be served by 2027 is 347,551. Total estimated cost of the project is Rs. 4,094 million. An intake at Dambulu Oya Reservoir, new treatment plant at the existing plant site and Reservoirs at Inamaluwa, Habarana and Sigiriya will be constructed to provide a capacity of 30,000 cu.m./day.

### **2. BADULLA AND BANDARAWELA INTEGRATED WSP**

This project covers Badulla, Hali-Ela, Ella, Bandarawela, Diyatalawa, Haputale, Boralande, Keppetipola, Welimada, Divitotawela and Ambagasdowa areas. It is planned to achieve water supply coverage of 55% (average) compared to the present 37%; the current production of 22,601 cu.m./day will be increased to 67,311 cu.m./day to serve an additional population of 200,250. The present sources will be improved and augmented by establishing seven surface-water reservoirs across six streams or rivers in the project area. These will be formed by the construction of concrete gravity dams at Moratota-Samagipura, Demodara, Gammedda, Kahagolla and Mahatotilla, together with a diversion weir at Rathambe across Uma Oya.

### **3. MONERAGALA-BUTTALA INTEGRATED WSS**

About 90,000 people in Buttala, Moneragala, Okkampitiya and Nakkala are to be covered by this WSS at a total estimated cost of about Rs. 1,675 million. 2007 saw submission of the project proposal and PAC approval. Preparation of conceptual designs will shortly commence.

### **4. MATARA INTEGRATED WATER SUPPLY SCHEME, PHASE IV**

The project is to serve about 62,000 people in Thihagoda, Aparekka, Dandeniya and Miriswatta by 2030. The total estimated cost is Rs. 2,854 million. A project proposal was prepared in 2007. PAC recommended proceeding with works after finalizing the proposal for a salinity barrier to be constructed at Nadugala (see below).

### **5. SALINITY BARRIER AT NADUGALA**

This project proposal was prepared during the year 2007 and approved by the PAC. Through it, at a total estimated cost of Rs. 1,484 million, most of the future drinking-water requirements of the Matara District will be met. The location of the structure is to be finalized in agreement with the Irrigation Department, since early proposals met with some objections from farmers' organizations.

### **6. MAHIYANGANAYA WATER SUPPLY SCHEME**

This water supply scheme will provide pipe-borne water to a population of about 20,779 in Mahiyanganaya town and suburbs by 2027. The design capacity is 4,500 cu.m./day and the tentative estimated cost is Rs. 989.2 million. Funding is not yet finalized.

### **7. KIRIELLA WATER SUPPLY SCHEME**

Under this scheme, it is expected to provide drinking water to Kiriella township and suburbs. The expected population served by 2027 is 8,000; estimated demand is 1,800 cu.m./day. The distribution system will approximately 25 km in length. PAC approval has been obtained for this scheme, Cabinet approval is awaited.

### **8. KARUKKAPONE WATER SUPPLY SCHEME**

Source investigation works were carried out and water-quality reports studied. The scheme will serve 6,600 by 2025.

### **9. WATER SUPPLY PROJECT FOR UNSERVED AREAS OF THE AMPARA DISTRICT**

Feasibility studies were carried out for pipe-borne water supply facilities to unserved areas in the Ampara District. Tentative estimated cost of the project is Rs. 13,256.36 million. It will serve a population of about 185,000 by the year 2026. A design-and-build contract has been awarded, but the agreement remains to be signed.

### **10. BADALKUMBURA WATER SUPPLY SCHEME**

The design capacity of this scheme is 3,000 cu.m./day. The project population to be served by 2030 is about 16,830 in Badalkumbura town and suburbs. The tentative estimated cost is Rs. 1,072 million. Funding sources have not yet been finalized.

### **11. MAKANDURA, PANNALA, KULIYAPITIYA INTEGRATED WSS**

This project is to construct a 21,000 cu.m./day-capacity water supply scheme, implemented in two phases. The proposed source of water is Ma Oya. It is also proposed to rehabilitate the existing 2,000 cu.m./day treatment plant at Udubaddawa to improve services to that area, and supplies will be provided to the Makandura Industrial Zone as well. The population to be served by 2025 is 112,000. The total estimated cost is Rs. 1,460 million.

### **12. MEDIRIGIRIYA WATER SUPPLY SCHEME**

Existing water supplies in Medirigiriya comprise two schemes: the Medirigiriya Old Town and New Town scheme and the present supply, whose source is a production borehole. The existing scheme needs

rehabilitation and expansion to improve service standards and to cater to increasing demand. Also, health reports indicate that 4% of the population in this area suffers from chronic renal failure due to the hardness and high fluoride levels of the present water supply.

In order to rectify this situation, it is proposed to augment the system by extracting 8,000 cu.m./day from Dambulla tank and to construct a water-treatment plant of equivalent capacity to handle this intake. The project will also include transmission mains and distribution system expansion. The total population to be served is 40,000, in both the Old and New towns.

### **13. 10 MGD WATER-TREATMENT PLANT AT HANWELLA**

Along with the ongoing Kalu Ganga Project and the proposed Kelani Right Bank Project, there is a need for a further dedicated water-treatment plant to augment supply to Watareka, Meegoda, Pahathagama, Hanwella, Meepe, Padukka, Nawagamuwa, Godagama, Jaltara, Ranala and Homagama. Consideration was therefore given to constructing a 10 MGD treatment plant at Hanwella as an urgent measure. All these areas are undergoing rapid economic development; as a result, there is very high demand for service-level improvements as well as for new connections.

The project is to be implemented in stages, commencing with construction of a 5 MGD plant. Several major transmission improvements are also required.

### **14. KOLONNA WATER SUPPLY SCHEME**

There is no pipe-borne water supply to the Kolonna area, whose residents must use conventional wells, tube wells or spring water to obtain drinking water. In periods of drought, most of these wells and springs run dry, causing great hardship to the people.

It is intended that Kolonna and its suburbs (Aeraporuwa, Kolonna, Maduwanwela, Nandanagama, Kella, Ambagahayaya, Pupulketiya, Hambeli-Ara and Walakada) and area up to Udagama junction will be served by this scheme. An extension is also planned to areas around Embilipitiya such as Sudugala, Jandura, Walalgoda, Mul Aediyawela, Panamura and Koonkatuwa. The project will increase production by up to 8,700 cu.m./day and serve a future population of 55,000 people. The selected water source for the project is Aeraporuwa River.

### **15. BALANGODA WATER SUPPLY SCHEME**

As a result of the Samanalawewa Hydropower Project, the groundwater table in the Balangoda and Samanalawewa areas has been severely depleted. The existing system

can provide only a restricted supply to people within the Balangoda urban limits, while people in the suburbs use conventional and tube wells or natural streams to obtain their requirements of drinking water. The combined projected demand from both these areas is around 10,000 cu.m./day. The proposed project is to integrate the Balangoda WSS with the Samanalawewa area, using the Walawe Ganga as main water source, supplemented by a spring located at Massenna. The proposed augmentation will enhance production capacity up to 10,000 cu.m./day, add 10.5 km of transmission, expanding the distribution network by 25 km. The total population to be served by this scheme is 48,000.

### **16. GREATER RATNAPURA WATER SUPPLY SCHEME**

The existing Ratnapura water supply scheme is running at full capacity. It is not possible to expand the system beyond the city limits. At present, pipe-borne water supplies cover only 36% of the population of Ratnapura DS Division. The rest must depend on conventional and tube wells, springs and other unprotected sources. Local development caused by the gem-mining industry and the operations of the Kuruwita Industrial Zone have greatly increased the need for an improved water supply system in Ratnapura, Kuruwita and their suburbs.

The proposed water supply scheme consists of three new intakes at different locations to meet the demand. Three intakes are necessary since, during the dry season, the quantity of water in the springs and rivers identified as sources reduces significantly. The three intake locations identified are at Induruwa (7,000 cu.m./day), Kaludiya Ella (2,000 cu.m./day) and Kurunegala (5,000 cu.m./day). By this scheme, twelve Grama Niladari (GN) Divisions in Kuruwita, 26 in Ratnapura and 10 in Pelmadulla will be supplied. By 2025, some 160,000 people in the above mentioned areas will be served.

### **17. GREATER MATALE WATER SUPPLY SCHEME**

236 GN Divisions in Matale, Ukuwela, Pallepola, Yatawatta, Naula, Rattota and Ambanganga Korale DS Divisions will be covered under this project, serving 406,866 people. The total estimated cost is Rs. 6,312 million.

### **18. GALIGAMUWA WATER SUPPLY SCHEME**

Galigamuwa is a major city situated on the Colombo-Kandy Road between Kegalle and Warakapola. The past few decades have seen high growth in the urban and suburban population and a corresponding rise in commercial and industrial activity. The demand for water has been further increased by the operations of Galigamuwa Industrial Park. However, there is no pipe-borne water supply in Galigamuwa town at present.

There are two options under consideration to improve service to Galigamuwa. One is to utilize the Gurugoda Oya by means of a 3,000 cu.m./day plant. The other option is to use the Maha Oya at Alawwa with a 5,000 cu.m./day plant. With the first option, a population of 17,500 can be served. With the second option, however, the number is increased to 30,800.

#### **19. RUWANWELLA WATER SUPPLY SCHEME**

The present water supply scheme covers Ruwanwella town and suburbs. It consists of a direct intake with pumping from the Kelani River where it passes through Ruwanwella town. This source presently provides a minimum of 1,400 cu.m./day and can serve about 10,000 people within the town limits. At present, pipe-borne water supply covers only 16% of the drinking-water demand in Ruwanwella DS Division; the rest must depend on alternative sources. Thus, though Ruwanwella is situated in the Wet Zone, 84% of its population depends on unsafe water sources, increasing the incidence of water-borne diseases.

There are two options considered for the proposed project. The first is to extract 10,000 cu.m./day of raw water for treatment from the Kelani River and Ritisaha Oya. The second is to construct a 1,900 cu.m./day-capacity intake and water-treatment plant using the Magal Oya as water source and constructing a new 1,900 cu.m./day treatment plant at Deraniyagala.

#### **20. MAHA OYA WATER SUPPLY SCHEME**

Under the Irrigation Department's Rambukkan Oya project, various infrastructure developments are proposed for the Maha Oya area. Among these, the NWSDB was requested to implement a water supply scheme for Maha Oya. This will serve the township, including the Maha Oya District Hospital, and also supply water to the Maha Oya, Dambadeniya, Kekirihena, Thappalpola and Samagipura GN Divisions. The expected population to be served by 2031 is 32,000, with demand estimated at 7,000 cu.m./day. The tentative estimated cost is Rs. 516.6 million. The Irrigation Department has allocated Rs. 260 million to implement this water supply scheme. However, PAC approval is yet to be sought.

#### **21. KALU GANGA WATER SUPPLY PROJECT, PHASE II, STAGE I**

This proposed project for Kalutara District in the Western Province will benefit 600,000 people in Panadura, Wadduwa, Waskaduwa, Kalutara North, Homagama, Magamma,

Diyagama, Kiriwattuduwa and Kirigampamuwa. The estimated cost is Rs. 13,929 million. Works comprise the construction of a new intake and 90,000 cu.m./day water-treatment plant, installation of pumps, laying of new raw-water and treated-water transmission mains, distribution improvements in the project area and construction of water towers and reservoirs. PAC and Board approval have been obtained. A funding request has been submitted to the External Resources Department.

#### **22. PATHADUMBARA INTEGRATED WATER SUPPLY SCHEME**

Areas under this project are Kundasale, Polgolla, Medadumbara, Theldeniya, Rangala and Udispaththuwa, covering 723,000 people. Total estimated cost is Rs. 7,128 million.

#### **23. AUGMENTATION OF HARAGAMA WATER SUPPLY SCHEME**

Areas under this project are Haragama, Gurudeniya West, Thalatuoya and Pinnagolla, covering 144,162 people. Total estimated cost is Rs. 989 million.

#### **24. AUGMENTATION OF MARASSANA WATER SUPPLY SCHEME**

Areas under this project are Bopitiya, Pothgoda, Murapola, Bowllana, Medagama, Udugama and Pallegama (22 GN Divisions) covering 17,142 people. Total estimated cost is Rs. 276.5 million.

#### **25. DEHIATTAKANDIYA WATER SUPPLY SCHEME**

People in the town of Dehiattakandiya are served by a water supply scheme designed and constructed in 1984 under the Mahaweli Development Programme while suburban residents of Dehiattakandiya use conventional wells and irrigation channels to meet their drinking-water requirements. The population served by the present scheme is about 3,200; actual demand is 600-700 cu.m./day. The existing treatment plant presently operates for 10-12 hours a day.

The Department of Health has identified the Dehiattakandiya area as having one of the highest incidences of kidney disease due to water-quality issues. In order to serve the suburbs of Dehiattakandiya and minimize this health hazard, a new scheme is proposed. The Mahaweli River has been identified as the potential water source, whereby it is proposed to increase the capacity of the water-treatment plant to 4,100 cu.m./day. The total population to be served by the proposed project is 20,000.

#### **26. IPALOGAMA WATER SUPPLY SCHEME**

The Ipalogama area is currently supplied by a scheme of 415 cu.m./day capacity located at Kekirawa, which serves a population of 2,000. Construction of a new full-treatment plant of 9,000 cu.m./day capacity is progressing under the ADB-3 Project.

In order to cater for a proposed housing project for Ranaviru war veterans, which will further increase the growing demand for water, the proposed project plans to expand the scheme's production capacity by an additional 9,000 cu.m./day with Yoda Ela as the source. The project will include transmission and distribution improvements as well. The total population to be served by the scheme is 50,000.

#### **27. KALUTARA WATER SUPPLY AUGMENTATION PROJECT, STAGE III**

This project has been proposed to serve 490,000 people in the Kalutara District of the Western Province. Areas covered are Kalutara North and South, Wadduwa, Payagala, Maggona, Beruwala, Aluthgama, Dharga Town, Bentota, Pilaminawatta, Bombuwela, Dodangoda, Matugama, Agalawatta and Nagoda. The estimated cost of the project is Rs. 3,815 million.

The scope of the project includes transmission improvements up to Beruwala, construction of ground reservoirs at Kalutara North, Beruwala, Dharga Town, Bombuwala, Matugama and Bentota, construction of new towers at Morontuduwa, Nagoda, Matugama and Agalawatta, and installation of pumps and other distribution improvements in the project area. PAC and Board approval has been obtained and a request has been made to the External Resources Department to seek funding.

#### **28. TRANSMISSION MAINS FUNDED BY FINNIDA (TSUNAMI SITE)**

The following transmission mains are to be laid for the provision of water supplies to tsunami-affected people in the Ampara District:

- Konduwattuwana to Bangalawadiya
- Bangalawadiya to Kalmunai

The total estimated costs of these transmission mains are Rs. 915 million and Rs. 724 million respectively. Design of the Konduwattuwana-Bangalawadiya main has been completed and separate tender documents for supply and laying have also been prepared and completed. The design of the transmission main from Bangalawadiya to Kalmunai is in progress. However, FINNIDA has now withdrawn its funding commitment and new funds will have to be sought.

#### **29. KARAGODA-UYANGODA WATER SUPPLY SCHEME**

The area is served by an existing water supply scheme. On the request of the Provincial Office (Southern), a project proposal has been prepared for the augmentation of the scheme and submitted for suggestions and views. The estimated implementation cost is Rs. 579 million.

#### **30. PANAMA WATER SUPPLY SCHEME**

This project was originally proposed as part of the Pottuvil water supply scheme to be implemented by USAID. However, due to funding restrictions, USAID removed the Panama area from its scope. The treatment plant designed by USAID was reviewed and the distribution designs completed by P & D. The project cost is estimated as Rs. 330 million. Requests for funds have been submitted to the relevant authorities.

## **WATER QUALITY**

### **IMPLEMENTATION OF A WATER QUALITY SURVEILLANCE SYSTEM**

In 2006, a joint Cabinet Paper (Department of Health and NWSDB) was processed and submitted to the Board of Directors, in which the proposed basic framework of a water-quality surveillance system was initiated, the details of which are as follows:

- **Schemes Managed by the NWSDB**

Each water provider must prepare a water-safety plan (WSP) for every scheme under its purview. Water-quality testing and a record of quality-surveillance activities will be part of the WSP. Regional Laboratories will be in charge of conducting annual and/or seasonal water testing of the final product.

- **Schemes Under Other Management**

The RWSSD, in conjunction with the NWSDB, will prepare a set of standard WSPs to be utilized by CBOs and local authorities and conduct training for the caretakers of these schemes and hand-pumps. Routine water-quality testing and records of quality surveillance activities will be part of the WSP. The service providers will be in charge of conducting annual and/or seasonal testing of the final product.

#### **National Steering Committee**

A National Steering Committee (NSC) leading to the implementation of a water-quality surveillance system was formed during 2006. On this committee, the following are represented:

- National Water Supply & Drainage Board
- Ministry of Health
- Sri Lanka Standards Institution
- Rural Water Supply and Sanitation Division
- Ministry of Provincial Councils and Local Government
- Medical Research Institute (Microbiologist)
- Central Environmental Authority
- Government Analyst

The committee will be convened by the General Manager, NWSDB, and will meet quarterly. It will be the committee's responsibility to:

- maintain a registry of suppliers;
- define policy and monitor implementation;
- co-ordinate with other sectors;
- issue guidelines and standards;
- define hygiene-promotion strategy;
- approve the registration of new suppliers; and
- periodically renew the programme.

The NWSDB will provide logistical and technical support for the implementation of these tasks. The NSC will provide feedback to the regional committees where appropriate.

The water-quality surveillance system initiated in 2006 was active in numerous areas during the course of 2007. Specifically,

- a joint Cabinet paper on a water-quality surveillance system (Department of Health and NWSDB) was processed and submitted to the Board of Directors;
- NWSDB prepared a training manual, Water Safety Plan for Dug Well, Rainwater Harvesting and CBO-Managed Piped Water Supply Schemes;
- a training programme on water-quality surveillance for the NWSDB was held in February 2008;
- the decision was taken to establish national and district water-quality surveillance committees very soon, with Assistant General Managers in the provinces taking a leading role in this regard;
- six NSC meetings were held during 2007, and terms of reference for the committee and a water-quality surveillance system were prepared;
- an awareness programme for Public Health Inspectors was held at the Ministry of Health by NWSDB; and
- an awareness effort for NWSDB officers was launched, disseminating relevant information to the respective officers.



# Sewerage

“The P & D Sewerage section engaged in 18 projects of various magnitudes during the year under review”

## GENERAL

### 1. ESTABLISHMENT OF A SEWERAGE SECTION

During 2007, the NWSDB decided to establish a separate division to handle sewerage activities. For this purpose, the post of Additional General Manager (Sewerage) was created and other staff positions approved by the Board of Directors.

The following are the responsibilities of the Additional GM (Sewerage):

- Sewerage operations in the Greater Colombo Area and regions
- Planning and design activities related to sewerage schemes
- Foreign-funded sewerage projects

### 2. PLANING & DESIGNS SEWERAGE SECTION

The P & D Sewerage Section engaged in 18 projects of various magnitudes during the year under review. Nine minor projects, totalling in value Rs. 304 million, were undertaken by the section on a rechargeable-job basis. Planning and feasibility studies were completed for two major potential projects, namely Sri Jayawardhanapura Kotte and Galle Sewerage Projects.

Work on major projects is proceeding where funding sources have been secured. Also, a development proposal to achieve the NWSDB's corporate goals in respect of providing improved sewerage-infrastructure facilities is being prepared. In addition to this, design inputs have been made to the Greater Colombo Sewer Rehabilitation Projects in the Southern and Northern Catchments.

### 3. MODARAWILA SEWERAGE PROJECT

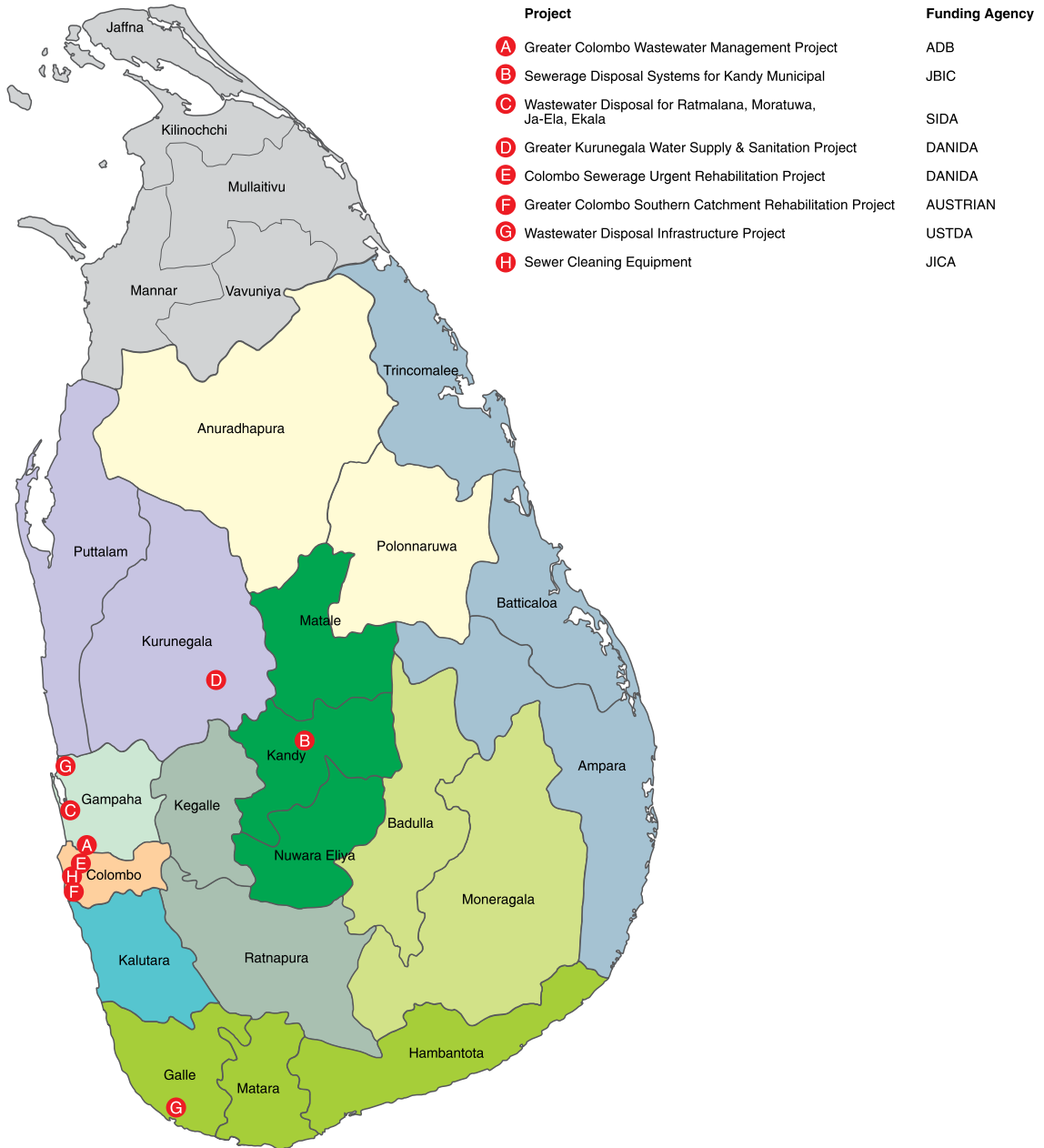
This a rechargeable project carried out on behalf of the Urban Development Authority (UDA). The treatment plant is being operated by the Construction Section. Difficulties have been experienced in disposing of the effluent. As a long-term solution, a wetland has been proposed. Funds and necessary land are to be obtained from the UDA.

### 4. IMPLEMENTATION OF SEWERAGE TARIFF

Cabinet approval was received in 2007 for the introduction of a sewerage tariff. The charge has been included as a part of the water bill since January 2008. Due to issues regarding ownership of assets, no sewerage tariff will be implemented in the CMC area for the time being. However, implementation commenced with respect to the Soysapura, Mt. Lavinia, Kolonnawa, Jayawadanagama, Maddumagewatte, Raddoluwa, Mattegoda, Hikkaduwa, Koggala, Kataragama and Hantana sewerage schemes in January 2008.

## MAJOR SEWERAGE PROJECTS

### LOCATION MAP OF FOREIGN-FUNDED PROJECTS UNDER CONSTRUCTION/AUGMENTATION DURING 2007



## PROJECTS UNDERTAKEN WITH DANIDA ASSISTANCE

### 1. Greater Kurunegala Water Supply and Sanitation Project, Stage I

The Greater Kurunegala Water Supply and Sanitation Project (Stage I) consists of a water supply package and a sewerage package. It will be implemented as a design-and-build contract. The estimated cost of this is Rs. 3,686.8 million. The total project period is 30 months, of which the first six months will be the design phase. The project commenced in March 2008 and will be completed by the end of 2010.

- **Package A (Water Supply)**

The water supply component of this project covers the Kurunegala municipal area and a part of the Pradeshiya Sabha area. Nearly 65,000 people will benefit from the expansion of water supply facilities. The major items of the system are a weir across the Deduru Oya, expansion of the water-treatment plant, an intake well and pumping station, water tower, 500 mm. DI pumping main, distribution network expansion (110 km) and construction of a training facility for the Regional Support Centre.



Construction of Intake for Kandy

- **Package B (Sewerage)**

The sewerage component of the project will provide safe wastewater disposal facilities to Kurunegala Teaching Hospital and environmentally-sensitive areas of Kurunegala



Mahaweli Pipe Bridge for Kandy

town. A population of approximately 34,000, including 2,844 homes, 985 shops, 91 Government institutions and six hospitals, will be served by the sewerage component by 2015. The major items of the sewerage system consist of a wastewater-treatment plant, four lift stations and a sewer network of 85 km, as well as 3,200 new sewer connections and a connection with the General Hospital sewer network.

Tender evaluation was in progress during the year under review. Environmental clearance was obtained, a Project Director appointed and acquisition of land for the project began.

### 2. Colombo Sewerage Rehabilitation Project

The objective of this project is to rehabilitate part of the existing sewerage system in the Colombo Municipal Council area. This portion, some 100 years old, has been identified as the most critically endangered of the overall system. The sewer line has deteriorated due to acidic gas attack and is now in a dilapidated condition, resulting in regular sewer and road collapses and blockages. The project is jointly funded by the Royal Danish Government (Rs. 2,500 million) and the Government of Sri Lanka (Rs. 800 million).



Lining Sewer Lines

Under this project, a new sewerage pumping station has been constructed at Madampiitya, increasing pumping capacity to 2.9 cum/sec to meet projected demand by 2020. It is now in operation. Work on the new pumping station is also largely completed. The non-man-entry sewers were lined and rehabilitated by the cured-in-place-pipe (CIPP) method and the man-entry sewers were lined and rehabilitated by glass-reinforced pipe (GRP) panels. The Wellawatte S8 pumping station was rehabilitated by replacing its M & E equipment. In effect, most of this project has now been completed.

## **PROJECT UNDERTAKEN WITH ASIAN DEVELOPMENT BANK ASSISTANCE**

### **Greater Colombo Wastewater Management Project**

It is proposed to rehabilitate the wastewater system in the Greater Colombo (Kolonnawa, Dehiwala and Mount Lavinia) areas under this project. An ADB-funded technical-assistance assignment was undertaken during the year under review to identify the project scope, with implementation scheduled from 2008 to 2012. The total estimated cost of the project is Rs. 14,300 million. The contribution from the ADB is US\$ 100 million (Rs. 11,000 million) and the balance will be met by the GOSL.

The main components identified for implementation are:

- rehabilitation of the sea outfalls at Mutwal and Wellawatte;
- construction of new pumping stations at the Port of Colombo, Bambalapitiya, Borella and Maligawatta;
- rehabilitation of the Mount Lavinia, Dehiwala, Kolonnawa, Meetotamulla, Wellampitiya, Colombo Harbour and Vystwyke pumping stations;
- provision of new sewerage facilities to areas within Colombo to benefit 24,200 new householders;
- rehabilitation of some sewers in Colombo (about 5,000 m.); and
- on-site sanitation facilities for the Maharagama Municipal Council area and some public toilets in the Kaduwela Pradeshiya Sabha area.

About 700,000 residents of Colombo and another 500,000 visitors will be served on completion of the project in 2012. It is expected that occurrences of water-borne diseases will be considerably reduced, while the canal system and beach from Mount Lavinia to Modera will no longer be polluted with overflows from wastewater sources.

## **PROJECT UNDERTAKEN WITH SWEDISH ASSISTANCE**

### **Wastewater Disposal Systems for Ratmalana-Moratuwa and Ja-Ela-Ekala**

The works contract for the above project was awarded to the Danish firm Pihl/Läckeby-Purac. The contract agreement was signed on 24th October 2007. Approval of the Cabinet of Ministers was obtained to amend the specific agreement entered into by the Governments of Sweden and Sri Lanka in order to enhance the credit facility provided by Sweden from US\$ 79,300,000 to US\$ 91,918,967. Cabinet approval was also obtained to borrow this sum from the Swedish institution Svensk Expotkredit. The amount includes US\$ 90,650,485 to finance the project

and US\$ 1,268,782 to finance the EKN Premium Flat. A subsidiary financing agreement between the Government of Sri Lanka and the NWSDB was also signed.

The tender for supervision consultancy closed on 17th September 2007. Evaluation is now in progress.

An aspect of the proposed scheme is that 121 families living in *Sumitha Mithudampura*, adjoining the existing wastewater-treatment plant at Soysapura, have to be relocated in order that land required for the proposed wastewater-treatment plant can be obtained. The National Housing Development Authority has been assigned to resettle these families in accordance with the Sri Lanka National Involuntary Resettlement Policy. At time of writing, 116 families had been relocated.

## **PROJECT UNDERTAKEN WITH JBIC ASSISTANCE**

### **Kandy City Wastewater Disposal Project (KCWDP)**

The indiscriminate disposal of wastewater in the city of Kandy pollutes Kandy Lake, the Meda Ela and ultimately the Mahaweli River, which is the main drinking-water source for the Kandy and Matale Districts. To find a permanent solution to this problem, NWSDB proposes to implement a wastewater disposal system for the City of Kandy with the financial assistance of the Government of Japan. The proposed project will collect wastewater in 724 hectares of the city and divert it to a treatment plant of capacity 17,000 cu.m./day through a 109 km pipeline network.

#### **Achievements in 2007**

- Putting an end to considerable uncertainty, the pre-construction phase of KCWDP was included as a sub-project of the Wastewater Sector Development Project under JBIC soft loan SLP-90. The loan agreement between JBIC and the GOSL was signed on 28th March 2007. The allocation for KCWDP is ¥ 311 million.
- Construction methodology of the project was changed from conventional to design-and-build. A detailed basic design will be prepared for bidding documents, in particular for sewers.
- A preparatory sociological study was carried out to identify those necessary sanitation facilities that could be managed by community members in densely-populated low-income areas (Mahaiyawa, Deiyannawela, Suduhumpola, Andupattiya and Nuwarawela) within the project service area. The study was carried out by a team, whose members included engineers and a sociologist, between June and December 2007 with financial assistance from JBIC.

- Cabinet approval was obtained on 31st October 2007 to award a design-and-build contract for the relocation of quarters currently occupying the proposed treatment plant site to the Central Engineering Consultancy Bureau (CECB). The total contract package is Rs. 106 million including price escalation, physical contingencies and VAT. Concurrence from the Department of Agriculture is awaited for the building plans prepared by the CECB.
- Proposals for consultancy services for detailed basic design and construction supervision were requested from four foreign consultancy firms, three from Japan and the fourth from Denmark.
- Approval to establish the Project Management Unit (PMU) was received from the Department of Management Services and recruitment of staff is now in progress.
- Public support for the project was cultivated through awareness programmes and media activities.

#### PROJECT UNDERTAKEN WITH USTDA ASSISTANCE

##### USTDA Grant Assistance to Carry Out a Feasibility Study on Wastewater Disposal Infrastructure for Tsunami-Affected Towns in Sri Lanka (Negombo and Galle)

The U.S. Trade and Development Agency (USTDA) made a grant of US\$ 491,000 available to the NWSDB to be used in implementing the above project on behalf of the then Ministry of Urban Development and Water Supply (MUDWS). This was pursuant to the grant agreement between USTDA and the MUDWS dated 19th September 2005.

The original contract agreement signed between B & E Engineers and NWSDB on 23rd August 2006 was amended on 12th December 2006 to allow preparation of a feasibility study report on the sewerage infrastructure in tsunami-affected towns. Project duration was twelve months. Initial studies were carried out in the towns of Negombo, Galle, Matara and Hambantota. The first two were subsequently selected for feasibility studies.

The reports for Galle and Negombo will shortly be ready for submission to the External Resources Department in quest of a potential donor agency for implementation subsequent to approval by the Board of NWSDB. The tentative estimated cost is Rs. 4,100 million, to serve a population of 163,000.

#### PROJECT UNDERTAKEN WITH AUSTRIAN ASSISTANCE

##### Rehabilitation of Southern Catchment of Greater Colombo Sewerage Project

The existing Colombo sewerage scheme comprises around 300 km of sewers, 18 major pumping stations at strategic locations, and two ocean outfalls. Parts of the sewerage system are almost 100 years old. The system has deteriorated over the years and is now very dilapidated. Collapses and blockages are experienced regularly, exacerbated by a lack of proper operation and maintenance with respect to the sewers and pumping stations. This has led to overflows and short-circuiting, causing serious pollution in water bodies and the environment as a whole.



Cleaning of Sewer Line



Closer View of Sewer Cleaning Process

This is a project to construct a main sewage pumping station at Wellawatte serving a large portion of the southern catchment, and to rehabilitate two main sewer lines (approximately 7.3 km long and having diameters from 300 mm to 1,500 mm) leading to the Wellawatte pumping station. The project is estimated to cost



Rs. 2,222 million, of which Rs. 1,585 million and Rs. 637 million come from the Bank of Austria and the GOSL respectively. The contract has been in force since June 2007. Notice to proceed was only given to the contractor on 22nd November 2007, owing to a delay in securing land for the contractor's stockyard.

By the end of 2007, the contractor had fully mobilized and had established site and main offices. Installation of an impregnation plant at the stockyard was in progress. At the time of writing, 40 days after notice to commence was given, 1,641 m of sewer line had been cleaned and CCTV inspection of a further 1,395 m had been carried out. A Project Director was appointed in late September 2007.

### NEW PROJECTS IN THE PIPELINE

#### 1. Sri Jayawardhanapura Kotte Sewerage Scheme

Scope of work on this project covers construction of pump-houses and a pumping main to the Wellawatte pumping station, and supplying and laying 130 km of sewer network. The project will serve 250,000 people by 2030 at a tentative cost is Rs. 12,645 million. Implementation is considered to be of highest priority, and Cabinet has approved implementation utilizing donor financing. A Chinese party has submitted a project proposal, which is under evaluation. The areas to be sewered are Sri Jayawardhanapura Kotte MC, Maharagama UC and Kaduwela Pradeshiya Sabha.

#### 2. Feasibility Studies

The sewerage section has undertaken seven technical feasibility studies:

1. Kataragama Sacred City sewerage facility improvement
2. A new sewerage system for the Gampaha UC area at an estimated cost of Rs. 648 million, to serve 25,000 people by 2027
3. Sewerage facilities for Kattankudy-Batticaloa at a preliminary cost of Rs. 3,853 million, to serve 143,000 by 2028
4. Sewerage facilities to Hakmana town council area
5. Akkaraipattu surface drainage system
6. Formulating project scope for urgent rehabilitation of the Greater Colombo sewerage system

Pre-feasibility study reports for Gampaha and Kattankudy-Batticaloa have already been completed.

#### 3. Rechargeable Jobs

The section was involved with activities pertaining to nine rechargeable jobs, which covered planning, design, tendering and construction supervision (depending on the level of technical assistance sought by the client organization). They are:

1. Havelock City sewerage development
2. Wastewater treatment and disposal facilities for Kandy BOI industrial zone, Pallekelle
3. Improvement of sewerage facilities at Sri Jayawardhanapura University
4. New sewer network facilities for the Meteorological Department, Colombo
5. Mitigatory action for sewer overflow issues at Jayawardhanapura Hospital
6. Wastewater treatment facilities at MTV broadcasting studio, Pannipitiya
7. Improvement of wastewater treatment and disposal facilities at Jaffna Female Hostel
8. Wastewater treatment facilities for NHDA housing scheme at Jaltara, Horana
9. Wastewater treatment facilities at Ratmalana Tsunami Housing Scheme

The total value of rechargeable works handled by the section in 2007 was approximately Rs. 160 million, excluding the works at Jayawardhanapura Hospital (Rs. 44 million), which is still in the pipeline. Consultancy fees earned by the NWSDB from these jobs will be about Rs. 20 million excluding VAT.

Balance works on the above rechargeable jobs will be carried forward to 2008. It is hoped to commence new pre-feasibilities for sewerage infrastructure facilities in major towns such as Hambantota and Matara.









## 'Cleaning Water'...

Water good enough for our use needs to be purified...  
to exacting standards. The process involves cost.

**Water is a Precious Resource. Let's Save It!**

# Development Works

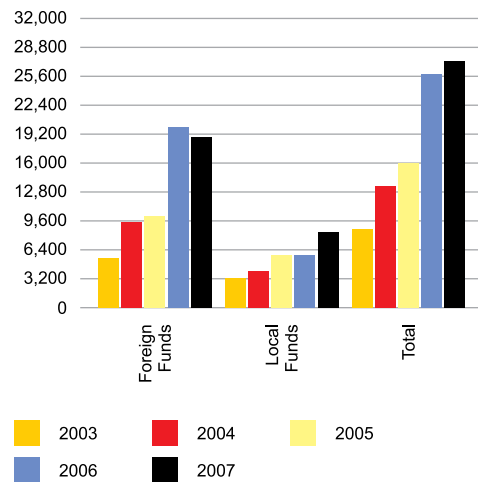
“Funds were used to improve the quality and quantity of water supplies, maintain NWSDB’s assets and undertake related support services in operational activities”

## FINANCIAL SOURCES

The NWSDB was provided with Rs. 14,166 million as foreign funds for capital works. The GOSL contribution was Rs. 4,587 million as counterpart funds. In addition, Rs. 2,625 million was contributed through small and medium water-supply projects. For the reconstruction of tsunami-affected water supply systems, a sum of Rs. 4,713.6 million in foreign funds and Rs. 1,158.5 million in local counterpart funds was provided.

## CAPITAL BUDGET ALLOCATION

*Rs. million*

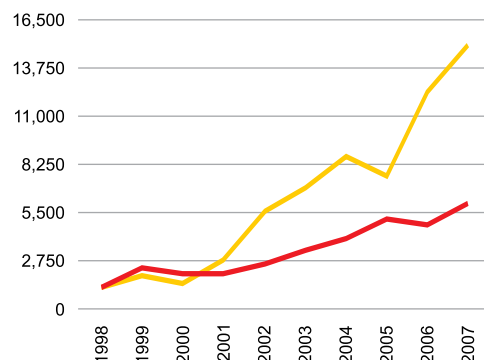


### UTILIZATION OF CAPITAL FUNDS

Capital fund utilization stood at 77% in 2007, placing the NWSDDB among the few public sector organizations to have made satisfactory use of their allocated capital funds.

### CAPITAL FUND UTILIZATION

Rs. million

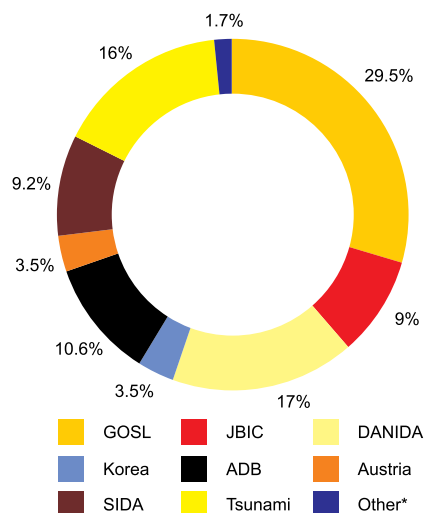


Foreign Local

### COMPARISON OF CAPITAL FUND UTILIZATION, 2006/2007

| Description       | 2006          |             | 2007          |             |
|-------------------|---------------|-------------|---------------|-------------|
|                   | Rs. million   | %           | Rs. million   | %           |
| Local Component   |               |             |               |             |
| (Rs. million)     | 4,748         | 83.0        | 6,060         | 72.4        |
| Foreign Component |               |             |               |             |
| (Rs. million)     | 12,376        | 62.0        | 15,028        | 79.6        |
| <b>Total</b>      | <b>17,124</b> | <b>67.0</b> | <b>21,088</b> | <b>77.4</b> |

### FOREIGN AID CONTRIBUTION BY DONORS AND RELATED GOSL FUNDS



\* India and KfW Assistance

### REHABILITATION AND IMPROVEMENT OF EXISTING WATER SUPPLY SCHEMES

The NWSDDB continued to rehabilitate and improve existing water supply schemes using its own finances, which amounted to Rs. 245 million in 2007. These funds were used to improve the quality and quantity of water supplies, maintain Board 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**

### **1. ACTIVITIES IN RURAL AREAS**

Participatory and demand-responsive approaches practised in rural water supply and sanitation activities continued in 2007. Issues emerging after the implementation of rural water supply schemes were:

- sustainability of CBOs; and
- supporting backup to CBOs; from the NWSDB.

Various initiatives were introduced by the NWSDB to cope with these needs in the rural water supply sector.

### **2. CONSTRUCTION OF DEEP WELLS**

Under various sources of funding, NWSDB continued the construction of deep wells to provide water supplies for Dry Zone rural communities in 2007. Of 636 wells drilled during the year, 513 were successful - a success rate of 81%. 220 hand pumps were also installed and 42 existing tube wells completely rehabilitated.

528 hand pumps were repaired during the year and 197 wells flushed.

### **3. WORLD VISION NATIONAL WELL-DRILLING PROGRAMME**

The NWSDB signed a MoU with World Vision LTRT in February 2006 to embark upon a national well-drilling programme. World Vision provided equipment to the cost of about US\$ 1,250,000, including 2 drilling rigs, 3 vehicles, 700 hand pumps, etc., in order to increase NWSDBs capacity to serve tsunami-affected communities in need of potable water.

245 deep wells were completed during the year 2007: 39 in Kalutara, 80 in Galle, 38 in Matara, 50 in Hambantota, 22 in Moneragala, 12 in Ampara and 4 in Nuwara Eliya.

### **4. UNICEF WELL-DRILLING PROGRAMME IN AMPARA DISTRICT**

UNICEF provided 2 drilling compressors, support trucks, drilling accessories, drilling consumables and other spare parts to carry out 200 hydrogeology investigations and drill associated tube wells in tsunami- and war-affected areas of the Ampara District. The project commenced in August 2007. 20 drillers and 10 technical staff for well drilling and rig maintenance were trained over the following months to December.

To expedite the programme and ensure long-term sustainability of the resource, a Groundwater Office was established at Ampara.

### **5. SOLAR ENERGY FOR THE DEVELOPMENT OF RURAL EDUCATION AND HEALTH INFRASTRUCTURE FACILITIES IN SRI LANKA (SOLAR POWER PROJECT)**

This project provided water and electricity to schools and Gramodaya Health Centres in the Anuradhapura, Polonnaruwa, Matale, Nuwara Eliya, Badulla and Moneragala Administrative Districts.

Hydrological investigations were carried out and 228 successful wells were drilled, together with the flushing of 13 boreholes.

## **MISCELLANEOUS**

### **POLICY AND STRATEGIC PLANNING UNIT**

The functions of the Policy and Strategic Planning Unit were:

- obtaining Cabinet approval for national policy on sanitation and drinking water;
- finalization and compilation of all relevant policy documents;
- development of guidelines for the planning process and for processing unsolicited proposals;
- formulation of capacity-building programmes with a special emphasis on developing financial skills;
- development of comprehensive briefs on projects in the pipeline; and
- providing necessary secretarial services to donors in the formulation of projects.

### **INFORMATION TECHNOLOGY DIVISION**

Work in connection with the enterprise-wise IT project continued during the year under review. The contract for the solution was awarded in February 2005 to Co-options Technologies, an Indian firm, for a sum of US\$ 4.64 million. This included supply and installation of computer hardware to be financed by the NWSDB. This activity was undertaken by the NWSDB. Supply and installation of the hardware was completed during the course of the year. Additionally, the contract sum was reduced to US\$ 3.98 million.

Software design and development work was also completed during the year. Laboratory testing carried out in India was verified by NWSDB staff, and various clarifications and amendments were made in the course of the year. Cumulative expenditure to 31st December 2007 was US\$ 2.90 million. Physical progress as at that date was 75%. Field testing of the software solution, staff training, etc., were also undertaken in 2007. The project is scheduled for completion on 31st March 2008.

In addition to the IT solution project, an online payments system, consumer complaints system and asset management system were also formulated during the year.

A wide area network covering all Managers' offices across the island (including Regional Support Centres) was also completed during the year under review. The associated virtual private network was provided by Sri Lanka Telecom.

Regional stores were provided with the necessary computers, printers and UPSs. Funds were made available for this work under the ADB Fourth Project.

Verification of fixed assets was undertaken by the Valuation Department. Schedules of fixed assets were provided by the IT Division.

Computer-hardware maintenance issues reported to the IT Division by various other Divisions were attended to.

### **GIS DEVELOPMENT UNDER MAPPING SECTION**

The GIS technology introduced to the Mapping Section under a NORAD funded project was fully institutionalized in 2006. In addition to regularly updating the Greater Colombo Water Utility GIS, the NWSDB Mapping Section successfully completed the Colombo City Sewerage and Storm Water GIS Development Programme in 2007 and commenced several key development tasks such as digital base-map development using high-resolution satellite images for the northern area of the Greater Colombo Region, outstation mapping and GIS development, and an initial study for sewerage GIS development for the rest of the Greater Colombo Region. Additionally, the Mapping Section conducted several training programmes on GIS and GPS technology for NWSDB staff.

# Our Employees, Our Strength

“NWSDB’s Manpower Development & Training Division continued to provide training opportunities to employees during 2007, as in the past”

## STAFF STRENGTH

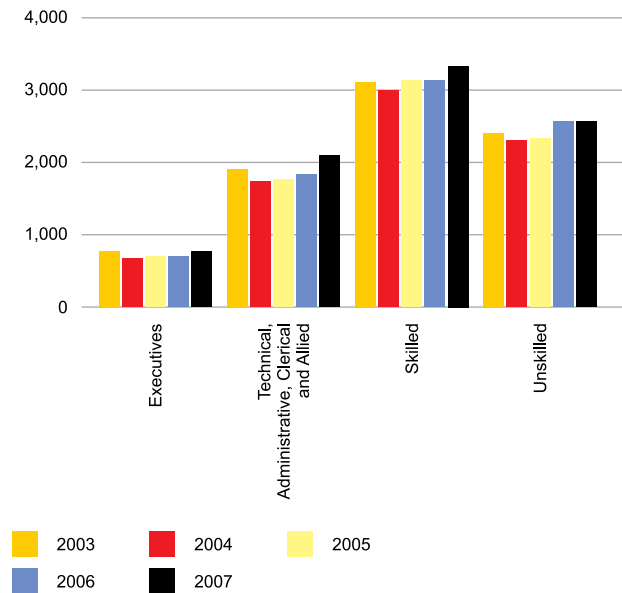
| Staff          | 2006         | 2007         | Variation (%) |
|----------------|--------------|--------------|---------------|
| (a) Permanent* | 7,532        | <b>8,021</b> | 6.5           |
| (b) Casual     | 530          | <b>413</b>   | (22.1)        |
| (c) Contract   | 173          | <b>305</b>   | 76.3          |
| (d) Trainee    | –            | 29           | –             |
| <b>Total</b>   | <b>8,255</b> | <b>8,768</b> | <b>6.2</b>    |

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

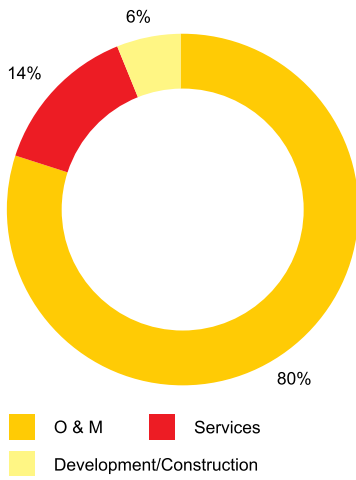
## Distribution by Key Job Function

There were 305 contract and 442 casual and trainee employees in addition to a permanent staff of 8,021 at the end of 2007. Most contract employees were recruited for work on foreign-funded projects.

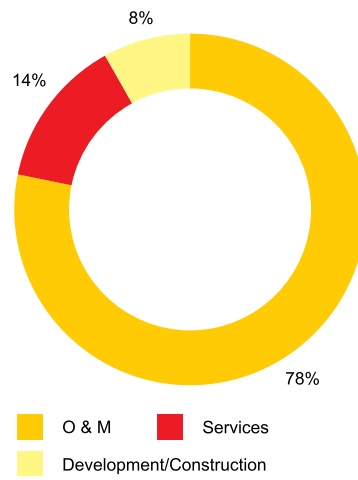
## STAFF CLASSIFICATION BY JOB CATEGORIES



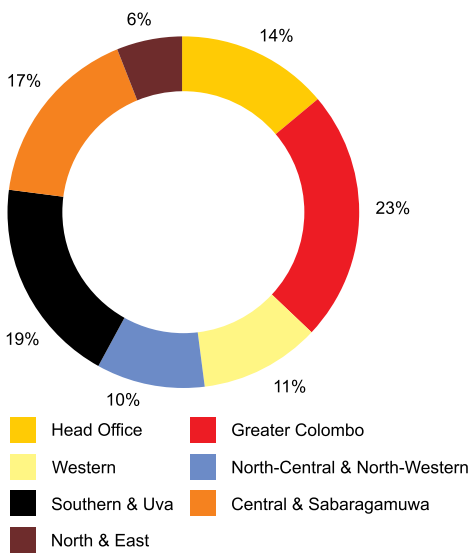
STAFF DISTRIBUTION BY KEY JOB FUNCTIONS - 2006



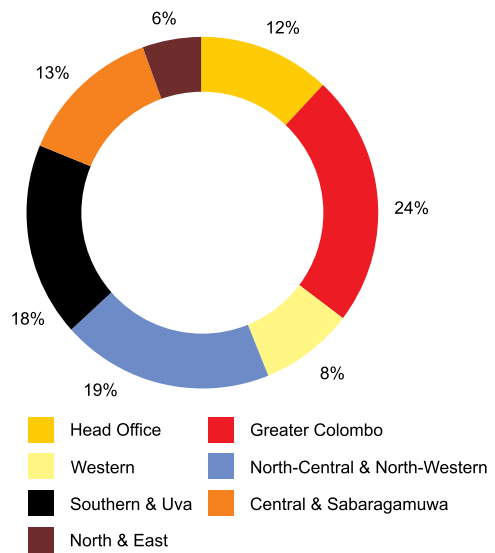
STAFF DISTRIBUTION BY KEY JOB FUNCTIONS - 2007



STAFF DISTRIBUTION BY LOCATION - 2006



STAFF DISTRIBUTION BY LOCATION - 2007



## STAFF REMUNERATION AND BENEFITS

### Comparison of Staff Remuneration in 2006 and 2007

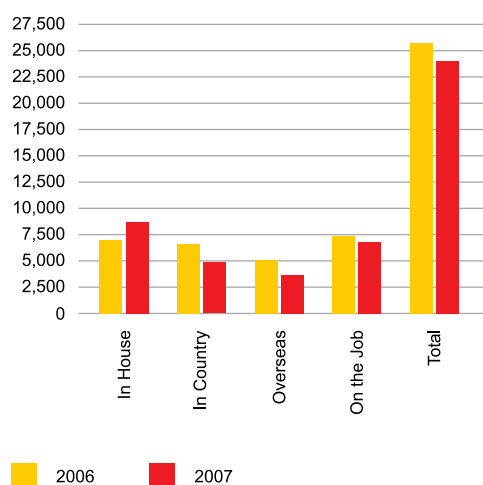
| Description                                  | 2006<br>Rs. million | 2007<br>Rs. million |
|--|---------------------|---------------------|
| Salaries                                     | 2,801               | 3,070               |
| Contribution to Employees'<br>Provident Fund | 248                 | 308                 |
| Contribution to Employees'<br>Trust Fund     | 62                  | 78                  |
| <b>Total</b>                                 | <b>3,111</b>        | <b>3,456</b>        |

### Staff Benefits

- An annual bonus of Rs. 22,500 (inclusive of a productivity incentive) was paid.
- Encashment of unused medical leave was continued.
- 1,758 concessionary loans (1,656 ten-month loans and 102 twelve-month loans or approximately Rs. 243,695,760) were disbursed among employees.
- 200 employees were granted terminal benefits (department allowance).
- 296 employees were felicitated for their unblemished service records at special ceremonies (regional offices only).
- Approximately Rs. 2,611,161 was paid in reimbursement of employees' medical expenses (both in- and out-patient treatment).
- 448 casual or contract employees were made permanent in their posts during the year under review.

## MANPOWER DEVELOPMENT AND TRAINING

Man Days



NWSDB's Manpower Development & Training Division continued to provide training opportunities to employees during 2007, as in the past. Training programmes were conducted to cover all categories of staff from managers to operative staff. Based on priority training needs identified by senior and line managers, employees in various categories were provided with training through the following approaches:

### (a) Formal in-house training courses, seminars and workshops

The division conducted 143 in-house training courses in 2007. 431 managerial staff, 737 supervisors, 283 clerical and allied grades, 684 operatives and 1,312 mixed group employees were included in these courses. Programme content related to the following areas:

- Water quality monitoring
- Water and wastewater treatment
- Analysis of water distribution systems
- Energy conservation
- Reduction of non-revenue water
- Safety at work sites
- Disciplinary procedures
- Financial rules and regulations
- Accounting standards
- Materials management
- Tender procedures
- Computer applications
- Geo-informatic systems
- Management skills
- Induction programme for new recruits
- Awareness and refresher programmes



***(b) Training at other training institutions in the country***

323 employees received training externally through local training institutions. Some attended masters' and postgraduate programmes conducted by local universities, while others took diploma and certificate courses offered by institutions such as the National Institute of Business Management, the Institute of Personnel Management, the Institute of Supplies and Materials Management, the Sri Lanka Institute of Development Administration, the Institute of Chartered Accountants of Sri Lanka and the Centre for Housing, Planning and Building.

***(c) Overseas training***

Overseas training was provided to 98 employees of the NWSDB, including official visits by 43 officers in respect of inspection visits, meetings etc.

***(d) On-the-job training***

On-the-job training was provided to 55 apprentices (undergraduates, special apprentices, National Diploma in Technology/Higher National Diploma in Engineering trainees and craft apprentices) under the National Apprentices and Industrial Training Authority (NAITA) training programme.

# New Focus

“ The NWSDB was represented at a ‘one-stop shop’ for 300 industries, which was located at the Board of Investment. All industries that requested water supply facilities were advised on the best option available to meet their water and sewerage requirements ”

## RESEARCH & DEVELOPMENT SECTION

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

### 1. AIR-RELEASE VALVE

An air-release valve was developed by the Section as a solution to the problem of consumers receiving air through their water meters. Five hundred units of the PVC valves are now being distributed for field testing.



*Air Release Valve*

### 2. STUDY ON IDENTIFICATION OF ECONOMICAL COAGULANTS FOR DIFFERENT RAW WATERS IN WATER TREATMENT

A pilot study on the use of Poly Aluminium Chloride in place of alum as a coagulant to optimize chemical usage in water-treatment plants was studied. It was concluded that Poly Aluminium Chloride is the next-best alternative to alum with respect to economy.

### 3. KATARAGAMA PEBBLE MATRIX FILTER PROJECT

Pebble matrix is a novel pre-filter technology applicable when raw water turbidity is very high (exceeding 500 NTU). Experiments have shown that pebble-matrix filter units reduce turbidity to 30 NTU in such water and are recommended for use before slow sand filters. Construction of two such filters for the World Bank-funded Kataragama water supply scheme is in progress. The filters will be commissioned in early 2008.

### 4. WATER RESOURCES DATABASE

A water resources database would be invaluable for use in forecasting and planning new schemes. The planned database marks intake locations using GPS and specifies details of intake, extraction, available treatment facilities, number of connections, etc. Data collection has been completed for the Kandy, Anuradhapura, Galle, Hambantota and Matara Districts.

#### **5. WALAPANE WATER SUPPLY SCHEME IMPROVEMENT**

This proposal to improve the Walapane water supply scheme by the use of prefabricated water-treatment unit modules for sand filtration and disinfection was submitted for funding by the Pradeshiya Sabha.

#### **6. TREATMENT PROCESS IMPROVEMENT OF DIYATALAWA WATER SUPPLY SCHEME**

The problem of flocs formed in the treatment plant not settling in the sedimentation tank was addressed by the introduction of a baffle flocculator and tube settler within the existing sedimentation basin. Construction works are to be implemented.

#### **7. WATER SAFETY WITH RESPECT TO RIVER POLLUTION**

The danger of pollution of the Kelani River from industrial waste discharges and garbage dumping was taken up with the relevant authorities. The Central Environmental Authority has already started mitigatory efforts using a community-participation approach. This is a positive effort beyond the ongoing Pavithra Ganga programme.

The following activities were initiated and are ongoing in facilitation of the programme:

- collection of details concerning all villages selected for the programme and circulation of same under RSCs to obtain basic data for the provision of water and sanitation facilities;
- preparation of tentative estimates for water and sanitation facilities for selected 42 villages under the first phase of the project and co-ordination with the relevant Ministries to obtain the required funds;
- preparation and distribution of guidelines for provision of water and sanitation facilities among district offices of the NWSDB;
- many different types of assistance provided by various district and provincial offices of the NWSDB to expedite implementation of the programme; and
- funding from the NWSDB for the water supply to the first village under the programme, Jayaminigama in the Moneragala District (this was achieved at a cost of Rs. 1 million and opened in October 2007).

### **MISCELLANEOUS**

#### **GAMA NAGUMA PROGRAMME**

Gama Naguma was a high-priority programme of the Government. Its objective was to provide infrastructure facilities to rural villages. Co-ordination of provision of water and sanitation facilities under the programme was undertaken by the NWSDB. The Rural Water Supply Section of the NWSDB handled this task.

# Report of the Audit and Management Committee

The Audit and Management Committee, appointed in terms of Public Finance Circular No. PF/PE/04 of 11.01.2000 to assist the Board of Management, was functioning during the year under review.

|     |   |                                   |
|-----|---|-----------------------------------|
| 1.  | Mr. D. Widanagamachchi<br>Board Member                        | - Chairman                        |
| 2.  | Eng. S. K. S. H. K. Suriyaarachchi<br>Vice Chairman           | - Member<br>(up to 16.04.2007)    |
| 3.  | Dr. A. Uthumalebbe<br>Vice Chairman                           | - Member<br>(w.e.f. 25.04.2007)   |
| 4.  | Mr. K. W. D. U. Dahanayake<br>Board Member                    | - Member<br>(up to 29.01.2007)    |
| 5.  | Dr. C. K. Shanmugarajah<br>Board Member                       | - Member                          |
| 6.  | Mr. M. Wickramage<br>General Manager                          | - Member<br>(up to 16.05.2007)    |
| 7.  | Mr. K. L. L. Premanath<br>General Manager                     | - Member<br>(w.e.f. 17.05.2007)   |
| 8.  | Mr. L. S. P. J. de Silva<br>Additional General Manager (CS)   | - Member                          |
| 9.  | Mr. D. Thotawatte<br>Deputy General Manager (F)               | - Member                          |
| 10. | Mr. K. Elangko<br>Deputy General Manager (IA)                 | - Member<br>(up to 27.01.2007)    |
| 11. | Mr. W. A. J. Weerasinghe<br>Actg. Deputy General Manager (IA) | - Member<br>(w. e. f. 28.01.2007) |
|     | Mr. K. K. Chandrasiri   | - Secretary                       |

The Audit and Management Committee, comprising the above members, assembled at the Office of the National Water Supply & Drainage Board on 1st March 2007, 1st June 2007 and 1st August 2007 under the chairmanship of Mr. D. Widanagamachchi.

The Audit and Management Committee continued its functions during the year under review in accordance with the revised Terms of Reference given in Annexure 1 to Public Finance Circular No. PF/PE/10 of 30th October 2000.

The Committee focused its attention mainly on strengthening the capacity of the Internal Audit Division and implementation of the action plan, giving special emphasis to foreign-funded projects and observations made in the report of the Auditor General on the annual financial statements for 2005 and 2006.

At the three meetings held during the year under review, the Committee perused the documents relating to the main areas of focus. Deliberations were also focused on the following core issues, on which audit observations were made:

- Accounting Deficiencies
- Non-Operative Accounts
- Suspense Accounts
- Foreign-Loan Utilization and Delays in Project Implementation
- Non-Revenue Water
- Assets and Stores Management System

The observations and recommendations of the Committee on the above areas were referred to the Board of Directors for consideration and implementation.





# Financial Statements

|           |   |
|-----------|---|
| <b>66</b> | Income Statement  |
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# Income Statement

| <i>For the year ended</i>                                |      | Revised Budget<br>2007 | <b>Actual<br/>2007</b> | Actual<br>2006  |
|--|------|------------------------|------------------------|-----------------|
|  | Note | Rs.                    | Rs.                    | Rs.             |
| Sale of Water  | 3    | 7,204,768,000          | 6,481,915,574          | 5,869,448,092   |
| Less: Direct Operating Expenses                          | 4    | (4,774,782,865)        | (4,902,547,316)        | (4,080,524,657) |
| Operating Profit on Sale of Water                        |      | 2,429,985,135          | 1,579,368,258          | 1,788,923,435   |
| Other Operating Income                                   | 5    | 1,556,448,000          | 1,129,364,580          | 1,074,822,450   |
| Administration Overheads                                 | 6    | (1,716,836,135)        | (1,762,775,528)        | (1,348,603,525) |
| Depreciation   | 7    | (1,053,848,000)        | (1,381,373,713)        | (1,100,006,942) |
| Other Operating Expenses                                 | 7    | (248,835,000)          | (139,810,303)          | (159,864,181)   |
| <b>Profit/(Loss) from Operating Activities</b>           |      | 966,914,000            | (575,226,705)          | 255,271,237     |
| Finance Cost   | 8    | (819,000,000)          | (851,942,058)          | (511,983,308)   |
| Non-Operating Income                                     | 9    | 130,000,000            | 203,386,141            | 114,477,942     |
| Tsunami Losses   | 10   | -                      | -                      | (7,981,932)     |
| <b>Profit/(Loss) from Ordinary Activities before Tax</b> |      | 277,914,000            | (1,223,782,622)        | (150,216,062)   |
| Taxation   | 11   | 78,263,000             | 54,590,568             | 63,864,173      |
| <b>Net Profit/(Loss) for the year</b>                    |      | 199,651,000            | (1,278,373,190)        | (214,080,235)   |

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

Colombo  
28th February 2008

# Balance Sheet

| <i>As at 31st December</i>                   |      | <b>2007</b>            | 2006                   |
|--|------|------------------------|------------------------|
|  | Note | Rs.                    | Rs.                    |
| <b>ASSETS</b>                                |      |                        |                        |
| <b>Non-Current Assets</b>                    |      |                        |                        |
| Property, Plant & Equipment, Net - At Cost   | 9A   | 52,406,177,577         | 42,181,602,353         |
| Capital Work-in-Progress                     | 12   | 48,291,137,797         | 47,681,030,625         |
| Investments                                  | 14   | 115,400,688            | 128,699,746            |
|  |      | <b>100,812,716,062</b> | <b>89,991,332,725</b>  |
| <b>Current Assets</b>                        |      |                        |                        |
| Non-Operating Assets                         | 13   | 191,486,865            | 191,487,240            |
| Inventories                                  | 15   | 2,601,875,030          | 2,283,492,046          |
| Trade & Other Receivables                    | 16   | 6,021,249,894          | 5,078,885,833          |
| Deposits & Advances                          | 17   | 2,944,744,662          | 4,208,785,416          |
| Investments                                  | 18   | 850,475,051            | 1,649,873,239          |
| Cash & Cash Equivalents                      | 19   | 484,127,206            | 207,321,422            |
|  |      | <b>13,093,958,709</b>  | <b>13,619,845,195</b>  |
| <b>Total Assets</b>                          |      | <b>113,906,674,771</b> | <b>103,611,177,920</b> |
| <b>EQUITY AND LIABILITIES</b>                |      |                        |                        |
| <b>Capital and Reserves</b>                  |      |                        |                        |
| Assets taken over from Government Department |      | 185,480,387            | 185,480,387            |
| Equity Capital                               |      | 48,851,176,568         | 42,361,254,462         |
| Capital Grants                               | 20   | 46,507,296,332         | 43,095,624,266         |
| Capital Recovery Fund                        | 21   | 1,487,418,856          | 1,261,237,556          |
| Staff Welfare Fund                           |      | 11,709,173             | 11,731,941             |
| Revaluation Reserve                          |      | 309,763,136            | 309,763,136            |
| Accumulated Profit/(Loss)                    |      | (4,555,450,598)        | (3,050,918,878)        |
|  |      | <b>92,797,393,852</b>  | <b>84,174,172,872</b>  |
| <b>Non-Current Liabilities</b>               |      |                        |                        |
| Loan Payable                                 | 22   | 16,525,615,820         | 15,696,986,667         |
| Other Deferred Liabilities                   | 23   | 1,731,195,728          | 1,603,640,105          |
|  |      | <b>18,256,811,548</b>  | <b>17,300,626,772</b>  |
| <b>Current Liabilities</b>                   |      |                        |                        |
| Creditors                                    | 24   | 1,209,831,339          | 1,081,162,244          |
| Loan Capital Payable                         | 25   | 698,582,535            | 295,283,159            |
| Loan Interest Payable                        |      | 284,226,156            | 142,184,781            |
| Non-Operating Liabilities                    | 13   | 115,455,778            | 115,455,778            |
| Other Payables                               | 26   | 544,373,563            | 502,292,316            |
|  |      | <b>2,852,469,371</b>   | <b>2,136,378,278</b>   |
| <b>Total Equity and Liabilities</b>          |      | <b>113,906,674,771</b> | <b>103,611,177,921</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)*

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

Colombo  
28th February 2008

# Cash Flow Statement

| <i>For the year ended</i>                                   |      | <b>2007</b>             | 2006                    |
|---|------|-------------------------|-------------------------|
|   | Note | Rs.                     | Rs.                     |
| <b>Cash Flows from/(used in) Operating Activities</b>       |      |                         |                         |
| Net Profit before Tax                                       |      | (1,223,782,622)         | (150,216,062)           |
| <b>Adjustments for</b>                                      |      |                         |                         |
| Interest Income   |      | (203,386,141)           | (114,477,942)           |
| Depreciation  | 7    | 1,381,373,713           | 1,100,006,942           |
| Profit/Loss on Disposal Assets                              |      | (10,679,735)            | -                       |
| Retiring Gratuity Provision                                 |      | 139,810,303             | 103,982,046             |
| Interest Expense  | 8    | 851,942,058             | 511,983,308             |
| <b>Operating Profit before Working Capital Changes</b>      |      | <b>935,277,576</b>      | <b>1,451,278,293</b>    |
| (Increase)/Decrease in Inventories                          |      | (318,382,984)           | (132,643,726)           |
| (Increase)/Decrease in Debtors, Receivables & Deposits      |      | 303,824,324             | (1,133,130,682)         |
| Increase/(Decrease) in Creditors & Provisions               |      | 371,013,475             | 174,278,936             |
| <b>Cash Generated from Operations</b>                       |      | <b>1,291,732,390</b>    | <b>359,782,821</b>      |
| Taxation  | 11   | (54,590,568)            | (63,864,173)            |
| Gratuity Paid   | 23.1 | (70,476,438)            | (41,666,035)            |
| <b>Net Cash from Operating Activities</b>                   |      | <b>1,166,665,384</b>    | <b>254,252,613</b>      |
| <b>Cash Flows from/(used in) Investing Activities</b>       |      |                         |                         |
| Investments in Fixed Assets                                 |      | (11,547,840,460)        | (12,973,220,403)        |
| Sale Proceeds for Disposal Assets                           |      | 12,739,313              | -                       |
| Investment Income   |      | 221,238,885             | 104,190,281             |
| (Investment)/Withdrawal of Investments                      |      | 812,697,246             | (962,236,894)           |
| <b>Net Cash Flows used in Investing Activities</b>          |      | <b>(10,501,165,015)</b> | <b>(13,831,267,016)</b> |
| <b>Cash Flows from/(used in) Financing Activities</b>       |      |                         |                         |
| Equity Capital during the period                            |      | 6,489,922,106           | 6,006,259,544           |
| Foreign Grant during the period                             | 20   | 3,411,672,066           | 6,418,465,307           |
| New Loans   |      | 1,589,498,022           | 2,527,437,245           |
| Loan Repayments   |      | (357,569,492)           | (573,486,204)           |
| Loan Interest Paid  |      | (1,522,217,286)         | (1,266,059,529)         |
|   |      | <b>9,611,305,415</b>    | <b>13,112,616,363</b>   |
| <b>Net Increase in Cash &amp; Cash Equivalents</b>          |      | <b>276,805,784</b>      | <b>(464,398,038)</b>    |
| Cash & Cash Equivalents at the beginning of the year        |      | 207,321,422             | 671,719,461             |
| <b>Cash &amp; Cash Equivalents at the end of the period</b> |      | <b>484,127,206</b>      | <b>207,321,422</b>      |

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



# Statement of Changes in Equity

| <i>As at 31st December 2007</i>       | Assets from<br>Department<br>Rs. | Capital &<br>Grants<br>Rs. | Capital<br>Recovery Fund<br>Rs. | Revaluation<br>Reserve<br>Rs. | Staff Welfare<br>Fund<br>Rs. | Accumulated<br>Profit/Loss<br>Rs. | Total<br>Rs.          |
|---------------------------------------|----------------------------------|----------------------------|---------------------------------|-------------------------------|------------------------------|-----------------------------------|-----------------------|
| <b>Balance at 31.12.2005</b>          | <b>185,480,387</b>               | <b>73,032,153,877</b>      | <b>1,059,581,281</b>            | <b>309,763,136</b>            | <b>11,571,713</b>            | <b>(2,635,022,139)</b>            | <b>71,963,528,254</b> |
| Grant received during the year        | –                                | 12,424,724,852             | –                               | –                             | –                            | –                                 | 12,424,724,852        |
|                                       | 185,480,387                      | 85,456,878,729             | 1,059,581,281                   | 309,763,136                   | 11,571,713                   | (2,635,022,139)                   | 84,388,253,105        |
| Net Profit/(Loss) for the year        | –                                | –                          | –                               | –                             | –                            | (214,080,235)                     | (214,080,235)         |
| Transfers to/(from) during the year   | –                                | –                          | 201,656,275                     | –                             | 160,228                      | (201,816,504)                     | –                     |
| <b>Balance at 31.12.2006</b>          | <b>185,480,387</b>               | <b>85,456,878,729</b>      | <b>1,261,237,556</b>            | <b>309,763,136</b>            | <b>11,731,941</b>            | <b>(3,050,918,878)</b>            | <b>84,174,172,870</b> |
| Grant received during the period      | –                                | 9,901,594,171              | –                               | –                             | –                            | –                                 | 9,901,594,171         |
|                                       | 185,480,387                      | 95,358,472,900             | 1,261,237,556                   | 309,763,136                   | 11,731,941                   | (3,050,918,878)                   | 94,075,767,041        |
| Net Profit/(Loss) for the period      | –                                | –                          | –                               | –                             | –                            | (1,278,373,190)                   | (1,278,373,190)       |
| Transfers to/(from) during the period | –                                | –                          | 226,181,300                     | –                             | (22,769)                     | (226,158,531)                     | –                     |
| <b>Balance at 31.12.2007</b>          | <b>185,480,387</b>               | <b>95,358,472,900</b>      | <b>1,487,418,856</b>            | <b>309,763,136</b>            | <b>11,709,173</b>            | <b>(4,555,450,598)</b>            | <b>92,797,393,851</b> |

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

Colombo  
28th February 2008

# Segmental Gross Profit - 31st December 2007

| Sources                          | Activities    | Water Service | Sewerage     | Ground Water | Total         |
|----------------------------------|---------------|---------------|--------------|--------------|---------------|
| <b>GROSS INCOME</b>              |               |               |              |              |               |
| Sale of Water -                  |               |               |              |              |               |
|                                  | Metered Sales | 6,417,437,493 | -            | -            |               |
|                                  | Bulk Sales    | 39,520,159    | -            | -            |               |
|                                  | Bowser Supply | 74,958,291    | -            | -            |               |
|                                  |               | 6,531,915,942 | -            | -            |               |
| Less: Rebates                    |               |               |              |              |               |
|                                  |               | (50,000,368)  | -            | -            |               |
|                                  |               | 6,481,915,574 |              |              |               |
| Other Income                     |               |               |              |              |               |
|                                  |               | 273,218,610   | 70,583,831   | 19,031,027   |               |
|                                  |               | 6,755,134,183 | 70,583,831   | 19,031,027   | 6,844,749,041 |
| <b>Less: Direct Cost</b>         |               |               |              |              |               |
| Personnel Cost -                 |               |               |              |              |               |
|                                  | Permanent     | 2,165,896,234 | 95,551,805   | 29,716,642   |               |
|                                  | Casual        | 42,217,075    | 1,299,897    | 409,920      |               |
|                                  |               | 2,208,113,310 | 96,851,702   | 30,126,562   | 2,335,091,573 |
| Pumping Cost                     |               |               |              |              |               |
|                                  |               | 1,568,167,110 | 19,129,827   | 576,390      | 1,587,873,327 |
| Chemical Cost                    |               |               |              |              |               |
|                                  |               | 346,684,682   | 2,807,925    | -            | 349,492,607   |
| Repairs & Maintenance            |               |               |              |              |               |
|                                  |               | 270,661,919   | 6,906,305    | 9,466,597    | 287,034,821   |
| Establishment Expenses           |               |               |              |              |               |
|                                  |               | 139,823,586   | 6,667,556    | 5,521,955    | 152,013,097   |
| Rent, Rates, Taxes, etc.         |               |               |              |              |               |
|                                  |               | 177,579,831   | 13,375,171   | 86,888       | 191,041,890   |
|                                  |               | 4,711,030,438 | 145,738,487  | 45,778,391   |               |
| <b>Gross Profit for the Year</b> |               |               |              |              |               |
|                                  |               | 2,044,103,746 | (75,154,656) | (26,747,365) | 1,942,201,725 |

# Notes to the Financial Statements

## 1. Corporate Information

### 1.1 General

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

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

### 1.2 Principal Activities and Nature of Operations

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

### 1.3 Number of Employees

The number of permanent and contract employees, as at the end of the year were 8,460 (2006 - 8,350). The number consists of those who were paid salaries as at 31st December 2007.

## 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 Date (SLAS 12)

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

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

## 2.2 Valuation of Assets and their Measurement Bases

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

#### i. Cost

Cost of 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.

#### 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 overhaul expenditure. Other subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the item of Property, Plant & Equipment. All other expenditure is recognized in the Income Statement as an expense as included.

#### iv. Restoration Costs

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

#### v. Depreciation (SLAS 8)

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

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

No depreciation has been provided on freehold land. Full provision is made in the year of purchase and none in the year of disposal.

#### vi. Rehabilitation Costs

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

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

SLAS 24 specifically does not apply organizations that have substantial ownership by the Government. As National Water Supply & Drainage Board is fully owned Government Institution, SLAS 24 is excluded in application of this Standard. However, grant received other than Government is considered in financial reporting of this Board.

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

#### 2.2.2 Inventories (SLAS 5)

Inventories mainly consist of materials that are held for use in the production of water and materials that are required for 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 & Cash Equivalents (SLAS 9)

Cash & cash equivalents are defined as cash on 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).

##### **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 a defined benefit plan. The advice of an actuary has not been obtained in accounting for defined benefit plan. The resulting difference between brought forward provision at the beginning of the year and the carried forward provision at the end of the year is dealt within the Income Statement.

##### **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. 342,266,906/- and ETF - Rs. 85,564,741/-.

##### **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 2-24 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 and Commitments**

In the opinion of the Board of Directors and legal officers pending litigation against the Board will not have a material impact on the reported financial results of the further operation of the Board.

All commitments has been specially disclose in the Note No. 27 to the financial statements.

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

Trade and other payables are stated at the cost.

#### **2.6 Income Statement**

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

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

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

Revenue from sale of water is recognized when the meters are read and when bills are processed within the system.

##### **(b) Other Operating Income**

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

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

##### **(c) Interest Income**

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

##### **(d) Dividends**

Dividend income is recognized on cash basis.



### **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.

|   | 31.12.2007           | 31.12.2006           |
|---|----------------------|----------------------|
|   | Rs.                  | Rs.                  |
| <b>3. Sale of Water</b>                         |                      |                      |
| Metered Sales                                   | 6,417,437,493        | 5,793,621,585        |
| Bulk Sales                                      | 39,520,159           | 79,253,182           |
| Bowser Supply                                   | 74,958,291           | 45,075,177           |
| Less: Rebates                                   | (50,000,368)         | (48,501,852)         |
|   | <b>6,481,915,574</b> | <b>5,869,448,092</b> |
| <b>4. Direct Operating Expenses</b>             |                      |                      |
| Personnel cost                                  | 2,335,091,573        | 1,829,346,805        |
| Pumping Cost                                    | 1,587,873,327        | 1,360,669,505        |
| Chemicals                                       | 349,492,607          | 319,570,787          |
| Repairs & Maintenance                           | 287,034,821          | 256,858,175          |
| Establishment Expenses                          | 152,013,097          | 137,637,825          |
| Rent, Rates, Taxes, Security & Other Expenses   | 191,041,890          | 176,441,560          |
|   | <b>4,902,547,316</b> | <b>4,080,524,657</b> |
| <b>5. Other Operating Income</b>                |                      |                      |
| Capital Recovery Charges                        | 226,181,300          | 201,656,275          |
| New Connection Income (Net)                     | 237,836,696          | 282,430,769          |
| Fees & Other Charges                            | 646,012,718          | 574,857,926          |
| Bad Debt Over Provision                         | 21,653,200           | -                    |
| Revenue Grants                                  | (2,319,334)          | 15,877,480           |
|   | <b>1,129,364,580</b> | <b>1,074,822,450</b> |
| <b>6. Administration Overheads</b>              |                      |                      |
| Personnel Cost                                  | 1,135,611,518        | 982,823,544          |
| Repairs & Maintenance                           | 69,864,240           | 95,828,699           |
| Establishment Expenses                          | 224,065,860          | 216,240,180          |
| Rent, Rates, Taxes, Security & Other Expenses   | 333,233,910          | 53,711,102           |
|   | <b>1,762,775,528</b> | <b>1,348,603,525</b> |
| <b>7. Other Operating Expenses</b>              |                      |                      |
| <b>Depreciation</b>                             |                      |                      |
| Infrastructures                                 | 8,324,931            | 1,072,353            |
| Buildings                                       | 119,652,153          | 86,685,152           |
| Water Supply Scheme Structures                  | 214,837,137          | 91,086,551           |
| Plant & Machinery - Pumping & Treatment         | 590,085,268          | 374,676,899          |
| Service/Bulk Meters                             | 7,505,742            | 3,627,759            |
| Plant & Equipment - Distribution & Transmission | 455,852,209          | 320,700,147          |
| Mobile Equipment                                | 7,174,870            | 7,467,166            |
| Survey Equipment                                | 608,270              | 229,597              |

|  | 31.12.2007           | 31.12.2006           |
|--|----------------------|----------------------|
|  | Rs.                  | Rs.                  |
| Laboratory & Other Equipment           | 118,239,488          | 88,656,865           |
| Furniture Fittings & Office Equipments | 39,546,598           | 28,975,776           |
| Passenger Cars                         | 6,063,599            | 2,188,581            |
| Vans, Buses & Jeeps                    | 9,337,336            | 7,162,973            |
| Lorries & Trucks                       | 36,992,745           | 38,758,307           |
| Tractors & Trailers                    | 1,066,802            | 1,024,827            |
| Water Bowsers & Heavy Vehicles         | 97,520,057           | 46,990,172           |
| Motor Cycles                           | 945,430              | 652,629              |
|  | 1,713,752,637        | 1,099,955,754        |
| Amortization of Leasehold Land         | 51,188               | 51,188               |
| <b>Total Depreciation</b>              | <b>1,713,803,825</b> | <b>1,100,006,942</b> |
| Less: Deprn. for Grant Funded Assets   | (332,430,112)        | -                    |
|  | 1,381,373,713        |                      |
| Bad & Doubtful Debts                   | -                    | 52,898,160           |
| Retiring Gratuity                      | 139,810,303          | 103,982,046          |
| Irrecoverable Debt                     | -                    | 2,983,975            |
|  | 2,902,557,728        | 1,259,871,124        |
| <b>8. Finance Cost</b>                 |                      |                      |
| <b>Loan Description</b>                |                      |                      |
| IDA 1700                               | 60,756,605           | 51,890,086           |
| IDA 1041                               | 24,421,417           | -                    |
| French - Trincomalee                   | 2,932,019            | 2,932,083            |
| French - Negombo I                     | 1,197,585            | 1,197,585            |
| French - Negombo II                    | 1,377,469            | 1,377,469            |
| French - Kurunegala                    | 1,824,954            | 1,824,954            |
| French - Badulla                       | 2,197,378            | 2,197,378            |
| French - Ambatale                      | 54,986,528           | 57,175,454           |
| ADB 817                                | 78,816,161           | 66,676,993           |
| UDA ADB                                | -                    | 2,036,791            |
| ODA                                    | 1,082,897            | 5,224,995            |
| ADB 1235                               | 98,840,471           | 83,556,806           |
| ADB 1575                               | 150,627,615          | 157,135,211          |
| USAID                                  | 681,956              | 751,899              |
| ODA Matara-Nilambe                     | 43,836,337           | 39,006,909           |
| OECF SLP 19                            | 35,681,363           | 38,236,877           |
| OECF SLP 37                            | 112,408,778          | 93,673,982           |
| OECF SLP 49                            | 259,298,195          | 182,331,730          |
| OECF SLP 55                            | 401,667,221          | 343,264,130          |
| OECF SLP 71                            | 72,842,817           | 61,032,868           |

|  | 31.12.2007    | 31.12.2006    |
|--|---------------|---------------|
|  | Rs.           | Rs.           |
| OECF SLP 66  | 9,435,080     | 8,225,012     |
| Kalmunai   | 1,583,501     | 1,707,696     |
| KfW - Nawalapitiya/Ampara/Koggala                          | 25,932,416    | 14,228,984    |
| EDCF - Greater Galle Korean I                              | 54,163,834    | 54,163,834    |
| EDCF - Greater Galle Korean II                             | 20,388,139    | 9,579,648     |
| SFD 1/30   | -             | 7,040,114     |
| ADB 1757   | 5,179,749     | 5,202,728     |
| ADB 1993   | 26,159,085    | 5,822,411     |
| Nuwara-Eliya - DANIDA                                      | 13,262,358    | 856,221       |
| Kandy South - DANIDA                                       | 33,365,095    | 11,122,642    |
| Greater Trincomalee  | 2,657,517     | -             |
| Ambalangoda/Weligama/Kataragama                            | 12,756,692    | 9,081,625     |
| Local loans  | 1,239,781     | 1,311,404     |
| <b>Less: Capitalized Interest on Construction Projects</b> |               |               |
| OECF SLP 49  | -             | (182,331,730) |
| ADB 1575   | (150,627,615) | (157,135,211) |
| OECF SLP 55  | (401,667,221) | (343,264,130) |
| OECF SLP 71  | (72,842,817)  | (61,032,868)  |
| KfW - Nawalapitiya/Ampara/Koggala                          | (25,932,416)  | (14,228,984)  |
| EDFC - Greater Galle Korean II                             | (20,388,139)  | (9,579,648)   |
| OECF SLP 66  | -             | (8,225,012)   |
| ADB 1757   | -             | (5,202,728)   |
| ADB 1993   | (26,159,085)  | (5,822,411)   |
| Nuwara-Eliya - DANIDA                                      | (13,262,358)  | (856,221)     |
| Kandy South - DANIDA                                       | (33,365,095)  | (11,122,642)  |
| Greater Trincomalee  | (2,657,517)   | -             |
| Ambalangoda/Weligama/Kataragama                            | (12,756,692)  | (9,081,625)   |
|  | 851,942,058   | 511,983,308   |
| <b>9. Other Non-Operating Income</b>                       |               |               |
| Investment Income  | 203,386,141   | 114,477,942   |

**9 A Schedule of Fixed Assets as at 31.12.2007**

| Description                       | Rate of Dep. | Cost of Fixed Assets as at 01.01.2007 (A) | Addition During the Year (B) | Transfers/ Adjustment (C) | Disposals (D)     | Cost of Fixed Assets as at 31.12.2007 (A+B-C-D) | Fully Depreciated Items (F) | Depreciable Assets (E-F) (G) | Depreciation 01.01.2007 (H) | Depreciation for Disposals/ Adj. for Depreciation (I) | Depreciation for Year 2007 (GX Rate) (J) | Depreciation as at 31.12.2007 (K) (HI+J) | Amortization for Year 2007 (L) | Fixed Assets Written Down Value 31.12.2007 (E-K-L) |
|-----------------------------------|--------------|---|------------------------------|---------------------------|-------------------|---|-----------------------------|------------------------------|-----------------------------|---|--|--|--------------------------------|--|
| Land - Freehold                   |              | 993,439,938                               | 200,635,271                  | 12,277,791                |                   | 1,181,797,417                                   |                             | 1,181,797,417                |                             |   |  |  | 51,187.42                      | 1,181,797,417                                      |
| Land - Leasehold                  |              | 5,898,131                                 |                              |                           |                   | 5,898,131                                       |                             | 5,898,131                    |                             |   |  |  |                                | 5,846,944  |
| Infrastructure                    | 2%           | 99,727,611                                | 318,718,953                  |                           |                   | 418,446,564                                     | 2,200,000                   | 416,246,564                  | 5,392,402                   |   | 8,324,931                                | 13,717,333                               |                                | 404,729,231  |
| Building - Freehold               | 2%           | 5,322,292,097                             | 666,385,073                  | 6,069,501                 |                   | 5,982,607,669                                   |                             | 5,982,607,669                | 953,031,553                 |   | 119,652,153                              | 1,072,683,706                            |                                | 4,909,923,963                                      |
| Structures                        | 1.67%        | 10,660,571,279                            | 2,220,533,314                | 16,605,397                |                   | 12,864,499,196                                  |                             | 12,864,499,196               | 1,069,238,830               |   | 214,837,137                              | 1,284,075,967                            |                                | 11,580,423,229                                     |
| Plant & Eq. Pumping               |              |   |                              |                           |                   |   |                             |                              |                             |   |  |  |                                |  |
| Treatment                         | 5%           | 9,882,001,533                             | 2,517,104,268                | 14,216,069                |                   | 12,384,889,733                                  | 583,184,369                 | 11,801,705,364               | 3,081,929,856               |   | 590,085,268                              | 3,672,015,124                            |                                | 8,712,874,608                                      |
| Service Meter                     | 10%          | 30,547,385                                | -                            |                           |                   | 30,547,385                                      | 25,397,642                  | 5,149,743                    | 30,336,695                  |   | 210,690                                  | 30,547,385                               |                                | -  |
| Bulk Water Meter                  | 10%          | 34,025,331                                | 38,925,188                   |                           |                   | 72,950,518                                      |                             | 72,950,518                   | 8,912,522                   |   | 7,295,052                                | 16,207,574                               |                                | 56,742,945   |
| Plant & Eq. Trans. & Distribution | 1.67%        | 21,759,030,756                            | 5,623,729,688                | 86,220,986                |                   | 27,296,539,458                                  |                             | 27,296,539,458               | 2,962,627,343               |   | 455,852,209                              | 3,418,479,552                            |                                | 23,878,059,906                                     |
| Mobile Equipment                  | 10%          | 123,680,972                               | 9,036,559                    | 75,800                    |                   | 132,641,731                                     | 60,893,030                  | 71,748,701                   | 105,661,448                 |   | 7,174,870                                | 112,836,318                              |                                | 19,805,413   |
| Survey Equipment                  | 10%          | 6,146,558                                 | 2,143,336                    |                           |                   | 8,289,895                                       | 2,207,196                   | 6,082,699                    | 4,437,823                   |   | 608,270                                  | 5,046,093                                |                                | 3,243,802  |
| Laboratory                        | 10%          | 91,909,776                                | 9,400,348                    | 137,984                   |                   | 101,172,140                                     | 16,522,478                  | 84,649,662                   | 41,755,460                  |   | 8,464,966                                | 50,220,426                               |                                | 50,951,714   |
| Other Equipment                   | 10%          | 1,061,325,932                             | 256,207,244                  | 709,995                   |                   | 1,338,823,182                                   | 239,077,961                 | 1,097,745,221                | 675,442,154                 |   | 109,774,522                              | 785,216,676                              |                                | 551,606,506  |
| Furniture & Fittings              | 10%          | 369,693,046                               | 107,348,985                  | 1,415,915                 |                   | 475,626,116                                     | 80,160,133                  | 395,465,983                  | 215,485,153                 |   | 39,546,598                               | 255,031,751                              |                                | 220,594,364  |
| Motor Vehicles, Cars              | 14.3%        | 61,449,541                                | 3,753,045                    |                           | 744,908           | 64,457,677                                      | 22,054,886                  | 42,402,791                   | 40,671,257                  | 744,908   | 6,063,599                                | 45,989,948                               |                                | 18,467,729   |
| Van, Busses & Jeeps               | 14.3%        | 141,386,070                               | 9,994,999                    |                           | 2,163,217         | 149,217,862                                     | 83,921,796                  | 65,296,056                   | 109,185,856                 | 2,163,217   | 9,337,336                                | 116,359,975                              |                                | 32,857,877   |
| Lorries & Trucks                  | 10%          | 533,204,036                               | 57,498,624                   | 22,684,931                |                   | 568,037,730                                     | 198,110,275                 | 369,927,455                  | 346,607,863                 | 20,621,553  | 36,992,745                               | 362,979,056                              |                                | 205,058,674  |
| Tractors & Trailers               | 10%          | 23,610,622                                | 250,000                      |                           | 190,000           | 23,670,622                                      | 13,002,605                  | 10,668,017                   | 14,750,650                  | 190,000   | 1,066,802                                | 15,627,452                               |                                | 8,043,170  |
| Water Bowlers,                    |              |   |                              |                           |                   |   |                             |                              |                             |   |  |  |                                |  |
| Heavy Vehicles                    | 10%          | 1,044,671,835                             | 34,441,073                   |                           | 1,637,039         | 1,077,475,869                                   | 102,275,301                 | 975,200,568                  | 420,555,416                 | 1,637,039   | 97,520,057                               | 516,438,434                              |                                | 561,037,435  |
| Motor Cycles                      | 14.3%        | 7,039,903                                 | 2,045,669                    |                           | 40,001            | 9,045,572                                       | 2,434,175                   | 6,611,397                    | 4,027,489                   | 40,001  | 945,430                                  | 4,932,918                                |                                | 4,112,654  |
| <b>TOTAL</b>                      |              | <b>52,271,652,352</b>                     | <b>12,078,151,638</b>        | <b>137,729,438</b>        | <b>27,440,096</b> | <b>64,184,634,456</b>                           | <b>1,431,441,847</b>        | <b>62,753,192,609</b>        | <b>10,090,049,771</b>       | <b>25,366,718</b>                                     | <b>1,713,752,636</b>                     | <b>11,778,405,688</b>                    | <b>51,187</b>                  | <b>52,406,177,580</b>                              |



|                                     | 31.12.2007<br>Rs. | 31.12.2006<br>Rs. |
|-------------------------------------|-------------------|-------------------|
| <b>10. Tsunami Losses</b>           |                   |                   |
| Charged to P & L A/C                | -                 | 7,981,932         |
| <b>11. Taxation</b>                 |                   |                   |
| Economic Service Charge             | 54,330,131        | 56,326,640        |
| Income Tax                          | 260,437           | 7,537,533         |
|                                     | 54,590,568        | 63,864,173        |
| <b>12. Capital Work-in-Progress</b> |                   |                   |
| Construction Work                   | 38,833,719,555    | 35,920,279,955    |
| Rehabilitation                      | 9,457,418,243     | 11,760,750,670    |
|                                     | 48,291,137,797    | 47,681,030,625    |
| <b>13. Non-Operating Assets</b>     | 191,486,865       | 191,487,240       |
| Non-Operating Liabilities           | 115,455,778       | 115,455,778       |
|                                     | 76,031,087        | 76,031,462        |

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>14. Investments</b>                   |               |               |
| HDFC Shares                              | 208,742       | 200,000       |
| HDFC Investment for Staff Housing Loans  | 113,009,032   | 126,476,806   |
| Bank of Ceylon Saving - I                | 1,426,427     | 1,321,152     |
| Bank of Ceylon Saving - II               | 756,487       | 701,788       |
|  | 115,400,688   | 128,699,746   |
| <b>15. Inventories</b>                   |               |               |
| Stock at Main stores                     | 323,340,699   | 300,647,626   |
| Stock at Sites Stores                    | 2,273,763,807 | 1,973,563,131 |
| Goods in Transit                         | 4,770,524     | 9,281,289     |
| Total Inventories at Cost                | 2,601,875,030 | 2,283,492,046 |
| <b>16. Trade &amp; Other Receivables</b> |               |               |
| Advance to Staff - Travelling            | 512,654       | 640,642       |
| Advance to Staff - Salaries              | 299,220       | 278,094       |
| HDFC Receivable                          | 22,770        | 24,270        |
| Festival Advances                        | 10,165,129    | 9,413,679     |
| Advance to Staff - Flood Relief          | 4,375         | 858,631       |

|  | Rs.                  | 31.12.2007<br>Rs.    | 31.12.2006<br>Rs.    |
|--|----------------------|----------------------|----------------------|
| Loans to Employees - Distress                | 676,441,361          |                      |                      |
| Less: Irrecoverable Employee Debts Provision | <u>(569,679)</u>     | 675,871,683          | 747,351,709          |
| Loans to Employees - Vehicle                 |                      | 22,560,823           | 24,333,519           |
| Loans to Employees - Special Advance         |                      | 130,734              | 138,345              |
| Loans to Employees - Tsunami                 |                      | 5,449,925            | 7,442,615            |
| Casual Salary - Advances                     |                      | 391,825              | 2,068,236            |
| Special Incentive Advances                   |                      | 28,185,204           | 27,838,326           |
| VAT Receivable                               |                      | 163,257,008          | 115,531,477          |
| VAT Receivable from Inland Revenue           |                      | 3,214,606,143        | 2,277,052,201        |
| Trade Debtors - Water                        | 1,863,177,689        |                      |                      |
| CMC Debtors                                  | 28,519,949           |                      |                      |
| Sewerage Debtors                             | 85,429,317           |                      |                      |
| Other Debtors                                | <u>61,582,382</u>    |                      |                      |
|  | 2,038,709,337        |                      |                      |
| Less: Provision for Bad Debts                | <u>(325,793,039)</u> | 1,712,916,298        | 1,674,731,214        |
| Debtors Collection Control                   |                      | 196,871,220          | 162,351,317          |
| Suspense Debtors                             |                      | 71,292               | 71,292               |
| Receivable on Interest & Others              |                      | 7,664,372            | 25,517,116           |
| Instalment Debtors - New Connection          |                      | 10,686,298           | 15,301,916           |
| Instalment Debtors - N/C (Low Income)        |                      | (30,120,513)         | (16,408,768)         |
| Stock Adjustments                            |                      | 1,703,434            | -                    |
| School/Religious Grant Receivable            |                      | -                    | 4,350,000            |
| Inter-Regional Current Accounts              |                      | -                    | -                    |
|  |                      | <b>6,021,249,894</b> | <b>5,078,885,833</b> |
| <b>17. Deposits and Advances</b>             |                      |                      |                      |
| Rechargeable Project Work                    |                      | 460,109,956          | 541,810,408          |
| Advance to Suppliers                         |                      | 14,034,552           | 11,484,135           |
| Advance to Contractors                       |                      | 69,799,318           | 171,518,029          |
| Cash Advances - Head Office                  |                      | 4,609,069            | 2,570,937            |
| Cash Advances - Regions                      |                      | 3,278,104            | 3,162,398            |
| Other Advances                               |                      | 6,450,000            | 6,450,000            |
| Advance to Contractors (Local Contract)      |                      | 775,983,181          | 720,921,248          |
| Advance for Contractors (Special Projects)   |                      | 1,519,330,608        | 2,442,311,714        |
| Pre-Payments                                 |                      | 56,568               | 226,073              |
| Special Dollar Account                       |                      | 1,198,086            | 225,131,112          |
| Other Short-Term Deposits                    |                      | 77,880,267           | 70,313,319           |
| Employees' Security Deposits                 |                      | 3,548,090            | 4,045,677            |
| Electricity Deposits                         |                      | 8,400,097            | 8,773,597            |
| Telephone Deposits                           |                      | 66,767               | 66,767               |
|  |                      | <b>2,944,744,662</b> | <b>4,208,785,416</b> |

|   | 31.12.2007     | 31.12.2006     |
|---|----------------|----------------|
|   | Rs.            | Rs.            |
| <b>18. Investments</b>                          |                |                |
| Treasury Bills                                  | 13,278,020     | –              |
| Fixed Deposits                                  | 609,999,999    | 1,537,043,411  |
| Savings Account with People's Bank - Ratmalana  | 46,858         | 44,312         |
| Savings Account with Bank of Ceylon - Ratmalana | 46,717         | 44,333         |
| Savings Account with Bank of Ceylon - Dehiwela  | 2,527,626      | 12,121,393     |
| Savings Account with Bank of Ceylon - Dehiwela  | 224,575,831    | 100,619,789    |
|   | 850,475,051    | 1,649,873,239  |
| <b>19. Cash &amp; Cash Equivalents</b>          |                |                |
| Main Current Accounts                           | 120,009,408    | (42,335,561)   |
| New Connection Accounts                         | 18,919,448     | 44,072,288     |
| Main Collection Account                         | 168,220,020    | 132,982,041    |
| Internal Cash Transfer Account                  | 14,209,602     | 22,689,256     |
| Cash Imprest - Head Office                      | 930,395        | 1,785,713      |
| Sub Collection Accounts                         | 7,049,570      | 11,345,160     |
| Cash Imprest Regions                            | 86,126,960     | 786,614        |
| Cash in Transit                                 | 71,860,839     | 59,870,226     |
| Cash Balance at the end                         | 487,326,240    | 231,195,737    |
| Adjust:   |                |                |
| New Connection Control Account                  | (8,662,290)    | (45,907,241)   |
| Water Bill Collection Control Account           | 5,463,257      | 22,032,926     |
| Cash & Cash Equivalents                         | 484,127,206    | 207,321,422    |
| <b>20. Capital Grants</b>                       |                |                |
| Central Government                              | 46,168,794,373 | 42,757,122,308 |
| Local Government                                | 338,501,958    | 338,501,958    |
|   | 46,507,296,332 | 43,095,624,266 |
| <b>21. Capital Recovery Fund</b>                |                |                |
| Balance at beginning of the year                | 1,261,237,556  | 1,059,581,281  |
| Amount Appropriated during the year             | 226,181,300    | 201,656,275    |
|   | 1,487,418,856  | 1,261,237,556  |
| <b>22. Loan Payable</b>                         |                |                |
| Foreign Loans Through Treasury                  | 15,904,683,652 | 15,076,361,020 |
| Local Loans                                     | 126,196,593    | 125,890,072    |
| Interest Payable                                | 494,735,575    | 494,735,575    |
|   | 16,525,615,820 | 15,696,986,667 |

|   | 31.12.2007    | 31.12.2006    |
|---|---------------|---------------|
|   | Rs.           | Rs.           |
| <b>23. Other Deferred Liabilities</b>               |               |               |
| Retiring Gratuity Provision                         | 1,131,855,622 | 1,062,521,758 |
| Customer and Employee Security Deposits             | 599,340,105   | 541,118,348   |
|   | 1,731,195,728 | 1,603,640,105 |
| <b>23.1 Movement of Retiring Gratuity Provision</b> |               |               |
| Balance at the beginning of the period              | 1,062,521,757 | 1,000,205,746 |
| Add: Provision for the period                       | 139,810,303   | 103,982,046   |
|   | 1,202,332,060 | 1,104,187,792 |
| Less: Gratuity Payments during the period           | (70,476,438)  | (41,666,035)  |
|   | 1,131,855,622 | 1,062,521,758 |
| <b>24. Creditors</b>                                |               |               |
| Rechargeable Work - Customer Advances               | 741,066,379   | 754,490,939   |
| 440, 444 - Contractors Retention                    | 468,764,960   | 326,671,305   |
|   | 1,209,831,339 | 1,081,162,244 |
| <b>25. Loan Capital Payable in 2007</b>             |               |               |
| IDA 1041  | 95,841,020    | 46,942,169    |
| French - Trincomalee                                | 10,278,232    | 10,288,012    |
| French - Negombo I                                  | 2,518,733     | 2,521,231     |
| French - Negombo II                                 | 2,245,018     | 2,188,843     |
| French - Kurunegela                                 | 1,548,530     | 1,553,153     |
| French - Badulla                                    | 2,040,240     | 2,044,073     |
| French - Ambatale                                   | 40,282,538    | 40,215,760    |
| ADB 817   | 84,613,155    | 36,822,283    |
| IDA 1700  | 60,232,380    | 23,818,284    |
| OECF - SLP 19                                       | 28,110,654    | 1,277,758     |
| Kalmunai - Australia                                | 1,261,156     | 1,241,960     |
| USAID   | 3,487,486     | 3,497,205     |
| ADB 1235  | 49,420,235    | 9,151,896     |
| SLP 37  | 162,911,275   | 108,607,516   |
| UDA - ADB   | -             | 1,380,875     |
| OECF - SLP 49                                       | 110,403,550   | -             |
| OECF - SLP 66                                       | 11,157,760    | -             |
| ODA - Hill Country                                  | 7,464,278     | 3,732,138     |
| Matara/Nilambe (ODA)                                | 24,766,294    | 2             |
|   | 698,582,535   | 295,283,159   |

|                           | 31.12.2007         | 31.12.2006         |
|---------------------------|--------------------|--------------------|
|                           | Rs.                | Rs.                |
| <b>26. Other Payables</b> |                    |                    |
| Creditors Control         | 103,329,709        | 84,926,505         |
| VAT Payable               | 109,339,577        | 96,968,185         |
| Security Deposit          | 371,028            | 246,028            |
| Other Creditors           | 34,053,600         | 23,214,947         |
| Refundable Tender Deposit | 16,211,558         | 19,109,332         |
| Salary Payables           | 116,366,129        | 77,051,769         |
| Withholding Tax           | 4,760,009          | 2,842,551          |
| Withholding VAT           | 32,226,300         | -                  |
| Accrued Expenses          | 124,909,848        | 194,526,208        |
| Provision for Cash Losses | 1,075,000          | 1,075,000          |
| Stock Adjustment          | -                  | 600,986            |
| Other Payables            | 1,730,805          | 1,730,805          |
|                           | <b>544,373,563</b> | <b>502,292,316</b> |

## 27. Capital Commitments

The committed Capital Expenditure for 2008 is Rs. 27,799 million for which the Government of Sri Lanka has allocated funds in the National Estimates.

## 28. 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.

## 29. Post Balance Sheet Events

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

## 30. Directors' Interests in Contracts

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

## 31. Comparative Information

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

## 32. Directors' Responsibility

The Directors take responsibility for the preparation and presentation of financial statements.



# Auditor General's Report for the year ended 31st December 2007

TH/G/NWS&DB/07  
12th August 2008

The Chairman  
National Water Supply & Drainage Board

## **Report of the Auditor General on the Financial Statements of the National Water Supply & Drainage Board for the year ended 31st December 2007, 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 & Drainage Board (NWS&DB) for the year ended 31st December 2007, was carried out under my direction in pursuance of provisions in Article 154 (1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13 (1) of the Finance Act No. 38 of 1971. My comments and observations which I consider should be published with the annual report of the Board in terms of Section 14 (2) (c) of the Finance Act appear in this report.

### **1.2 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 and 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 principles 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 purpose of the audit. I therefore believe that my audit provides a reasonable basis for my opinion. Subsections (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 explanations given to me, I am of opinion that the National Water Supply & Drainage Board had maintained proper accounting records for the year ended 31st December 2007 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 NWS&DB as at 31st December 2007 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**

Non-compliance with the following accounting standards were observed in audit:

- (i) **SLAS - 5**
- (a) Under Accounting Policies 2.2.2 of the financial statements it was disclosed that the weighted average method had been used in determining the cost of inventory. However, it was observed that the last purchase price or prices quoted in the Engineers, Rate Books had been used in certain instances.
- (b) A provision had not been made for the unusable stocks valued at Rs. 14,736,704.
- (c) The stock in hand as at 31st December 2007 had not been classified and shown in the financial statements.

**(ii) SLAS - 9**

In determining the cash flow from financial activities, the amortization of the Government grants amounting to Rs. 332,430,112 had not been taken into consideration. Instead the net effect of the Government grants had been taken into cash flow statement.

**(iii) SLAS - 10**

The nature, reason and the effects to the financial statements had not been disclosed in the accounts in respect of the change of accounting policies adopted on the provision for doubtful debts.

**(iv) SLAS - 16**

Fair value of the assets related to gratuity provision as at the balance sheet date had not been disclosed in the financial statements.

**(v) SLAS - 18**

- (a) It was observed that vehicles and office equipment purchased at a cost of Rs. 123,640,923 under the Secondary Towns Rural Community Based Water Supply and Sanitation Project had been shown under capital work-in-progress without being depreciated even though such assets had been utilized for operational activities.
- (b) Provision for depreciation had been made in the year of purchase fully and no provision had been made in the year of disposal instead of making provision at the date of purchase up to the date of disposal of the assets, in terms of the provision in SLAS - 18.

**(vi) SLAS - 20**

Though several water supply schemes and capital construction works implemented under foreign loans had been completed and being in use the interest portion thereon related to these works had continuously been capitalized instead of being charged against income for the year under review.

**(vii) SLAS - 24**

- (a) Government grant related to assets had not been disclosed at fair value and it was shown in the balance sheet as at 31st December 2007 by deducting the grants in arriving at the carrying amount of the assets.

- (b) Expenses related to grants had been set off against the revenue grants received during the year under review and the net amount had been shown as revenue grants instead of showing separately.

**2.2.2 Accounting Deficiencies**

- (a) Following deficiencies were observed in respect of the value of stocks amounting to Rs. 2,601,875,030 appearing in the financial statements:

- (i) Shortages and excesses of stocks identified at the annual physical verification valued at Rs. 93,948,839 and Rs. 42,558,779 respectively had not been taken into account in respect of 91 regional stores.

- (ii) Stocks in the Investigation unit valued at Rs. 59,755,699 had not been taken into accounts for the year under review.

- (iii) Stocks valued at Rs. 15,274,789 in respect of nine stores had not been physically verified as at the balance sheet date.

- (b) Test check revealed that the Capital Work-in-Progress valued at Rs. 48,291,137,797 appearing in the financial statements had not been fairly stated due to following shortcomings:

- (i) Water Supply Schemes already completed at a total cost of Rs. 5,002,168,187 had not been eliminated from this account by transferring it to relevant property plant and equipment accounts though these schemes had already been handed over to the Board. Further, it was observed that the depreciation relating to those assets had not been provided for the year under review due to non-capitalization.

- (ii) Although sub projects and Small towns water supply schemes constructed under the Third Water Supply and Sanitation Sector Project at a cost of Rs. 2,199 million had already been handed over to the respective Community Based Organizations (CBOs), the value of these schemes had been shown under capital work-in-progress continuously.

- (iii) Negative balances aggregating Rs. 1,685,280,906 had been shown in the accounts in respect of two sub offices which is unrealistic.
- (c) Loan Interest amounting Rs. 494.7 million payable to the Treasury for the period of 1994 to 2002 in respect of loans had been shown under long-term loan payable instead of showing under current liabilities.
- (d) A test check revealed that expenses amounting to Rs. 478.6 million incurred on two Foreign Funded Projects which had later been abandoned had continuously been shown under capital work-in-progress.
- (e) 220 vehicles received from various donor agencies for the tsunami rehabilitation activities had not been valued and taken into account. It was also observed that only the customs duty paid by the Board amounting to Rs. 391.4 million had been capitalized.
- (f) Value Added Tax expenses incurred by the Board on behalf of customers had been overstated by Rs. 9,228,774 due to erroneous computation.
- (g) Sales and bad debts for the year under review had been understated by Rs. 4,032,723 due to incorrect accounting in respect of Anuradhapura Region.

### 2.2.3 Deficiencies in the activities relating to Foreign Loans

Following observations are made:

- (a) The Treasury had clearly instructed not to apply the reduced interest rate of 10% to the existing loans as at 1st January 1998. However, the Board had applied the reduced interest rate for such loans instead of the interest rate mentioned in the loan agreements in respect of three loans thus understating the finance charges for the year 2007 by Rs. 6,566,690.
- (b) A difference of Rs. 56,702,044 had been observed between the NWS&DB accounts amounting to Rs. 1,647,832,234 and Treasury accounts amounting to Rs. 1,591,130,190 as at the balance sheet date in respect of two Foreign Loans.
- (c) Subsidiary loan agreements in respect of 14 loans aggregating Rs. 4,100,063,601 had not been made available for audit. It was therefore not possible to be satisfied in audit regarding the computation of the interest charges and whether all liabilities relating to borrowings had properly been accounted for in the accounts.
- (d) Capital repayment in respect of four loans had not been started as at the date of this report in accordance with the provisions stated in the subsidiary financing agreements.
- (e) Differences amounting to Rs. 352,991 and Rs. 30,399,090 had been observed between the project accounts of Greater Kandy and NWS&DB accounts in respect of loans and grants respectively.
- (f) Grants amounting to Rs. 70,401,140 received from the Government of Saudi Arabia for SFD 1/130 Project had erroneously been classified as loan instead of grant and interest thereon amounting Rs. 69,353,062 had also been provided in the accounts.

### 2.2.4 Unreconciled Control Accounts

The following balances in the control accounts had not been reconciled with the corresponding subsidiary records, schedules etc. as at 31st December 2007.

| Description of Control Accounts    | Amount as per Control Accounts<br>Rs. | Amount as per Subsidiary Records<br>Rs. | Difference<br>Rs. |
|------------------------------------|---------------------------------------|---|-------------------|
| Trade Debtors                      | 1,863,177,689                         | 1,939,627,455                           | 76,449,766        |
| <b>Advances and loans to staff</b> |                                       |   |                   |
| Travelling                         | 318,338                               | 290,600                                 | 27,738            |
| Festival                           | 10,165,129                            | 10,059,336                              | 105,793           |
| Distress                           | 658,999,051                           | 659,457,452                             | 458,401           |
| Vehicle                            | 22,560,683                            | 22,580,420                              | 19,737            |
| Advances to Suppliers              | 3,208,529                             | 3,121,143                               | 87,386            |
| Cash in Transit                    | 71,860,839                            | 71,761,490                              | 99,349            |
| VAT Receivables                    |                                       |   |                   |
| (Colombo City)                     | 933,442                               | 962,920                                 | 29,478            |
| Retention                          | 442,653                               | 249,689                                 | 192,964           |

### 2.2.5 Non-Operating and Suspense Balances.

- (a) Service of a firm of chartered accountants had been obtained at a cost of Rs. 1,035,000 to reconcile the long outstanding debit balances aggregating Rs. 191,486,865 and credit balances aggregating Rs. 115,455,778 as at the balance sheet date. However,

it was observed that action had not been taken to implement the proposals made by the firm of Chartered Accountants and the Board had later decided to carry out further reconciliation of these balances.

- (b) A difference of Rs. 1,758,300 between physically verified stock balances and the ledger balances for the year under review and previous years had been transferred to stock adjustment account without being investigated.

### 2.2.6 Identified Losses

It was reported that cash frauds amounting to Rs. 171.9 million, Rs. 56.4 million and Rs. 21.3 million had been taken place at Trincomalee, Kelaniya and Ampara Regional Offices 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 with regard to these frauds.

### 2.2.7 Billing and Collection of Water Supply

Following observations are made in this regard:

- (a) Significant differences were observed between the revenue on sale of water shown in the income statement and the records maintained by the Commercial Division of the Board and action had not been taken to reconcile the balances. As the information maintained by the Commercial Division was being used for the Management Information System of the Board, the validity of the information provided for decision making purposes is open to question. According to the information given in the financial statements, the metered water sale and bulk water sale had understated by Rs. 207 million and Rs. 75 million respectively as per records maintained at the Commercial Division of the Board. Further, the revenue generated through Bowser water sale had overstated by Rs. 38 million in the financial statements as per the record maintained at the Commercial Division.
- (b) According to a test check carried out in the Greater Colombo Area, percentages of number of water bills issued on estimations, were 16% in April 2007 and

12% in December 2007. Therefore, such ratios had not been declined significantly even though control procedures had been adopted to monitor the situation. However, it was observed that such ratios were at high level due to delays in taking meaningful action to avoid some of the controllable factors as described below.

| Reason                          | No. of Connections where Bills Issued on Estimations |               |
|---------------------------------|--|---------------|
|                                 | April 2007   | December 2007 |
| Defective Meters                | 23,804   | 27,098        |
| Inaccessibility to the Premises | 20,605   | 19,516        |
| Illegal Activities              | 4,215  | 4,014         |
| Weather Condition               | 6,304  | 2             |
| Reason Not Given                | 11,786   | 4,653         |
| Others                          | 7,259  | 3,070         |
|                                 | <b>73,973</b>  | <b>58,353</b> |

- (c) It was further observed that no action had been taken to rectify the defective meters in respect of 19,403 consumers and continued to issue water bills on estimated basis for a period of more than 6 months.

### 2.2.8 Accounts Receivable and Payable

Following observations are made:

- (a) Debtor balances in respect of Colombo Municipal Council amounting to Rs. 28,519,949, other debtors amounting to Rs. 53,078,881 and Sewerage debtors amounting to Rs. 54,036,826 had been outstanding for over 3 years and effective action had not been taken to recover the outstanding balances.
- (b) Advances paid to Contractors, Suppliers and Employees amounting to Rs. 90,083,307 had remained unsettled for over 3 years.
- (c) Debit balance of Rs. 66,357,553 had been shown in the customer advance, retention, GST payable and refundable tender deposits accounts which was unrealistic.
- (d) The Value Added Tax as at the balance sheet date which was accumulated from 2002 amounting to Rs. 3,214,606,143 shown in the accounts as receivables had not been confirmed by the Department of Inland Revenue (DIR). The DIR had refunded only a sum of Rs. 21,146,228 for the period of 2004

against the amount of Rs. 1,321,465,430 shown in the accounts as receivable. Therefore, it was not possible to be satisfied in audit, whether the amount shown in the balance sheet as receivable could be recovered in future.

- (e) It was observed that only a sum of Rs. 19.6 million had been written off out of the outstanding balances of Rs. 22.9 million approved to write off by the Board of Directors during the year under review. According to the information made available, some of the balances had been recovered subsequently. Therefore, it evidenced that the requests to write off the outstanding balances had been made without considering their recoverability.
- (f) Debtor balances aggregating Rs. 3,360,739 in respect of three regional offices had been written off without proper approval.
- (g) It was observed that the Board had continuously failed to recover the dues from institutional consumers in time. However, the long outstanding receivable balances of Government institutions and Government Quarters amounting to Rs. 19.6 million had been written off during the year under review with the Board of Directors approval.

### 2.2.9 Lack of Evidence for Audit

Following observations are made:

- (a) Following items in the financial statements 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<br>Rs. |
|------------------------|---------------|
| i. Other Debtors       | 47,984,264    |
| ii. Goods in Transit   | 3,287,159     |
| iii. Customer Advances | 18,088,839    |
|                        | 69,360,262    |

- (b) The Register of fixed assets except vehicles had not been properly maintained. Therefore, it was not possible to be satisfied in audit as to the existence, ownership and valuation of all the assets belonging to the Board. Further, a difference of Rs. 1,250,578 had been observed between the ledger balance and register of vehicles.

### 2.2.10 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) <b>Finance Act No. 38 of 1971</b><br>Section 13 (5)        | Reports on debtors, creditors, stock and stores had not been submitted as specified.   |
| (b) <b>Public Finance Circular No. 130 of 18th March 1998</b>  | The Board had reduced the interest rate from 10% to 4.2% on loans granted to the staff of the NWS&DB with effect from May 2003, without the required approval from the Treasury. |

## 3. Financial and Operating Review

### 3.1 Financial Results

According to the financial statements presented, the working of the Board for the year ended 31st December 2007 had resulted in a net loss of Rs. 1,278,373,190 as compared with the corresponding net loss of Rs. 214,080,235 for the preceding year, thus indicating further deterioration of Rs. 1,064,292,955 in the financial results. The following table gives a summary of the financial results at various stages:

| Year ended 31st December                                     | 2007<br>Rs.     | 2006<br>Rs.     |
|--|-----------------|-----------------|
| Profit before Charging Overheads and Other Operating Expense | 2,708,732,838   | 2,863,745,885   |
| Net Profit/(Loss) from Operating Activities                  | (575,226,705)   | 255,271,237     |
| Net Loss before Tax  | (1,223,782,622) | (150,216,062)   |
| Net Loss for the year after Tax                              | (1,278,373,190) | (214,080,235)   |
| Accumulated (Loss)   | (4,555,450,598) | (3,050,918,878) |

Even though sale of water income had increased by 10.4%, the Administration and other overheads expenses also had increased by 28.4%.



### 3.2 Purchase of Water Meters

Following observations are made in this regard:

- (a) Annual water meter requirement had not been included in the annual procurement plan.
- (b) The Board had procured 151,000 water meters during the year 2007 by splitting the annual requirement into 13 orders intentionally to get the approval of the Departmental procurement board instead of getting the approval from the Ministry Procurement Board for the full quantity. The opinion of the Board was that the procurements were getting delay if the correct procurement process was applied. However it was observed that the Board was able to supply only 47,504 water meters out of the total requirement of 81,662 made by eight regions and as a result considerable delays occurred in providing new water connections in these regions .

### 3.3 Delays in Implementation of Projects

Following observations are made:

#### (a) Construction of Kelani Conservation Barrage

- (i) A land adjoining the Kelani River had been acquired by the Project at a cost of Rs. 2,000,000. The respective land was heavily damaged due to erosion and it had been purchased without considering the condition of the land. It was further observed that the cost incurred in this connection was fruitless as action had not been taken by the Project to construct the dam up to the date of this report.
- (ii) Adequate records had not been maintained by the Project Management Unit to recognize the actual cost incurred on construction of salinity barrage across the Kelani River and construction of the low weirs. Further the consultancy charge, salaries and loan interest amounting to Rs. 127 million had continuously been shown under capital work-in-progress.
- (iii) It was expected to construct a salinity barrage across the Kelani River with the assistance of ADB at a cost of US\$ 9.1 million to prevent saline water intrusion to the existing Ambatale Water

Reservoir during dry season. After lapse of nearly 18 months NWS&DB had requested approval of the ADB for the bid evaluation report to start the construction of the Barrage at a contract cost of US\$ 7.4 million of which US\$ 4.8 million would be the loan proceed. However NWS&DB had raised an alternative to construct two upstream reservoirs to be used to prevent saline water intrusion. Later the terms of reference (TOR) and cost estimates for the feasibility study of the reservoirs had been turned down by the ADB and decided to close the loan as scheduled. Therefore the cost incurred for planning and designing of the Barrage appears to be a fruitless expenditure. Further it was observed that the problem of salt water intrusion will continue and likely to spread out along with the river without any permanent solution and alternative procedures had not been implemented in this regard by the NWS&DB. According to the progress report prepared by the Project the overall progress even as at the end of the Project was 46.63% only.

#### (b) Third Water Supply and Sanitation Sector Project

Following observations are made:

- (i) Advances paid to the suppliers and officers of the Third Water Supply and Sanitation Sector Project aggregating Rs. 1,165,319 had continued to be shown as advances even up to 30th October 2007 without adjustment being made for the supplies and services received/obtained against these advances due to the weaknesses in the internal control system. The Board was unable to fix the responsibility on the officers concerned.
- (ii) It was planned to improve 87,000 units of household latrines under batches one and two of the Project. But only 81,596 units had been completed as at the end of the year under review.
- (iii) Value of stocks amounting to Rs. 112,596,005, purchased out of the Project Funds had been transferred for maintenance activities of the NWS&DB due to the absence of proper

mechanism to identify the requirement of stock items of each subproject. Thereby huge stock of items purchased out of the Project Funds had been accumulated and being transferred to make use of the NWS&DB requirements.

**(c) Integrated Water Supply Scheme for Eastern Coastal Area of Ampara District (Phase III)**

The Phase III of above Project had been commenced with the objective of supply of water for the people living in areas where pipe water supply was available in the Ampara District. Contract agreements had been signed with the same contractor who had carried out the construction works of Phase I and II of the Project on 16th July 2007 under the approval of the Cabinet of Ministers. Following observations are made in this regard:

- (a) Contract agreement valued at Rs. 1,746,868,000 plus US\$ 78,878,934 had been signed by the Board without exploring a funding agency.
- (b) According to the estimate of the Project a sum of Rs. 2,178.27 million need to be spent by the Board. However, action plans had not been prepared in this connection.
- (c) Even though several shortcomings and defects found in the constructions made under the Phase I and II, the construction activities had been handed over to the same contractor without considering such weaknesses.
- (d) Even though an exceptional reason had not been found for single contractor as per Paragraph 3.5 of the Government Procurement Guide Lines, the whole activities of the contract had been awarded to a single contractor.
- (e) The information included in the feasibility study report of the Project had not been agreed with the information collected from other sources thus indicating that proper forecasts had not been carried out in this regard.
- (f) According to the Project proposals, a large scale purification centre and a drainage system had been proposed without considering the factors such as other water resources of the area and the density of the population in the area, thus indicating per capita cost of the Project was very high.

**3.4 Non-Revenue Water (NRW)**

It was observed that the National Water Supply & Drainage Board was unable to account the 140.4 million cubic metre of treated water costing approximately Rs. 2,378 million during the year under review. Following observations are made in this regard:

- (a) It was observed that the existing customers of the Board had highly compensated on their water bills by incurring an additional cost of Rs. 8.37 (approximately) per unit as at the end of the year under review due to NRW. Following table shows the growing trend of the additional cost incurred on each unit due to NRW during the last five years.

|   | 2007           | 2006    | 2005   | 2004    | 2003    |
|---|----------------|---------|--------|---------|---------|
| NRW (cm 000)  | <b>140,491</b> | 136,630 | 96,690 | 123,959 | 124,442 |
| Direct cost on NRW Rs. million  | <b>2377.9</b>  | 2040.4  | 1290.1 | 1648.4  | 1406.5  |
| Additional cost borne by customers for every unit of consumption. Rs. | <b>8.37</b>    | 7.82    | 6.76   | 6.76    | 6.04    |

- (b) According to the information made available the NRW percentage in respect of Colombo City was more than 51% which was recorded as the second highest among major Asian Cities. Following observations are made in this regard:
  - (i) Although a foreign-funded Project was launched in 2003 with the objective of rehabilitating part of the distribution net work in the Colombo City to reduce NRW, the project had been abandoned after incurring more than Rs. 354 million due to lack of proper management.
  - (ii) Action had not been taken to disconnect and give individual connections in respect of 3,500 common stand posts in Colombo City.
  - (iii) Effective action had not been taken by the Board to reduce billing on estimated basis and rectify the defective meters identified.

- (iv) A special unit had been established to deal with the NRW issues and Rs. 56 million had been incurred on its operations during the year under review. However the NRW percentage in respect of Greater Colombo Area had gone up during the year under review as compared with the preceding year.

### 3.5 New Connections

The mission of the Board is to serve the Nation by providing sustainable water and sanitation solutions ensuring total user satisfaction. However, it was observed that the level of satisfying the demand for water supply was not satisfactory even the Board had implemented several major water supply projects using various foreign and local resources.

- (a) According to the information collected from 15 regional offices in 2006, only 77,451 or 53% new connections had been completed out of 146,924 applications received for new connections in 2006. The position with regard to 2007 in respect of 08 regional offices was that the Board could provide only 52,433 new connections out of 75,499 applications received.
- (b) It was observed that the long delays had been occurred for providing new connections and as a result, undue competition among the applicants had prevailed.

### 3.6 Stores Management

Following observations are made:

- (a) Even though a computerized inventory management system had been implemented at a cost of Rs. 3 million at the Main Stores, the intended objectives could not be achieved due to the failure of generating adequate information through the system. Further, a difference of Rs. 50,299,808 had been observed between the ledger balances and computerized inventory system in respect of Main Stores.
- (b) Master stock ledger had not been prepared and as a result existing stock items in different stores had been purchased again for other projects in other regions without verifying the availability of stocks.
- (c) No proper and updated stock levels such as minimum, reorder or buffer stock had been maintained.

- (d) Action had not been taken by the Board to reconcile the differences between the stock ledger balances and physical balances, and fix the responsibility to the officers concerned.
- (e) Action had not been taken with regard to slow moving and non-moving items valued at Rs. 111,580,668, which were identified by the Board of Survey.
- (f) No proper system had been introduced with regard to safe custody of stocks and proper storage.

### 3.7 Utilization of NWS&DB Resources

Thirty three employees and 11 vehicles belonging to the Board had been released to other Institutions and Ministries during the year under review, disregarding the instructions given in paragraph 8:3:9 of the Public Enterprises Circular No. PED/12 of 2nd June 2003. Salaries and other expenses relating to thirty employees had also been incurred by the Board.

### 3.8 Budgetary Control

Significant variances were observed between the Budget and the actuals 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) Debtors and Creditors
- (b) Reduction of Non-Revenue Water
- (c) Internal Audit
- (d) Accounting
- (e) Fixed Assets
- (f) Stocks
- (g) Implementation of Projects
- (h) Contract Administration
- (i) Cash and Bank Balances

(Sgd.)

**S. Swarnajothi**  
Auditor General

# Abbreviations

|        |  |         |  |
|--------|--|---------|--|
| ADB    | - Asian Development Bank                             | MUDWS   | - Ministry of Urban Development and Water Supply                 |
| AFD    | - Agence Francaise de Development                    | NHDA    | - National Housing Development Authority                         |
| B & E  | - Bechtol & Emerson                                  | NORAD   | - Norwegian Assistance for Development                           |
| BOI    | - Board of Investment                                | NPA     | - National Procurement Agency                                    |
| BOQ    | - Bill of Quantity                                   | NRW     | - Non-Revenue Water  |
| CBO(s) | - Community Based Organization(s)                    | NSC     | - National Steering Committee                                    |
| CCTV   | - Closed Circuit Tele Vision                         | NTU     | - Nephelometric Turbidity Units                                  |
| CECB   | - Central Engineering Consultancy Bureau             | NWS&DB  | - National Water Supply & Drainage Board                         |
| CMC    | - Colombo Municipal Council                          | NWSDB   | - National Water Supply & Drainage Board                         |
| cu.m.  | - cubic metre  | O & M   | - Operation & Maintenance  |
| DANIDA | - Danish International Development Agency            | OIC     | - Officer In Charge  |
| DI     | - Ductile Iron                                       | ORET    | - Development-Related Export Transitions Programme               |
| DIR    | - Department of Inland Revenue                       | P & D   | - Planning & Designs   |
| DS     | - Divisional Secretariat                             | PAC     | - Project Appraisal Committee                                    |
| ECTAD  | - Eastern Coastal Towns of Ampara District           | PS(s)   | - Pradeshiya Sabha(s)  |
| EKN    | - Swedish Export Guarantee Board                     | PVC     | - Poly Vinyl Chloride  |
| EPF    | - Employees Providence Fund                          | RPE     | - Reserve Pays Emegeants   |
| ERD    | - External Resources Department                      | RSC     | - Regional Support Centre  |
| ETF    | - Employees Trust Fund                               | SCADA   | - Supervisory Control and Data Acquisition                       |
| GI     | - Galvanized Iron                                    | SIDA    | - Swedish International Development Agency                       |
| GIS    | - Geographical Information System                    | SLAS    | - Sri Lanka Accounting Standards                                 |
| GM     | - General Manager                                    | STAART  | - Sri Lanka Tsunami Affected Areas Recovery and Take-off Project |
| GN     | - Grama Niladari                                     | UC      | - Urban Council  |
| GND(s) | - Grama Niladari Division(s)                         | UDA     | - Urban Development Authority                                    |
| GOSL   | - Government of Sri Lanka                            | UNICEF  | - United Nations International Children's Education Fund         |
| GPS    | - Global Positioning System                          | UPS     | - Uninterruptible Power Supply                                   |
| GST    | - Good & Services Tax                                | USAID   | - United States Aid for International Development                |
| ICTAD  | - Institute for Construction, Training & Development | USTDA   | - United States Trade and Development Agency                     |
| IT     | - Information Technology                             | VAT     | - Value Added Tax  |
| JBIC   | - Japan Bank for International Cooperation           | WS      | - Water Supply   |
| JICA   | - Japan International Cooperation Agency             | WS & SP | - Water Supply & Sanitation Project                              |
| KCWDP  | - Kandy City Wastewater Disposal Project             | WSP     | - Water Supply Project   |
| KfW    | - Credit for Reconstruction                          | WSS     | - Water Supply Scheme  |
| LTRT   | - Lanka Tsunami Response Team                        | WTP     | - Water Treatment Plant  |
| M & E  | - Mechanical & Electrical                            |         |  |
| MC     | - Municipal Council                                  |         |  |
| MGD    | - Million Gallons per Day                            |         |  |
| MOU    | - Memorandum of Understanding                        |         |  |
| MTV    | - Maharaja Tele Vision                               |         |  |

# Corporate Information

The National Water Supply & Drainage Board is a Statutory Board enacted by the Parliament under the National Water Supply and Drainage Board Law No. 2 of 1974. The registered office of the NWSDB is located at Galle Road, Ratmalana where the principal venue of business is located.

Telephone: 2611589, 2637194, 2612566

Hunting No.: 2638999

Fax: 2636449

e-mail: [nwsdbch@sltnet.lk](mailto:nwsdbch@sltnet.lk)

Web: [www.waterboard.lk](http://www.waterboard.lk)

