### Key Result Areas (KRAs) of the Corporate Action Plan as at end 4th quarter 2019

### Goal 1 - Increase the Water Supply and Sanitation Coverage

|   |   |   | 4th quarter 2019 | 9                                    |                 |
|---|---|---|------------------|--------------------------------------|-----------------|
| _   |   | Target  | Actual           | Achievement<br>(%)                   | Target end 2020 |
| i.  | Water Supply Coverage (%)   | 53.20   | 51.80            | 97.37                                | 55.00           |
| ii.   | Water Supply Connections (Nos.)   | 2,452,760   | 2,437,504        | 99.38                                | 2,577,760       |
| iii.  | Piped sewerage connected coverage (%)                                     | 2.24  | 2.07             | 92.41                                | 2.25            |
| iv.   | Total implemented WSPs - Island wide (Nos.)                               | 249   | 264              | 106.02                               | 304             |
| Investments made for Water Supply and Sewerage Projects |   | No. of Projects in various stages of<br>implementation as at end 2019 |                  | No. of Projects<br>Completed in 2019 |                 |
| i.  | Large scale donor funded Water Supply Projects                            | 2   | 3                | 0                                    |                 |
| ii.   | Local Bank Funded Water Supply Projects                                   | 11  |                  | 3                                    |                 |
| iii.  | Large scale donor funded Sewerage Projects                                | 3   |                  | 1                                    |                 |
| iv.   | GOSL funded Water Sector Community Facilitation and Small &<br>Medium WSP | 9   | Э                | 0                                    |                 |

Investments made for Water Supply and Sewerage Projects through NWSDB during the year 2019 under different funding sources and Bills in Hand as of 31.12.2019.

| Investment Source  | Programmed   | Allocation<br>(Rs. Mn) | Utilization<br>(Rs. Mn) | Bills in Hand<br>(Rs. Mn) |
|--|--|------------------------|-------------------------|---------------------------|
|  | Large Water Supply Projects  | 28,195.90              | 32,445.83               | 10,456.00                 |
|  | Large Sewerage Projects  | 4,470.17               | 3,067.00                | 719.00                    |
| GOSL Capital Budget                                      | Small & Medium WSP and Water<br>Sector Community Facilities handled by<br>NWSDB                  | 1,291.60               | 500.80                  | 271.00                    |
|  | Small & Medium WSP and Water<br>Sector Community Facilities Projects<br>shared with the Ministry | 434.39                 | 248.89                  |                           |
|  | Implementation of City Planning Water<br>Projects  |                        | 44.82                   |                           |
|  | Debt Service Payment (Including supplementary allocation)  | 9,183.38               | 9,183.38                |                           |
| Total GOSL Capital I                                     | Budget   | 43,575.44              | 45,490.72               | 11,446.00                 |
| People's Bank Loan                                       | Counterpart Funds for Large Water<br>Supply and Sewerage Projects                                |                        | 2,564.72                |                           |
| NWSDB Funds  | Counterpart Funds for Large Water<br>Supply and Sewerage Projects                                |                        | 1,229.88                |                           |
| Foreign Loans and Local loans Borrowed by NWSDB          | Large Water Supply Projects  |                        | 25,089.96               | 3,634.00                  |
| Local Loans Borrowed by NWSDB Local Bank Funded Projects |  |                        | 3,063.00                | 262.00                    |
| Grand Total  |  |                        | 77,438.29               | 15,342.00                 |

### **Goal 2 - Improve Business Efficiency**

#### Activities for Improve Business and Operational Efficiency

1. Reduction in Non Revenue Water (NRW)(%)

|                                 | <b>T</b>               |                 | Status as at end 4th quarter 2019 |                 |          |  |
|---------------------------------|------------------------|-----------------|-----------------------------------|-----------------|----------|--|
| Zones /RSCs / Regions           | Target e               | Target end 2019 |                                   | Achievement (%) |          |  |
|                                 | CP 2016 -2020 Revised* |                 | Actual                            | CP 2016 -2020   | Revised* |  |
| Colombo City                    | 42.00                  | 37.65           | 40.58                             | 103.50          | 92.78    |  |
| Western Central (Excluding CMC) | 16.50                  | 18.26           | 21.61                             | 76.35           | 84.50    |  |
| Western Central (Overall)       | 32.80                  | 30.51           | 30.97                             | 105.91          | 98.51    |  |
| Western South                   | 24.60                  | 16.60           | 23.17                             | 106.17          | 71.64    |  |
| Western North                   | 22.00                  | 14.16           | 17.76                             | 123.87          | 79.73    |  |
| Southern                        | 25.00                  | 23.07           | 26.40                             | 94.70           | 87.39    |  |
| Uva                             | 18.50                  | 22.24           | 23.97                             | 77.18           | 92.78    |  |
| Central                         | 20.00                  | 18.72           | 27.27                             | 73.34           | 68.65    |  |
| Sabaragamuwa                    | 22.20                  | 23.82           | 25.95                             | 85.55           | 91.79    |  |
| North Western                   | 10.00                  | 11.58           | 16.90                             | 59.17           | 68.52    |  |
| Eastern                         | 10.00                  | 16.71           | 18.10                             | 55.25           | 92.32    |  |
| North Central                   | 13.40                  | 13.98           | 19.04                             | 70.38           | 73.42    |  |
| Northern                        | 18.00                  | 18.74           | 24.07                             | 74.78           | 77.86    |  |
| Island-wide                     | 26.00                  | 23.52           | 24.95                             | 104.21          | 94.27    |  |

\*NRW % targets for ensuring year is set based on the outcome of activities during the previous year. The target for 2019 is therefore marginally lower than that specified in the Corporate Plan. Please refer Page No. 4 of 9 for NRW % Targets for 2020

|      |   | Townshi and 2010 | Status as at end 4th quarter 2019 |                 |  |
|------|---|------------------|-----------------------------------|-----------------|--|
| 2.   | Energy Saving Activities                                    | Target end 2019  | Progress                          | Achievement (%) |  |
| i.   | Completion of energy efficiency improvement projects (Nos.) | 33               | 21                                | 63.64           |  |
| ii.  | Carrying out instrument audits for energy saving (Nos.)     | 20               | 10                                | 50.00           |  |
| iii. | Savings for the period under review (Rs. M)                 | 30               | 40.6                              | 135.33          |  |

#### 3. Cash flow management activities

| i.   | Collection efficiency (%)                             | 100.00 | 110.0 | 110.00 |
|------|---|--------|-------|--------|
|      | Accounts receivable (including disconnections) (Days) |        |       |        |
| ii.  | Domestic & Commercial                                 | 30     | 29    | 103.45 |
| iii. | Government  | 40     | 7     | 571.43 |

#### 4. Promote ICT Activities

The NWSDB is ready to capitalize on improving the customer and corporate relationship, which will have a web-portal as a platform for improve its business to implementing comprehensive ICT development activities such as;

| Activity   | Present Status | Expected outcome  |
|--|----------------|---|
| Improvement of Commercial Operation Management System  | 95.0%          | Extend the existing system to incorporate the O&M functions related to Commercial Activities.   |
| Development of a software system for routine office functions  | 75.0%          | A centralized solution for handling routine office activities to<br>improve productivity of general office staff.                             |
| Development of a Field Operations Mobile Application   | 75.0%          | Develop and implement a mobile application for the field<br>operations.   |
| Improvement of online e-services portal  | 75.0%          | Improve the existing online services portal to facilitate<br>customers to submit the online service requests with online<br>payment facility. |
| Testing of NB-IoT (Narrow Band Internet of Things) solution for<br>automating metering and facility monitoring | 50.0%          | Test a NB-IoT devices to implement a automated metering and<br>billing system and facility monitoring system.                                 |
| Development of Loan Management System  | 100.0%         | Develop and implement a software solution for the Finance<br>Division to handle foreign loan repayment process.                               |

#### 5. Staff Training (No. of Employees Trained)

|      |                              |        | 4 <sup>th</sup> quarter 2019 |                    |                 |
|------|------------------------------|--------|------------------------------|--------------------|-----------------|
|      |                              | Target | Actual                       | Achievement<br>(%) | Target end 2020 |
| i.   | In-house Training            | 7,800  | 11,560                       | 148.21             | 7,800           |
| ii.  | In-country External Training | 250    | 247                          | 98.80              | 250             |
| iii. | Overseas Training            | 80     | 88                           | 110.00             | 80              |

### 6. <u>R&D activities</u>

Research and Development Division of the NWSDB is continuing systematic, investigative and experimental activities that are performed for the purposes of acquiring new knowledge to efficient business and O&M activities such as;

|       | Activity   | Present Status | Expected outcome  |
|-------|--|----------------|---|
| i.    | Korean collaborative study on membrane filtration for small-scale water purification plants in Sri Lanka   | 100.0%         | Initiation and sharing of technical knowledge by a collaborative<br>research for small-scale water treatment. Demonstration and<br>customization of promising technologies with Micro Membrane<br>Filtration.                         |
| ii.   | Revise the specification of Mastic materials used to protect Ductile<br>Iron flange joints   | 100.0%         | To prepare specification for most economical and efficient<br>Mastic material to protect Ductile iron flange joints   |
| iii.  | Assistance for implementation of water footprint in Sri Lanka  | 30.0%          | Save water, optimizing the usage and there by contribute for<br>saving other natural resource such as energy for overall<br>protection of the environment.  |
| iv.   | Distribution network model for Athurugiriya area   | 100.0%         | To calibrate the distribution system (a part) and find out the chlorine decay.  |
| v.    | a)Establishing mechanism for water allocation  | 100.0%         | participation for preparation of operational model of Mahaweli<br>basin   |
|       | b) Feasibility studies with Mahaweli Consultancy bureau for Yatimahana reservoir.  | 100.0%         | arrangement of feasibility studies with Mahaweli consultancy bureau for Yatimahana reservoir  |
| vi.   | Conduct Symposium 2019 and Follow-up actions on application of the presented papers  | 100.0%         | knowledge sharing on sector improvements and practicing research culture in the NWSDB staff   |
| vii.  | Water losses in domestic consumers and its impact to NWSDB, consumers and for the whole country  | 100.0%         | identify the leaks are frequently occurring places in plumbing system   |
| viii. | Preparation of GIS Data base on water resources and water supply schemes.  | 50.0%          | Preparing GIS Data maps for raw water extraction for in each river basins   |
| ix.   | Management information system for Colombo and suburb areas for coordination and optimization of transmission line  | 40.0%          | To optimize the water transmission on short run and analyze<br>the system behavior , forecast the demand based on collected<br>data on long run   |
| x.    | Cost effective process parameter monitoring and logging system for Water Treatment Plant at Ambatale   | 75.0%          | To implement a low cost ultrasonic filter level detector, and customize the system as per user requirements.  |
| xi.   | Establishment of Energy Management system in Kethhena water<br>treatment plant with M&E Section  | 10.0%          | To get ISO certificate for Energy management system   |
| xii.  | Optimizing iron removal in groundwater for better water quality<br>satndards and proper operation and maintenance of distribution<br>systems with cost efficiency in Meerigama water treatment plant | 10.0%          | To improve the water quality of Meerigama plant to SLS<br>614:2013 standards by using an efficient iron removal method.<br>In addition to develop an efficient iron removal method to<br>eliminate iron problems in WTPs in Sri Lanka |
| xiii. | Utilization of water treatment facilities donated under China Sri<br>Lanka Resaerch Grant Project (CSLRGP) Anuradhapura for future<br>advancement of NWS&DB  | 20.0%          | To ensure the water safety in CKDu prevalent areas using the<br>provided water treatment facilities by CSLRGP and to fill the<br>knowledge gaps in the field of groundwater treatment in Sri<br>Lanka                                 |
| xiv.  | Improvement of water quality by plant upgrading and operational aspects improvement in small scale WTPs. Case study : Bundala WTP  | 10.0%          | To improve the treated water quality supplied by the exsisting water treatment plant  |

### Goal 3 - Ensure Greater Accountability and Transparency

Regular internal checks and controls were carried out for ensure greater accountability and transparency of the NWSDB.

|       |  |        | )                                      |                    |                 |
|-------|--|--------|--|--------------------|-----------------|
|       | Considered field   | Target | 4 <sup>th</sup> quarter 2019<br>Actual | Achievement<br>(%) | Target end 2020 |
| i.    | Water Supply & Sewerage Projects, Construction & Development | 25     | 16                                     | 64.00              | 20              |
| ii.   | Water Safety Plan  | 7      | 6                                      | 85.71              | 5               |
| iii.  | Commercial activities & consumer services                    | 25     | 25                                     | 100.00             | 20              |
| iv.   | NRW  | 10     | 2                                      | 20.00              | 12              |
| v.    | Information Technology                                       | 10     | 7                                      | 70.00              | 5               |
| vi.   | HRM  | 15     | 26                                     | 173.33             | 8               |
| vii.  | Operational Efficiency                                       | 15     | 22                                     | 146.67             | 10              |
| viii. | Research & Development                                       | 5      | 0                                      | 0.00               | 2               |
| ix.   | Financial Management   | 25     | 41                                     | 164.00             | 25              |
| x.    | Procument & Assets Management                                | 15     | 23                                     | 153.33             | 12              |
| xi.   | Assess of Internal Controls (Good governance)                | 15     | 49                                     | 326.67             | 8               |
| xii.  | Corporate Planning Progress                                  | 5      | 0                                      | 0.00               | 5               |
| xiii. | Local Bank Funded Projects                                   | 10     | 1                                      | 10.00              | 5               |
| xiv.  | Rural Water & Ground Water and Other                         | 8      | 6                                      | 75.00              | 5               |
|       | Total  | 190    | 224                                    | 117.89             | 160             |

Goal 4 - Ensure Safe Drinking Water Supply and Sanitation to Rural and Underserved Communities

|       | Activity  | Implemented by | Present Status | Expected outcome   |
|-------|---|----------------|----------------|--|
| i.    | Develop criteria for the identification of needy rural and marginalized communities.  | STRWS          | In progress    | Upgrade the living standers of rural and marginalized communities.   |
| ii.   | Carry out water quality surveillance program.   | STRWS          | In progress    | Improve life expectation of the people in the country.   |
| iii.  | Carry out water quality surveillance program in liaison with the Department of Health and other stakeholders.   | STRWS          | 40%            | Implement Water Safety Plans (WSP) for rural water supply systems under WHO assistance Island-wide.  |
| iv.   | The Climate Resilient Integrated Water<br>Management Project (CRIWMP) of Ministry of<br>Mahaweli Development and Environment<br>(MMDE) with the assistance of the United<br>Nations Development Program (UNDP).                                     | STRWS          | 50%            | To conduct community Action Plan (CAP) programmes in<br>11 schemes out of 35 proposed total number of sub-<br>projects under Output 2 of CRIWMP.   |
| v.    | A Memorandum of Understanding (MoU) was<br>signed between the National Water Supply &<br>Drainage Board (NWSDB) and Department of<br>National Community Water Supply (DNCWS)<br>with the assistance from the World Bank<br>funded Project.          | STRWS          | 100%           | To provide technical support to the DNCWS as requested<br>by community managed water supply schemes on a three<br>phased Goal Set: Short term, Medium term & Long term<br>until the CBOs become fully technically competent to<br>handle major technical issues.                                       |
| vi.   | Water Supply & Sanitation Improvement<br>Project (WaSSIP).  | STRWS          | 75%            | To work collaboratively with WaSSIP to improve water<br>and sanitation services in small-scale schemes by<br>organizing varied workshops and TOT (Training of<br>Trainers) programmes.   |
| vii.  | Implementation of the identified Urban, Small<br>Town, Rural and Estate Water Supply systems<br>including sanitation needs.   | STRWS          | 70%            | To preparation of preliminary report and NPD Report and<br>submit to the World Bank. Project proposal is to be<br>finalized with the WaSSIP Project.   |
| viii. | JICA funded RIDEP (Rural Infrastructure<br>Development Project in Emerging Regions).  | STRWS          | 50%            | To sign the Memorandum of Understanding(MoU)<br>between Project Management Unit of JICA funded RIDEP<br>of the Ministry of Provincial Council and Local<br>Government and National Water Supply & Drainage Board<br>(NWSDB) to extend technical cooperation for the<br>proposed sub-projects in RIDEP. |
| ix.   | Disaster Risk Reduction and Emergency<br>Preparedness & Response Plan in WASH sector<br>(UNICEF).   | STRWS          | 10%            | To prepare a Disaster Risk Reduction and Emergency<br>Preparedness and Response plan.  |
| x.    | Study on existing overflowing and high yielding<br>deep bore wells to use as water sources for<br>development of community based rural water<br>supply schemes within the Embilipitiya and<br>Kolonna DS areas in Ratnapura District, Sri<br>Lanka. | R&D            | 30%            | Identification of groundwater recharges areas and demarcates areas as groundwater to be protected.   |
| xi.   | Research proposal on Ground water Modeling<br>in Attanagalla Oya River Basin.   | R&D            | 35%            | Ground water supply will be increased by identifying<br>potential ground water storage and management of<br>groundwater extraction points of the water supply<br>schemes using the applied model.  |

| -     |  |     |      |   |
|-------|--|-----|------|---|
| xii.  | Research proposal on Ground water potential<br>and water quality related issues in Mannar<br>island for effective water management.  | R&D | 30%  | Identifying high Fe-Mn areas and identifying potential<br>areas for sea water intrusions/identifying water quality<br>related issues.         |
| xiii. | Study on RO plants and measure to improve the system.  | R&D | 100% | To run the RO plants more efficiently and to provide safe<br>water for drinking and cooking for CKD affected areas,<br>without interruptions. |
| xiv.  | Performance evaluation of ecobiological<br>purification unit for producing drinking water<br>from organically polluted raw water with<br>fluoride.   | R&D | 100% | To produce drinking water with low cost and easy maintenance.   |
| xv.   | Pilot study to determine the most appropriate<br>dose and the dosing point for applying Powder<br>Activated Carbon (PAC) adsorption treatment<br>at Kurunegala Water Treatment Plant & Madu<br>WSS.                              | R&D | 100% | To determine the most appropriate dose and dosing<br>point for applying PAC absorption treatment at<br>Kurunegala WTP & Madu WSS.             |
| xvi.  | Study on supply of potable water for cooking and drinking purposes.  | R&D | 10%  | To expand safe drinking water coverage.   |
| xvii. | Collabarative study on groundwater treatment<br>specific to areas with Iron, Manganese, Arsenic,<br>Fluoride and Hardness with installation plants<br>for selected Rural Water Supply Schemes by<br>Iron Exchange India Limited. | R&D | 10%  | Identification of the water contamination, selection of proper treatment scheme, installation, commissioning, monitoring and Training.        |

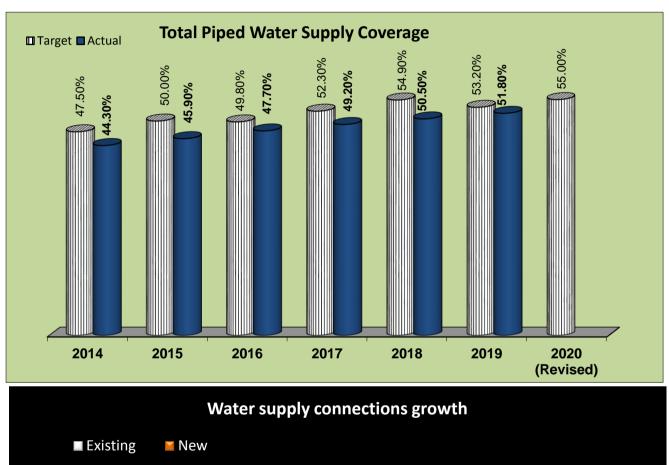
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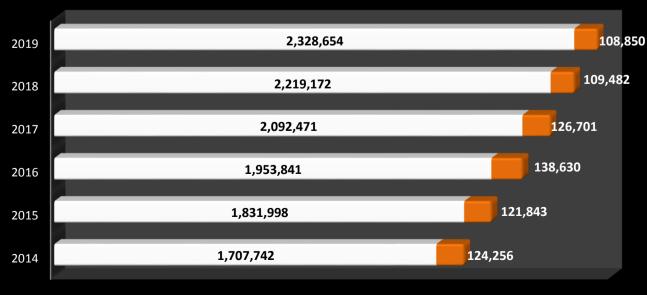
# Goal 1 - Increase the Water Supply and Sanitation Coverage

# Water Supply

Total number of Water Supply Connections as at end of the 4<sup>th</sup> quarter 2019 was 2,437,504 as against the target of 2,452,760.

Total piped water connected coverage was 51.80% against the target of 53.20%.





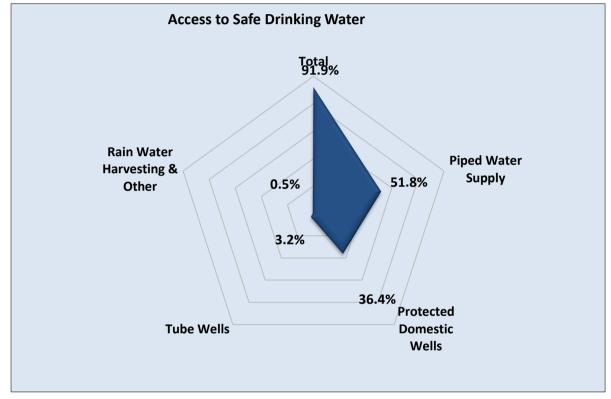
|   | Performance    | on Capital Wo              | orks -2019 (31.12                   | .2019)                  |                           |                    |
|---|----------------|----------------------------|-------------------------------------|-------------------------|---------------------------|--------------------|
| ltem  | Financial Code | Allocation-2019<br>(Rs.Mn) | Revised Allocation-<br>2019 (Rs.Mn) | Expenditures<br>(Rs.Mn) | Financial<br>Progress (%) | Budget Holder      |
| Emerging Small Townships Water Supply & Wastew                                    | ater Schemes   |                            |                                     |                         |                           |                    |
| Matara Short Term Improvement   | 11             | 200.00                     | 110.00                              | 16.78                   | 15.25                     | RSC (Southern)     |
| Utility shifting  | 11             | 300.00                     | 210.00                              | 144.19                  | 68.66                     | All RSCs           |
| Acquiring Land  | 11             | 200.00                     | 170.00                              | 24.28                   | 14.28                     | Addl.GM (CS)       |
| Bandrawela WS   | 11             | 170.00                     | 170.00                              | 94.72                   | 55.71                     | RSC (Uva)          |
| Dankotuwa   | 11             | 100.00                     | 100.00                              |                         | -                         | RSC (NW)           |
| Sub Total   |                | 970.00                     | 760.00                              | 279.96                  | 36.84                     |                    |
| Large Scale Water Supply Projects   |                |                            |                                     |                         |                           |                    |
| Dry Zone Urban Water and Sanitation Project                                       | 17             | 50.00                      | 50.00                               | 33.50                   | 67.00                     | Addl.GM (WSP)      |
| Sub Total   |                | 50.00                      | 50.00                               | 33.50                   | 67.00                     |                    |
| Large Scale Sewerage Projects   |                |                            | ł                                   |                         |                           |                    |
| GPOBA funded projects for increasing Household                                    | 15             | 71.40                      | 71.40                               | 50.00                   | 70.03                     |                    |
| Access to Sewerage Services (GOSL-WB)   | 17             | 88.60                      | 88.60                               | 50.00                   | 56.43                     | Addl.GM (Sewerage) |
| Sub Total   |                | 160.00                     | 160.00                              | 100.00                  | 62.50                     |                    |
| Foreign Loan Disbursement   |                |                            |                                     |                         |                           |                    |
| Water Supply Projects (Foreign Loan Disbursement)                                 | 12             | 12,475.00                  | 13,013.00                           | 19,181.21               | 147.40                    | Addl.GM (WSP)      |
| Board Borrowed Projects - Treasury components                                     | 12             | 10,900.00                  | 10,900.00                           | 9,390.84                |                           |                    |
| Sewerage Project (Foreign Loan Disbursement)                                      | 12             | 4,125.00                   | 4,125.00                            | 2,895.61                | 70.20                     |                    |
| Sewerage Project (Foreign Grant)  | 13             | 128.00                     | 128.00                              | -                       | -                         | Addl.GM (Sewerage) |
| Nainathive Water Supply System  | 13             | 22.00                      | 22.00                               | 33.50                   | 152.27                    | Addl.GM (WSP)      |
| Brought forward from 2018 (information only)                                      | 12             |                            |                                     | 17,621.18               |                           |                    |
| Sub Total   |                | 27,650.00                  | 28,188.00                           | 31,501.16               | 111.75                    |                    |
| Foreign Finance Associated Domestic cost  |                |                            |                                     |                         |                           |                    |
| Water Supply Projects On going Funded Projects                                    | 17             | 5,442.83                   | 5,442.83                            | 777.23                  | 14.28                     | Addl.GM (WSP)      |
| Water Supply Projects NWSDB Borrowed Foreign<br>Funded Projects                   | 17             | 4,000.00                   | 4,000.00                            | 1,654.47                | 41.36                     | Addl.GM (WSP)      |
| Sewerage Project  | 17             | 57.17                      | 57.17                               | 71.39                   | 124.86                    | Addl.GM (Sewerage) |
| Custom Due - Other projects   | 17             |                            | -                                   | -                       |                           |                    |
| Debt Service Payments (Transferd Rs. 5232 M from FC-17+ supplimentary allocation) | 17             |                            | 3,951.45                            | 9,183.38                |                           |                    |
| VAT - (Already Accounted)   | 17             |                            | -                                   | 1,375.09                |                           |                    |
| Sub Total   |                | 9,500.00                   | 13,451.45                           | 13,061.56               | 97.10                     |                    |
| People's Bank Loan & Board Funds  |                |                            |                                     |                         |                           |                    |
| People's Bank Loan for Water supply Projects                                      | PB Loan        |                            |                                     | 1,933.57                |                           | Addl.GM (WSP)      |
| People's Bank Loan for Board Borrowed Projects                                    | PB Loan        |                            |                                     | 426.07                  |                           | Addl.GM (WSP)      |
| People's Bank Loan for Sewearge Projects  | PB Loan        |                            |                                     | 205.06                  |                           | Sewerage           |
| Sub Total   |                |                            |                                     | 2,564.69                |                           |                    |

| Performance on Capital Works -2019 (31.12.2019)   |                   |                            |                                     |                         |                           |   |  |
|---|-------------------|----------------------------|-------------------------------------|-------------------------|---------------------------|---|--|
| Item  | Financial Code    | Allocation-2019<br>(Rs.Mn) | Revised Allocation-<br>2019 (Rs.Mn) | Expenditures<br>(Rs.Mn) | Financial<br>Progress (%) | Budget Holder   |  |
| Board Funds   |                   |                            |                                     |                         |                           |   |  |
| Board Fund for Water suply Projects   | Board Fund        |                            |                                     | 564.28                  |                           | Addl.GM (WSP)   |  |
| Board Fund for Board Borrowed Projects  | Board Fund        |                            |                                     | 476.42                  |                           | Addl.GM (WSP)   |  |
| Board Fund for Sewearge Projects  | Board Fund        |                            |                                     | 183.00                  |                           |   |  |
| GPOBA funded projects for increasing Household<br>Access to Sewerage Services (GOSL-WB) <i>Board</i><br><i>Fund</i> | Board Fund        |                            |                                     | 0.00                    |                           | Sewerage  |  |
| Retentions and outstanding bills of completed projects (S&M)  | Board Fund        |                            |                                     | 6.16                    |                           |   |  |
| Sub Total   |                   |                            |                                     | 1,229.86                |                           |   |  |
| Water Sector Community Facilitation   |                   |                            |                                     |                         |                           |   |  |
| Handled by Ministry   |                   |                            |                                     |                         |                           |   |  |
| Chronic Kidney Disease Prevention Programme<br>(CKDu)   | 11                | 288.17                     | 346.07                              | 173.47                  | 60.20                     | RSC (Central, Southern,<br>East, North, NW, NC,<br>Sab., Uva) |  |
| Rural Water Supply & Sanitation(NC,NW,C,Uva,N ,E<br>& Sab)  | 11                | 86.91                      | 83.37                               | 70.16                   | 80.73                     | RSC (NC, NW, C, Uva, N<br>& Sab)                              |  |
| Catchment Protection (Sab,C,NC & S)   | 11                | 3.45                       | 3.45                                | 2.56                    | 74.20                     | RSC (Sab,Central)   |  |
| Rain Water Harvesting Programme   | 11                | 1.50                       | 1.50                                | 2.71                    | 180.67                    | RSC (NC, NW)  |  |
| Sub Total   |                   | 380.03                     | 434.39                              | 248.90                  | 65.49                     |   |  |
| Handled by NWSDB  |                   |                            |                                     |                         |                           |   |  |
| Andaragasyaya WSS   | 11                | 50.00                      | 30.00                               | 11.80                   | 23.60                     | RSC (Southern)  |  |
| Thissamaharama WSP  | 11                | 20.00                      | 20.00                               | 9.10                    | 45.50                     | RSC (Southern)  |  |
| Water Supply Facilities for Resettlement Villages in<br>Kagalle Districts   | 11                | 186.60                     | 186.60                              | 62.08                   | 33.27                     | RSC (Sab.)  |  |
| Augmentation of Trincomalee WSS   | 11                | 200.00                     | 150.00                              | 93.44                   | 46.72                     | RSC (East)  |  |
| Madhu church Water supply scheme  | 11                | 100.00                     | 85.00                               | 42.77                   | 42.77                     | RSC (North)   |  |
| Project for Enhancement of operational efficiency & Asset MGT - RSC WS  | 13                | 50.00                      | 50.00                               |                         | -                         |   |  |
|   | 17                | 15.00                      | 10.00                               | 1.63                    | 10.87                     |   |  |
| Sub Total   |                   | 621.60                     | 531.60                              | 220.82                  | 41.54                     |   |  |
| Grand Total-NWSDB Allocation (Excluding PB loan,<br>Board funds )   |                   | 39,331.63                  | 43,575.44                           | 45,445.90               | 104.29                    |   |  |
| NWSDB Borrowed Projects   |                   |                            |                                     |                         |                           |   |  |
| NWSDB Borrowed Foreign Funded Projects-Banks Loans  |                   |                            |                                     | 25,089.98               |                           | Addl.GM (WSP)   |  |
| NWSDB Borrowed Local Bank Funded Projects   |                   |                            |                                     | 3,063.00                |                           | Addl.GM (Seweage)   |  |
| Total   |                   |                            |                                     | 28,152.98               |                           |   |  |
| Total expenditure through all kind of funds (excludi  | ng 17621.18 BF fi |                            | 77,393.43                           |                         |                           |   |  |

23 Large scale donor funded and 11 Local Bank Water Supply Projects are in progress which are in various stages of implementation. These new/augmented & existing Water Supply Projects contributed towards the change in piped water supply coverage.

## Water Safety

NWSDB strive to make sure that all the water consumed by the community is safe. Under this context Water Safety Plans (WSPs) are being implemented with the WHO assistance. At present there are 264 urban WSPs implemented in various stages Island-wide by the RSCs DGM with assistance of WSP advisory unit established in Kandy.



### <u>Sewerage</u>

- Piped sewerage connected coverage is 2.07% while the target was 2.24%. The number of sewerage connections provided is not comparable with the population increase to show improvement.
- 24,494 connections were provided from the sewerage system maintained by the NWSDB whereas around 85,000 connections are being maintained by the CMC.
- 3 Large scale donor funded Sewerage Projects are in progress which are in various stages of implementation. These new/augmented & existing Sewerage Projects contributed towards the piped Sewerage connected coverage.

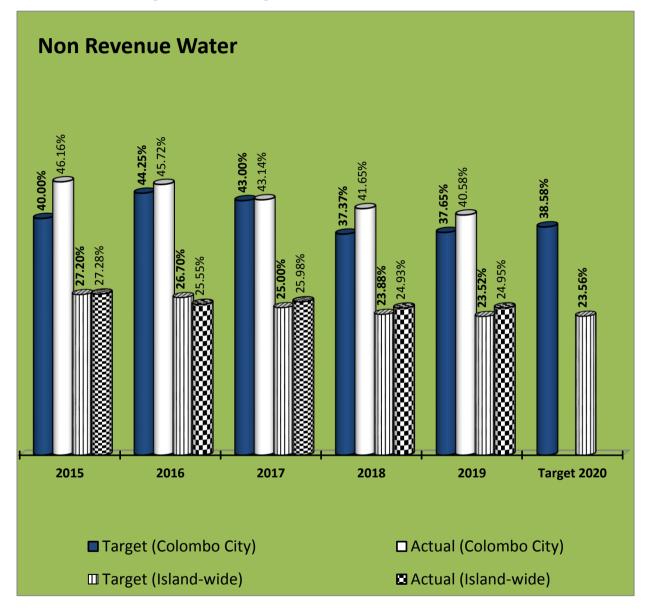
# Goal 2 - Improve business efficiency

Actions implemented under this Goal and their current statuses are presented in A – F below.

# A. Reduce NRW

Reduction of NRW is a very important strategy to improve business / operational efficiency. Details of NRW percentages island-wide and for Colombo City [CC] area are shown in a pictorial manner:

 Although NRW for island-wide has increased by 0.02%, it is decreased significant percentage by 1.07% in Colombo City compared with the December 2018 actual. However in CC, it is still higher than the targeted values.



NRW % targets for ensuring years are set based on the outcome of activities in previous year. The target for 2019 is therefore marginally lower than that specified in the Corporate Plan.

| NRW Reduction Activity |                              | Unit | Island-wide Cumulative Performance as at end |                              |                              |                              |  |  |
|------------------------|------------------------------|------|--|------------------------------|------------------------------|------------------------------|--|--|
|                        |                              |      | 1 <sup>st</sup> qtr.<br>2019                 | 2 <sup>nd</sup> qtr.<br>2019 | 3 <sup>rd</sup> qtr.<br>2019 | 4 <sup>th</sup> qtr.<br>2019 |  |  |
| 1                      | Defective meters replaced    | Nos. | 31,525                                       | 47,030                       | 88,139                       | 136,711                      |  |  |
| 2                      | Illegal connections detected | Nos. | 464  | 779                          | 1,269                        | 1,760                        |  |  |
| 3                      | Bulk meters replaced         | Nos. | 75   | 101                          | 216                          | 328                          |  |  |
| 4                      | Bulk meters installed        | Nos. | 15   | 48                           | 80                           | 116                          |  |  |
| 5                      | Leaks repaired               | Nos. | 47,281                                       | 64,267                       | 101,520                      | 137,383                      |  |  |
| 6                      | Valves replaced              | Nos. | 121  | 187                          | 257                          | 300                          |  |  |
| 7                      | Valves installed             | Nos. | 206  | 260                          | 432                          | 528                          |  |  |
| 8                      | Pipe lines replaced          | km   | 148.65                                       | 162.21                       | 173.71                       | 185.21                       |  |  |
| 9                      | Night leak surveys           | km   | 613.52                                       | 816.81                       | 906.67                       | 1042.75                      |  |  |
| 10                     | Hydrant replacement          | Nos. | 1  | 1                            | 1                            | 1                            |  |  |
| 11                     | Meter reading audits         | Nos. | 3,681  | 6,576                        | 8,008                        | 10,394                       |  |  |

### B. Improve R&D Activities

Research and Development Division of the NWSDB is continuing systematic, investigative and experimental activities that are performed for the purposes of acquiring new knowledge to efficient business and O&M activities such as;

- Korean collaborative study on membrane filtration for small-scale water purification plants in Sri Lanka – Report writing is completed. Review and recommendation has to be done.
- Revise the specification of mastic materials used to protect ductile iron flange joints. Report writing is completed.
- Establishing mechanism for water allocation Participation for preparation of operational model of Mahaweli basin is in progress and Inception report for Yatimahana has been received for review. Preparation of final report is in progress.
- Water losses in domestic consumers and its impact to NWSDB, consumers and for the whole country – Study completed.
- Cost effective process parameter monitoring and logging system for Water Treatment Plant at Ambatale - Market survey for features & identification of sensor installation were completed. Implement an ultrasonic level detector & software are in process.
- Management information system for Colombo and suburbs areas for coordination and optimization of transmission line - Parameter identification survey and work study for identify the study the process were completed. Implementation of software - 80% completed.

- Establishment of Energy Management in Kethhena water treatment plant with M&E
   Section System evaluation for energy management and Preparation of report are in progress.
- **Distribution network model for Athurugiriya Area** This study has been temporally suspended due to non-availability of resources.

## C. Operational efficiency

## I. Energy Saving Activities as at end 4<sup>th</sup> quarter 2019

- 21 projects completed and to be tested and rest 12 projects are in various stages in implementation out of 33 energy efficiency improvement projects during the year under review.
- Out of rest 12 projects;

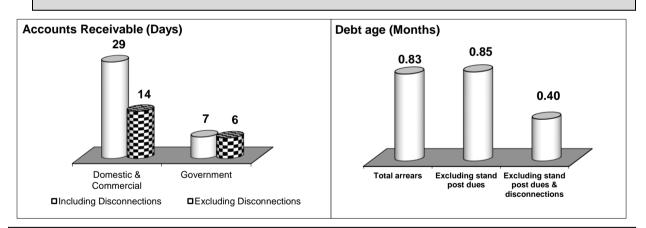
6 projects are in installation stage, 3 projects have been awarded for implementation,

3 projects are at tendering and bid calling stage.

 Carrying out instrument audits for energy saving – 10 energy audits were carried out during the year 2019 under review in WSSs Island-wide.

### II. Cash flow management activities

• Collection efficiency was 110.0% including stand post dues.



- Consumers having Estimated Bills due to obstructions to the water meter Awareness was made and allowed a period of about three months to remove the obstruction. They were informed of possible disconnection if no action was taken.
- Issue of disconnection orders regularly Disconnection programmes were scheduled and disconnections were done according to the plan.

## D. Improve Customer Satisfaction

|   |  | Island-wide Cumulative Performance as at end |  |  |  |  |
|---|--|--|--|--|--|--|
|   | Description  | 1 <sup>st</sup> qtr.<br>2019<br>(Nos.)       | 2 <sup>nd</sup> qtr.<br>2019<br>(Nos.) | 3 <sup>rd</sup> qtr.<br>2019<br>(Nos.) | 4 <sup>th</sup> qtr.<br>2019<br>(Nos.) |  |
| 1 | Complaints received  | 67,012                                       | 93,018                                 | 108,388                                | 220,175                                |  |
| 2 | Complaints attended successfully   | 61,648                                       | 87,316                                 | 103,822                                | 211,396                                |  |
| 3 | Schools Programmes carried out   | 9  | 10                                     | 26                                     | 37                                     |  |
| 4 | Awareness programmes carried out   | 1  | 4                                      | 4                                      | 6                                      |  |
| 5 | Teacher training programmes<br>carried out   | 1  | 5                                      | 7                                      | 7                                      |  |
| 6 | Awareness programmes carried out<br>in other organizations such as<br>Government Departments, Hotels,<br>Hospitals, Police Stations etc. | 10   | 10                                     | 23                                     | 30                                     |  |

- A system was established to monitor status of complaints through the call centre solution and all required mechanisms were made available in the call centre and are being practiced. Instead of the Consumer Grievances module, the call centre solution was enhanced to cover the required functions and this call centre solution is now in full operation.
- Customers are able to pay water dues at Cargills Food City Supermarkets, Keells Supermarkets, Abans Showrooms, Singer Mega outlets, Banks (HNB, Seylan, NSB, Commercial, Standard Chartered, Pan Asia, HSBC, Deutsche, Union, Nations Trust, City, NDB, BOC, People's, DFCC Vardana), Agency Post Offices and other collecting agents at their convenience. They can also pay through the NWSDB's web site using credit card.

# E. Promote ICT Activities

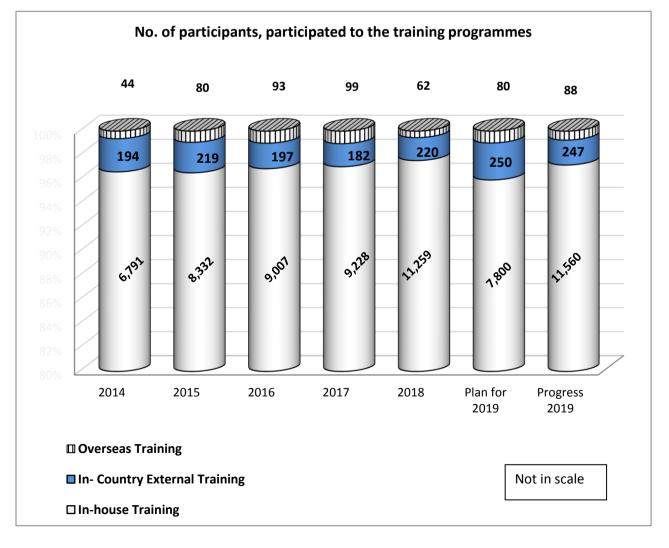
The NWSDB is ready to capitalize on improving the customer and corporate relationship, which will have a web-portal as a platform for improve its business to implementing comprehensive ICT development activities such as;

- Improvement of Commercial Operation Management System Extend the existing system to incorporate the O&M functions related to Commercial Activities are in progress.
- Development of a software system for routine office functions Implementation of a centralized solution for handling routine office activities to improve productivity of general office staff is in progress.

- **Development of a Field Operations Mobile Application** Develop and implement a mobile application for the field operations is in progress.
- Improvement of online e services portal Improve the existing online services portal to facilitate customers to submit the online service requests with online payment facility is in progress.
- NB-IoT (Narrow Band Internet of Things) solution for automating metering and facility monitoring – Testing is in progress.
- **Development of Loan Management System** Develop and implement a software solution for the Finance Division to handle foreign loan repayment process.

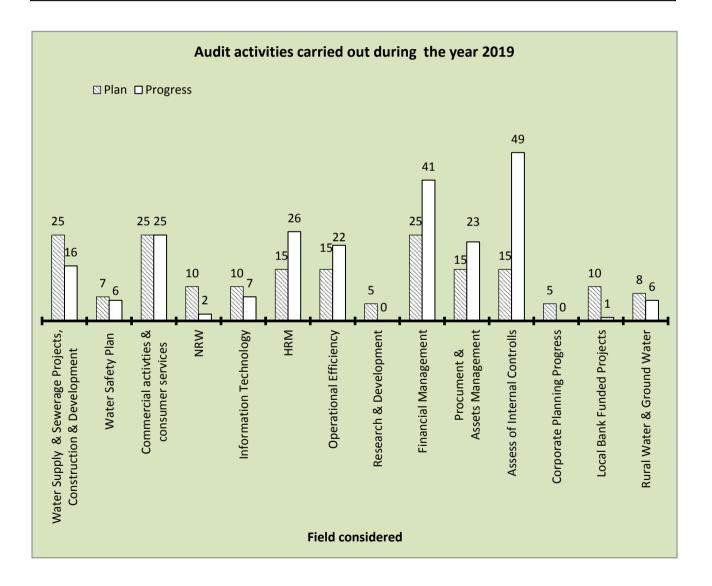
## F. Efficient HRD programme

 Formulate and implement a Staff Training Plan based on Needs Assessment together with on-the-job training component - Provided opportunities to employees of many divisions to follow training programs according to the training plan.



# Goal 3 - Ensure greater accountability and transparency

- Regular internal checks and controls were carried out; especially, on revenue collections from new connection and payments.
- Evaluated the existing financial procedures and activities and identified the weak areas in financial administration; especially, loss of revenue, to prevent frauds etc. Commercial activities were evaluated and recommendations were forwarded to prevent weaknesses in internal controls.
- Checked the proper use of Commitment Register and Votes Ledger; Called for explanations on major variations from the budget.



# Goal 4 - Ensure safe drinking water supply and sanitation to rural and underserved communities

# <u>Small Towns, Rural Water & Sanitation Section activities to facilitate safe drinking water supply</u> and sanitation to rural and underserved communities

- Carry out water quality surveillance program in liaison with the Department of Health and other stakeholders – Water Safety Plans for rural water supply systems under WHO assistance are in progress various stages of implementation in the Island-wide.
- The Climate Resilient Integrated Water Management Project (CRIWMP) of Ministry of Mahaweli Development and Environment (MMDE) with the assistance of the United Nations Development Program (UNDP) - CRIWMP activities in sub project areas were carried out. Design & Procurement work and awarding are completed in most of the sub project areas. Ground water source investigation is almost completed in all the sub project areas. As the literacy improving campaign, Children's library in Thalakolawewa, which is a component of the 'model village' concept was ceremoniously opened to the public. Tree planting programme as a part of the model village concept also was carried out distributing trees to villagers.
- A Memorandum of Understanding was signed between the National Water Supply & Drainage Board (NWSDB) and Department of National Community Water Supply (DNCWS) with the assistance from the World Bank funded Project - Training materials were prepared as part of the community mobilization activities.
- Water Supply & Sanitation Improvement Project (WaSSIP) Progress meetings, Financial training for CBOs, kick off meetings and community Action Plan 1 and 2 were carried out in sub project areas. NPD Format for the forth coming World Bank project proposed under additional financing was prepared and send for revision.
- Implementation of the identified Urban, Small Town, Rural and Estate Water Supply systems
  including sanitation needs Preparation of preliminary report and NPD Report has been
  completed and submitted to the World Bank. Project proposal is to be finalized with the
  WaSSIP Project.
- JICA funded RIDEP (Rural Infrastructure Development Project in Emerging Regions) -Memorandum of Understanding was signed between Project Management Unit of JICA funded RIDEP of the Ministry of Provincial Council and Local Government and National Water Supply & Drainage Board to extend technical cooperation for the proposed sub-projects in RIDEP.
- Disaster Risk Reduction and Emergency Preparedness & Response Plan in WASH sector (UNICEF) - Prepare a Disaster Risk Reduction and Emergency Preparedness and Response plan

# <u>Research & Development Activities to facilitate safe drinking water supply and sanitation to</u> <u>rural and underserved communities</u>

- Study of existing overflowing and high yielding deep bore wells to use as water sources for development of water Supply Schemes within the Embilipitiya and Kolonna DS areas in Ratnapura District, Sri Lanka - Desk studies (collecting existing data & information -Secondary data collection) and initial field visit was completed. Water samples were collected for chemical and isotope analysis. Research is temporary suspended due to funding problem.
- Groundwater potential and water quality related issues in Mannar Island for effective water management - Desk studies (collecting existing data & information - Secondary data collection), initial field visit and 50 nos. of water samples were collected for isotope and water quality analysis were completed. This study has been temporally suspended due to fund problem for food and lodging. This study has been temporary suspended due to funding problem.
- Groundwater modeling in Attanagalla Oya river basin Desk studies was completed.
   Purchasing Mod Flow and field conductivity meter in progress. Water level collected at all locations in the Attanagalla oya river basin.
- Study and monitoring of RO plants and caring out measures to improve the system Study completed and Preparation of final report is in progress.
- Pilot study to determine the most appropriate dose and the dosing point for applying Powder Activated Carbon (PAC) adsorption treatment at Kurunegala Water Treatment Plant & Madu WSS – Study completed.
- Study on supply of potable water for cooking and drinking purpose Study completed and handed over to relevant RSCs.
- Monitoring of Anuradhapura advanced water treatment units in CKDu prevailing areas Study completed and handed over to RSC.
- Monitoring the performance of iron removal plant installed by Ion Exchange India (IEI)
   Limited MOU signed and identification of suitable site is in progress.