

Section C: Primer on NWSDB's Responsibilities, Service Standards and Key Performance Indicators

1

Introduction

1.1 Rationale and Scope

- 1.1.1 The basic objective of regulation is to ensure that the National Water Supply and Drainage Board (Board) to undertake its role of distributing safe, reliable and sufficient drinking water and providing appropriate sewerage services at affordable prices. For the Public Utilities Commission of Sri Lanka (Commission) to carry out its role effectively, it shall be guided by an agreed framework and principles for regulation with the Board; standards, systems and procedures as contained in this Primer.
- 1.1.2 This Primer defines the i) responsibilities of the Board in the provision of water supply and sewerage services; ii) sets out the minimum acceptable and targeted levels of service or service standards in the national and regional levels; and iii) the performance indicators and performance monitoring system that will be employed by the Board in the internal monitoring of its performance and of the Commission as bases for reviewing and assessing the performance of the Board.
- 1.1.3 The Minister-in-charge for water supply & sewerage shall be responsible to set out the overall service quality objectives for the entire water sector. These objectives are then translated into 5-year business plans which define the Board's responsibilities, the levels of service it will provide and the performance targets within a given time period. These standards and targets as indicated in the business plans is the basis for the Commission in the monitoring and evaluation of the performance of the Board.
- 1.1.4 Commission shall exercise some flexibility in setting standards that are appropriate for each specific water supply system or scheme given the uniform tariff but varying levels of service. The Commission shall set targets that promote efficiency and require improvements in operational and financial performance of the Board. The standards and operating targets shall be reviewed and updated jointly by the Board and the Commission every start of regulatory period.

2

Service Obligations and Service Standards

2.1 Water Supply Provision

2.1.1 New Connections

- (i) New water supply connections shall be provided whenever practical to any individual or entity that requests a connection whose property lies within 25 meters of a water supply distribution main (network) unless there are significant and demonstrable difficulties. Even in such instances, the maximum distance shall not exceed the limit of 150m for individual and dedicated service lines and all other cases of common branch mains shall be introduced. Distance ceilings shall be imposed based on population densities and topographical constraints in the service area. In addition to linear dimensions, other governing features or constraints where applicable in access to premises concerned shall be considered.
- (ii) The Board is entitled to charge an amount, approved (agreed) by the Commission, based on the average cost of installing the service connection (labor, materials, machinery, overheads and others). Each water connection shall be provided a meter with flow control valves and safety protection devices. For consumers whose property is more than 25 meters from a distribution main or collection pipe other than the above stated demonstrable special circumstances, the Board is entitled to charge the customer the actual reasonable cost of installing the connection (materials, labor and overheads) plus the cost of extending the distribution main or collection pipe or other needed works to install the connection. All these costs must be communicated to the customer for his consent prior to the installation.
- (iii) As a general rule, installation of water connections should be completed within seven (7) days from the time of payment of the connection charge for properties within 25 meters and two (2) weeks for properties more than 25 meters. Sewerage connections must be completed within two (2) weeks from date of payment of the connection charge as well. Some flexibility will be allowed in the installation period in some regions in consideration of availability in resources; and shall be communicated in advance to customers applying for a new connection.
- (iv) Customers who have voluntarily or involuntarily have their connection cut-off shall be charged a reconnection fee in case they apply for reconnection to the system. The schedule of reconnection charges will be submitted to the Commission for approval.

2.1.2 Service Coverage

- (i) The business plans of the Board will indicate the service coverage targets for each year based on the national safe water coverage targets. The establishment of targets for the whole Board shall build on regional and area specific targets and shall be defined in terms of the mode of safe water supply. The Board shall meet (or exceed) the water supply coverage targets set out in their plans.

- (ii) Targets shall be expressed as a percentage of the population given water services to the total population of the area. The Board shall make sufficient number of pipe water connections (net of any disconnections) to meet the coverage target percentage of the population in the designated towns or densely populated areas in addition to the other means of providing safe water. Coverage targets are to apply as at the year end of the designated year.
- (iii) The Board shall provide data and supporting evidence to the Commission that demonstrates compliance with such coverage targets, along with the method by which such compliance was calculated. With respect to the piped water coverage targets the following shall be taken into consideration.

The population figure to be used as the denominator in the target calculations is not to include any member of the population in each area who receive water services from any other legal and/or authorized water providers or those who have privately owned pipe water systems.

Those who were connected to the system but have been disconnected permanently or over a period of six months prior to the target date are not to be counted as water serving population.

The Commission shall, in consultation with the Board, set out a methodology on estimating the number of people served by each category of connection in order to determine the population served. The methodology shall be reviewed every 5 years or as the need arises.

2.1.3 Provision of Water Other than Through Mains

- (i) The Board shall make supply of water available to customers other than through a water main in circumstances where the supplies through a water main have been or will be interrupted for more than 24 hours or supplies through a water main has been or will be subject to contamination. The charges for these services shall not exceed the approved rates for piped water supplies plus the cost of conveyance.
- (ii) In cases where no connection to a water main exists, the Board may make a supply of water available to its customers at a rate equal to the costs reasonably and efficiently incurred by it in supplying such water.

2.1.4 Provision of Water for Public Purpose

- (i) The Board shall make available an adequate supply of water for fire-fighting, emergency and other public purposes as may be reasonably requested by local authorities/sector agencies within its service area. The Board shall not assess a charge for such water used for fire fighting and emergency purposes but may charge for all other water use for public purposes. For providing such service, the Board may be allowed to charge the customers based on approved consumption charges by the Commission.

2.2 Service Standards

2.2.1 Reliability of Supply

- (i) The Board shall ensure that safe and potable water is available to all customers at a desirable quantity and pressure at all times. Following are the obligations of the Board with regard to ensuring reliability of supply:

Water Quantity - The Board shall see to it that the water source of the defined service area has sufficient capacity to provide the average daily demand to all consumers. Efficient and adequate supply of water shall take into consideration the average daily demand required for a domestic/municipal connection with 6 persons consuming at least 120 liters per capita per day.

Service Interruptions (Planned) - The Board must notify all affected customers through print media, radio or television and any other means that will immediately convey the message to all customers within 48 hours prior to any planned temporary service interruptions. The Board shall limit the duration of any service interruption (e.g. replacement of motor pump) to a maximum of three (3) days.

Service Interruptions (Unplanned) - In case of unplanned service interruptions, the Board shall take immediate action to restore service to normal levels within 24 hours or within a reasonable period of time depending on the extent of work that is needed to be done. The Board will be penalized should it fail to restore normal service within 24 hours or should unplanned service interruptions occur more than twice a month. This does not include interruptions resulting from force majeure (such as natural calamities and other man-made disasters).

- (ii) The Board must undertake all necessary means, such as rationing through tankers, etc. to deliver water to its customers in case of prolonged service breakdowns. It shall also have emergency provision of water supply in times of emergency.

Operating Hours

- (iii) It is the obligation of the Board to ensure the availability of an uninterrupted 24 hour supply of water to all connected customers in their service area. This is subject to interruptions resulting from the temporary failure of some items of their facilities or required for the repair or construction of their facilities where such repairs or construction cannot be performed without interruption to the supply of water.
- (iv) However, conditions per scheme and region vary, and providing a 24 hour water supply may not be feasible in some areas. Operating hours shall be established per region and shall be indicated in the Board's business plan. These agreed operating hours shall be the basis of the Commission in monitoring operating hours.
- (v) Notwithstanding the provisions in Section 2.2.1 above, the Board shall maintain and ensure at least 6 hours of supply of water in their pipe systems by undertaking remedial measures timely. In such instances the Board shall also promote the storage facility at the individual consumer outlets to minimize the inconveniences at curtailing of supply hours. When the restrictions encountered in the water sources are either due to low yield or abnormal changes in water quality or resulting from conflict in water sharing and which will seriously affect the continuity of supply; the Board shall take initiatives to inform and educate the consumers on the circumstances and take all appropriate measures to remedy the situation.

Water Pressure

- (vi) The Board shall supply water at a level of positive pressure sufficient to secure the system against the ingress of untreated water or other contaminants. Such pressure shall be at a minimum of 7 meters and a maximum of 40 meters at the consumer outlets for all areas connected by new conveyance pipelines and for all service area pipelines within 10 years from adoption of these Guidelines. Hydraulic modeling of distribution networks shall incorporate necessary appliances to control the high pressure environments if any and shall make sure the protection of the appliances at the consumer side from the causes of high water pressures in the system. Water pressures shall be determined by measuring service pressure at the extreme of the system on the customer's side of the water meter.

2.2.2 Drinking Water Quality

- (i) The Board shall ensure at all times that the water supplied to customers complies with the minimum (or at least satisfy the permissible) requirements for drinking water set under Sri Lanka Standards. The responsibility for setting standards for drinking water rests with the Bureau of Sri Lanka Standards (SLS). (The current SLS water standards are published in SLS 614: Part 1: 1983 and SLS 614: Part 2: 1983).
- (ii) The Commission shall monitor the compliance of the Board to said drinking water standards. However the Commission, after consultation with the Ministry, Board and other appropriate government authority, shall have the discretion to consent to a phase-in compliance with these standards over a 10 year period from adoption of the Regulatory Guidelines. The phase-in period shall be reviewed and adjusted during each business planning period.
- (iii) The Board shall observe requirements regarding sampling procedures, record keeping or reporting as may be required by applicable laws or regulations.
- (iv) The Board must ensure that the drinking water at the connection point of the customers property meets the following standards or applicable standards as may be revised by the Bureau of Standards:

Physical requirements: The Board shall at all time supply the customers with water that meets the physical requirements prescribed in Table 1 of SLS 614: Part 1: 1983.

Chemical Requirements: The Board shall at all times ensure that the water supplied to customers meets the chemical requirements prescribed in Table 2 of SLS 614: Part 1: 1983. At its discretion, the Commission may require the Board to test for the optional parameters given in tables 4 and 5 of SLS 614: Part 1: 1983 depending on the location of the water sources.

Bacteriological requirements: The Board shall at all times ensure that the water supplied to customers meets the bacteriological requirements prescribed in clauses 3.1.1 through 3.1.4 of SLS 614: Part 1.

- (v) The Commission may request that the Bureau of standards to revise and update the standards periodically and should participate on the technical committee assigned for the purpose. The Board and the other relevant sector agencies shall sufficiently be consulted at such revision or updates.

Granting Exemptions

- (vi) While the Board must meet the SLS standards for drinking water, the Commission may grant a time-bound exemption from the standard for certain parameters, if necessary provided that the Board can justify that the costs of meeting the standard outweigh the health risks to the customers. Exemptions should not be granted for the parameters that are the most critical to protect human health. The Board is expected to request for the exemption if needed in a timely manner to ensure that it is granted before the end of the initial grace period.
- (vii) An initial grace period of ten (10) years or as determined in the corporate/business plan will be granted except for the most critical health related parameters such as bacteriological quality. Critical parameters shall be determined with the consultations of the health authorities from the adoption of the Regulatory Guidelines, during which time the Board will establish their baseline water quality and compliance level to the standards in all of their operational water supply systems.
- (viii) Prior to the expiry of the grace period, the Board must already meet the standards or request, as necessary, an exemption from those specific standards which it cannot meet. The request must be accompanied by documentation that demonstrates that the Board's investment plan includes measures to phase-in compliance with the standards and a detailed statement on the health impacts of phasing in compliance with a specific interim water quality standard specified.
- (ix) The Commission must review the request and make a determination on its merits (health, costs and tariff implications). The Commission may carry out its own study if needed to evaluate the request. The content of such a study shall be agreed with Board prior to execution. If the Commission is convinced that human health will not be jeopardized, it will grant the exemption for a set period and agree on a phase-in schedule with the Board.
- (x) If further study is required, the Commission may grant the Board a provisional exemption pending the results of the investigation.
- (xi) If the exemption is not granted, the Commission shall notify the Board with instructions to initiate works within 30 days and a specific time period after initiation of the works to ensure compliance with the standard

Monitoring Water Quality

- (x) The Board has the primary responsibility for monitoring water quality and reporting the results to the Commission in accordance with the standard sampling procedure. The Commission shall be informed by the Board of the test dates and sites for bacteriological sampling in advance for possible joint sampling and analysis purposes. The Commission will review the reports, verify the results and take action to enforce the standards as appropriate.
- (xi) The Board shall submit a water quality monitoring and testing program based on the sampling regime and methods specified by it or by the SLS, for approval by the Commission. The plan should include the monitoring of raw water from each abstraction point, treated water at treatment works outlets (if treatment applicable), at various points along the distribution network and at selected consumer connection points. The water quality monitoring program will cover all the water supply systems in operation and the quantum of sampling at a time

shall be proportionate to the rate of production and/or the number of service connections.

2.2 Sewerage

2.2.1 Provision of Sewerage Services

- (i) The Board shall offer to supply sewerage services for either domestic sewage or industrial effluents compatible with its existing treatment facilities and capacities to all customers connected to the utility's water system. The Board shall endeavor to meet the coverage target percentages set out by the government or in accordance with its own plans or goals. Nevertheless, such targets shall be in compliance with the 5-year business plan of the Board.
- (ii) At the start of each regulatory period which is assumed to be the start of a five-year tariff review period coinciding with the corporate planning of the Board, capital investment programs for sanitation and sewerage facilities shall be included in the 5-year business plan. The business plan shall indicate the targets for sewerage coverage including the capital investments requirements per year and on a per region basis if feasible.

Obligations to Make Connections to a Public Sewer

- (iii) Upon request from an owner or occupant of premises located in the Board's service area for connection to a public sewer, the Board shall install the connection within two (2) weeks from receipt of payment for new connection.
- (iv) The Board shall endeavor to encourage connections to the sewerage system. Where there are existing sewerage facilities, the Board shall set its annual targets based on the projected design of the system. The Commission as the appointed regulator for sewerage services shall monitor compliance to the targets set by the Board.
- (v) To allow for monitoring of the Board's performance in connecting customers to a sewer connection, the Board will make available the following information:
 - No. of requests for connections by type
 - Time taken between taking payment and installing the connection
 - Number of connections made by type

2.2.2 Service Standards

- (i) Wastewater Discharges into the Environment. The Board shall adhere to the effluent standards established by the Central Environmental Authority when discharging effluents from their systems to the environment, except where the receiving body of water is marine waters, in which case the standards set by the Marine Pollution Control Authority shall be complied with.

Wastewater Discharges by Consumers into the Sewerage System

- (ii) Setting Pretreatment Standards. In order to meet the wastewater standards set out by the CEA, the Board shall develop pre-treatment standards for wastewater discharged into the sewerage system, especially for wastewater generated by

commercial and industrial customers. These limits shall be based on the capacity of the system and the treatment technology adopted. The Commission's role is to ensure that the Board has informed CEA of these limits and that the customers so affected shall have been notified at least 2 weeks in advance of any change to provide an opportunity to comment on any changes affecting them.

- (iii) **Commercial and Industrial Customers.** If a commercial or industrial customer opts to connect to the sewerage system of the Board, the applicable pretreatment standards shall be stipulated in the Customer Service Agreement between the Board and its customers. The Commission shall ensure that the CEA receives a copy of the Customer Service Agreement as part of the licensing process. In case of non-compliance with the pre-treatment standards, the Board shall refer the case to the CEA and notify the Commission. It is the responsibility of the Commission to follow-up the actions with the CEA.

Rules Regulating the Use of the Sewerage System

- (iv) The Board shall prescribe a set of rules together with the penalties involved, to be approved by the Commission, to protect the integrity of the sewerage system from harmful substances or damage. These rules may include the following:

No person shall introduce solid waste or any other harmful substances to block or destruct the sewerage system.

No person shall divert rainwater/storm water or water from construction sites to the sewer system.

No person shall obstruct manholes or construct any structures on manholes or connecting sewer mains to manholes

Enforcing Wastewater Discharges into the Sewerage System

- (v) If a commercial or industrial customer violates the pretreatment standards set out in the Customer Service Agreement, the Commission shall ensure that the Board has taken the following actions:

The Board should notify the customers in writing of the violation indicating the action to be taken by the customer and penalties to apply in cases of non-action. A copy of this notice should be filed with the CEA. A copy of the notice shall be filed with the CEA.

Should the customer fail to rectify the violation, the Board has recourse to any one or a combination of the following actions depending on the severity of the violation.

- Requesting the CEA to take action against a client on the violation regarding its regulations;
- Requesting the CEA for approval to cut off its water connection ;(i.e. the requirement of obtaining the certification from CEA based on the misconduct)
- Disconnecting the sewerage connection of the customer after due notice has been given.

- (vi) Penalties for Non-Compliance. The Board shall draw up and submit to the Commission for its approval a table of penalties to be imposed on customers for violation of pretreatment standards.

2.2.3 Service Performance

- (i) The Board shall ensure the regular and efficient maintenance of the sewerage system to reduce and minimize the incidence of sewer blockages, and properties being affected by sewage overflows.
- (ii) The Board shall ensure that no more than a certain % of private properties experience an uncontrolled sewage overflow
- (iii) The Board shall ensure that full normal sewerage service is restored after an uncontrolled sewage overflows.

3

Operational and Financial Performance

- (iv) Parallel to providing the required levels of service to its customers, the Board is tasked to operate efficiently while ensuring a sound financial condition.

3.1 Achieving Operational Efficiency

- (i) The Board along with targeting certain service standards shall attain operational efficiency in the delivery of water and sewerage services. These operational aspects refer to those areas other financial performance; and do not have a direct impact on customers. These operational aspects, however have a direct effect on the financial condition of the Board. The Board shall ensure to attain efficiency in the following areas of operations:

- Production performance
- Collection performance
- Personnel management
- Marketing performance

3.2 Asset Management Obligation

- 3.2.1 The Board must ensure that its assets are managed well to reach the maximum expected life; that there is a clear and well defined asset management plan for the rehabilitation, renewals and additions.

- 3.2.2 The Board shall report to the Commission at the onset of the regulatory regime the following matters:

- A description of the processes, practices, systems and plans that the Board uses in the management of its assets;

- A complete listing of its assets and a description of the major group of assets

- An assessment of the capacity of the assets to deliver the projected services

- 3.2.3 Every start of the regulatory period or tariff review, planned capital expenditures for asset renewals, replacement and others shall be submitted as part of the business plan. The capital expenditures budget shall support the projected levels of services during the period.

3.3 Non-revenue water

- 3.3.1 The Board shall undertake all feasible measures to keep non-revenue water at economic levels; which shall be determined and adjusted every 5-years or regulatory period by the Board in consultation and agreement with the Commission.

- 3.3.2 For purposes of planning, non-revenue water targets shall be determined and projected per region. The NRW levels will also be the basis for monitoring and evaluation of the Board's performance by the Commission.

3.4 Financial Management Obligations

- 3.4.1 The Board shall ensure that its operations is financially viable where financial viability is the ability to have sufficient funds to meet operating and maintenance expenses, and to provide for system improvement and expansion. It is important that the Board is financially viable throughout its operating life so that services are delivered as committed and customers benefit from a continuous and sustainable water supply service.

- 3.4.2 To achieve financial viability, the Board shall undertake and ensure the following:

Ensure that the operation of the Board is guided by a business plan and that the program of activities, asset management plans, demand forecasts, and revenue requirements in the plan are attained during the projection period.

Ensure that the financial and commercial operating systems covering general accounting and financial reporting, billing and collection, disbursements, budgeting, fixed assets management, inventory management and other relevant systems and procedures are sound and enable the effective financial management of the water utility;

Implement the appropriate level of tariffs to generate the required revenues to meet the operating expenses and other costs;

Set aside an annual fund for asset replacement/maintenance, i.e., a depreciation reserve fund which shall be utilized for major improvements, new constructions, extensions or additions to the property of the Board;

Maintain operating expenses at prudent and cost effective levels but without prejudice to meeting the agreed levels of service;

4

Customer Service Obligations

4.1 Introduction

- 4.2.1 Customer service is an important component of water utilities service obligations to minimize customer complaint and increase customer support for the Board's improvement initiatives. Customers' perception of good water service promotes willingness to pay for delivered services. The Board shall at all times, endeavor to provide highly satisfactory customer service. The Board shall anticipate and respond to the needs of its customers and create a climate of service, trust and cooperation.
- 4.2.2 The Board shall ensure that there is in place a well running customer support system that will take care of customers' concerns and promote good customer relations.
- 4.2.3 The Board shall develop and disseminate a Customer Service Code that shall inform the customers of the services to be provided by the Board, their rights as customers and corresponding role in enabling a sustainable water supply operation. (The Customer Service Code shall be based on the core provisions of the Customer Service Guidelines prepared under the TA:4049).

4.2 Handling Customer Service Request and Complaints

- 4.2.1 The Board shall establish and maintain an internal complaint handling system for receiving, responding to and resolving complaints of customers. A unit within the Board will be assigned to take care of customers' concerns.
- 4.2.2 The Board shall make available to customers, information concerning its internal complaints handling system and how it works. It shall also furnish customers' information on other utility rules and regulation, in particular those that affect them directly.

4.3. Standard Response Time

- 4.3.1 The handling of customers' complaints and service requests will be guided by standard response and resolution time. These standard times are enumerated in the Customer Service Guidelines.

5

Performance Monitoring

5.1 Key Result Areas and Aspects to be Monitored

- 5.1.1 Key Result Areas. The Board's performance in the following areas shall be reviewed and assessed by the Commission using an agreed set of performance indicators.
- (i) Service standards and system performance – extent to which the committed levels of service have been complied with;
 - (ii) Customer Service - this area covers the interface between the Board and its customers and how well the Board has handled customer concerns and interests;
 - (iii) Operational Performance – Indicates the ability of the Board to deliver its targeted levels of service in an efficient and effective manner; and
 - (iv) Financial Management Performance – measures the financial performance of the Board and its ability to sustain long-term operations
- 5.1.1 Aspects of Operations to be Measured. The Commission shall monitor the following aspects in each KRA which are reflective of the efficiency and effectiveness of the Board's operations. (The various indicators are shown in Schedule 1)

Service Standards and System Performance

- Drinking water quality
- Water system reliability
- Sewerage system reliability
- Sewerage system performance

Customer Service

- No. of complaints received per type
- Customer complaint resolution
- Legal Actions
- Disconnections

Financial Performance

- Collection Effort
- Cost Control
- Profitability
- Liquidity
- Sustainability

5.2 Performance Indicators

- 5.2.1 The Commission in agreement with the Board shall adopt the performance indicators in the more detailed review of the Board that will be conducted annually. For the more frequent monitoring of the Board's performance (on a quarterly basis) the Commission and the Board shall agree on a lesser number but more significant performance indicators. These key performance indicators or KPIs shall be reported along with the financial and operating highlights by the Board to the Commission.
- 5.2.2 The indicators shall also be updated based on the changing conditions in the sector.

Schedule of Indicators:

SERVICE STANDARDS PERFORMANCE	
Drinking Water	
Indicator	Measure
1 Drinking Water Quality	% of water tests that meet the standards of SL Standards for Drinking Water No. of complaints received per 1,000 connections relating to water quality
2 Customers experiencing planned and unplanned water interruptions	No. of planned and unplanned interruptions expressed as a % of all service connections where the duration is: <ul style="list-style-type: none"> ○ Less than or equal to 2 hours ○ More than 2 hours and less than or equal to 6 hours ○ More than 6 hours and less than or equal to 12 hours ○ More than 12 hours and less than or equal to 24 hours ○ More than 24 hours
3 Response time to breaks	The average time taken to respond to bursts and leaks in drinking water mains in the transmission and distribution system
4 Low water pressure	The number of service connections and the number expressed as a percentage of total connections experiencing a water pressure failure which is: <ul style="list-style-type: none"> (a) Occasional or recurrent but not permanent (b) Permanent low pressure
Wastewater standards compliance	
1 Effluent Standards	No. of instances where the Board does not meet the standards set by the CEA
2 Pre-treatment standards	No. of customers apprehended for violating the pre-treatment standards No. of customers whose connections were cut-off due to violation
Sewerage System Reliability	
1 Frequency of uncontrolled sewage overflows and properties affected	The number of uncontrolled sewage overflows affecting private properties The percentage of uncontrolled sewage overflows affecting both public and private properties expressed as a percentage of total number of properties
2 Repeat sewage overflows	The no. of public and private properties experiencing sewage overflows on <ul style="list-style-type: none"> (a) 2 occasions (b) on 3 or more occasions
3 Sewage blockages ¹	The number of sewer blockages not exceeding 5 times per month

¹ Appendix 4: Key Performance Indicators, (Greater Colombo Project, 2006)

Indicator	Measure
<p>4 Response times</p>	<p>The number of events notified to the Board to which the Board responded in 2 hours and to those which it responded in more than 2 hours where the event was assessed by the Board as:</p> <ul style="list-style-type: none"> (a) likely to have a significant environmental impact (b) a public health concern (c) likely result to a material damage in property <p>The number of events notified to the Board to which the Board responded in 3 hours and to those which it responded in more than 3 hours where the event was assessed by the Board as:</p> <ul style="list-style-type: none"> (a) Causing minor damage to property (b) Minor environmental effect, and does not pose a major health risk
<p>5 Restoration time</p>	<p>The average time taken by the Board to restore full normal sewerage service from the start of the uncontrolled sewage overflows</p>

OPERATIONAL PERFORMANCE INDICATORS		
Key Result Area	Indicator	Formula
<p>1 Collection Performance Refers to the effectiveness of the collection system to ensure high collection efficiency ratios and manageable levels of accounts receivables.</p>	<p>Collection Efficiency –expressed as a percentage and indicates the collection performance of the utility during the current year and is arrived at by comparing total collections of current year's accounts as against total billings for the year.</p> <p>Collection Period – shows average period required to collect accounts expressed in months' equivalent of accounts receivables. A higher number of months in accounts receivables indicates that the utility has a more difficult time collecting its accounts.</p>	<p>$\frac{\text{Total Year-to-Date Collection}}{\text{Total Year-to-Date Billings}}$</p> <p>$\frac{\text{Total Account Receivables}}{(\text{Total Annual Billings}/12 \text{ months})}$</p>
<p>2 Production Efficiency</p>	<p>Non-Revenue Water – the difference between annual volumes of system input and billed authorized consumption. It includes not only real losses (i.e. leakage) and apparent losses (i.e. meter inaccuracies and illegal consumption) but also unbilled authorized consumption.</p> <p>% Metered Connections - the ratio of metered service connections to total service connections expressed as a percentage of total service connections.</p>	<p>$\frac{\text{Water Produced} - \text{Water Billed}}{\text{Water Produced}}$</p> <p>$\frac{\text{No. of Metered Service Connections}}{\text{Total Service Connections} \times 100}$</p>
<p>3 Personnel Management</p>	<p>Staff/1,000 Connection Ratio – measures the efficiency with which the WSP is managing the utility by maintaining a low staff/1,000 connection ratio. This means that the WSP is able to utilize the personnel effectively and operate the utility at the same level of efficiency as when there is more staff.</p>	<p>$\frac{\text{No. of Staff}}{(\text{Total Active Connections}/1000)}$</p>

FINANCIAL PERFORMANCE INDICATORS		
Key Result Area	Indicator	Formula
<p>1 Cost Control Refers to the efficiency in carrying out activities at the least possible cost to ensure that controllable expenses are kept at the minimum and that expenses are prudent and efficient.</p>	<p>Operating Ratio – ratio of operating expenses to operating revenues. It shows the extent to which costs are covered by operating revenues and the effort to control costs at an economic level. The lower the operating ratio, the better is the operations and maintenance (O&M) coverage. A higher operating ratio means there is relative difficulty on the part of the utility to fully cover its costs.</p> <p>Operating Expenses - operation and maintenance expenses excluding depreciation and interest expense. Operating Revenues - includes revenues from water sales and other revenues from operations.</p> <p>% of Administrative Expenses to Total O & M- administrative expense (including salaries of administrative staff) is basically a controllable expense and an increasing % of Adm. to Total O & M is an indication of the failure to control costs within efficient levels.</p>	$\frac{\text{Operating Expenses}}{\text{Operating Revenues}}$ $\frac{\text{Total Administrative Expenses}}{\text{Total Operation and Maintenance Expenses}}$
<p>2 Profitability - This ratio shows the results of operations of a utility in terms of its earning ability as measured from the utilization of the assets through the revenue generated, the relationship of income to expenses and the ultimate return on the investment.</p>	<p>Net Income Ratio – This ratio measures the percentage of profits earned against the total operating revenues. It determines the ability of water utility to withstand competition and adverse conditions like rising costs, falling prices or declining sales in the future.</p>	$\frac{\text{Net Income before Tax}}{\text{Operating Revenues}}$

FINANCIAL PERFORMANCE INDICATORS		
Key Result Area	Indicator	Formula
<p>3 Liquidity - This is the ability of the utility to meet short-term and long-term obligations which is of prime importance to creditors.</p>	<p>Current Ratio – indicator of the water utility's ability to pay short-term obligations calculated by dividing current assets by current liabilities such that the higher the ratio, the more liquid is the water utility.</p>	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$
<p>4 Sustainability - This is the ability to finance continued operations with a return to shareholders that is neither be “too low” nor be “too high” to be considered oppressive in terms of tariff implications.</p>	<p>Debt to Equity Ratio – indicates what proportion of equity and debt the WSP is using to finance its assets.</p>	$\frac{\text{Total Liabilities}}{\text{Total Stockholder's Equity}}$
	<p>Debt Service Ratio – this is the measurement of the ability of the utility to cover debt service payments (principal + interest); the higher the debt service ratio, the greater is the capacity of the utility to service its loan.</p>	$\frac{\text{Net Income before Tax}}{\text{Total Debt Service}}$

CUSTOMER SERVICE PERFORMANCE	
Indicator	Performance
1 Response to customer service complaints	<p>No. of complaints received relating to service standards</p> <p>Expressed in average time spent in resolving customer complaints relating to service standards received</p> <p>% of complaints resolved within targeted response time to total complaints received</p>
2 Response to billing complaints	<p>No. of complaints received relating to billing errors</p> <p>% of billing complaints resolved within target response time over total no. of billing complaints received</p>
3 Response to requests for new service connections	<p>This relates to the ability of the service provider to respond to requests for a water or sewerage connection and is expressed as a percentage (%) of total applications for new service connections that are carried out within the target period</p> <p>No. of requests for service connections processed</p> <p>Ave.time spent in processing new connections</p>
4 Response to disruptive mains failure	<p>Average time spent to resolve disruptive mains failure</p> <p>No. of complaints received</p>

5.3 Performance Monitoring

5.3.1 Rationale

- (i) The Board shall measure its performance against agreed targets indicated in the corporate plan/business plan and/or appropriate benchmarks or standards, where applicable. On a periodic basis, the head office of the Board shall monitor the performance of the Regional Support Centers (RSCs) using the agreed indicators. The results shall be compiled and reported quarterly and annually to the Commission.
- (ii) The Commission shall monitor the Board's performance by using the indicators, and by comparing actual performance against the committed levels of service and operational and financial targets in the corporate/business plan and as necessary, audit the performance of the Board.

5.3.2 Setting Targets

- (i) The Board shall establish the targets for the KPIs that will be used for measuring its performance. The targets will establish the context for the KPIs and allow both the Board and the Commission in measuring and comparing actual performance with the targets.
- (ii) Targets shall be set by the Board every regulatory period or every 5 years in the corporate/business plan. When it becomes difficult to set realistic targets due to the lack of reliable baseline information, the Commission and the Board shall agree in adjusting targets over the 5-year period as more information becomes available.

5.3.3 Reporting by the Board to the Commission

- (i) The Board shall submit periodic reports to the Commission that will report on the KRAs such as service standards and service performance, customer service, and financial and operational performance. The reports to be submitted shall include at the minimum the following:

Monthly:

Monthly water quality tests
Other Reports

Quarterly

Financial Statements (Balance Sheet and Income Statement – unaudited)
Operations Summary (service standards, customer service and operational/financial performance) that will include operating highlights and KPIs
Other Reports

Annually

Annual Report
Audited Financial Statements
Other Reports

Glossary and Acronyms

- (a) *Assets* - mean the structures, plant , equipment, and other properties which enable, allow, or assist in the delivery of services
- (b) *Board* - National Water Supply and Drainage Board (NWSDB), provider of water and wastewater services
- (c) *CEA* –Central Environmental Authority
- (d) *Commission* – Public Utilities Commission of Sri Lanka, which the proposed regulator of the NWSDB
- (e) *Complaint* – a manifested dissatisfaction by the customer on the service delivered by the Board
- (f) *Consumer* – any person who consumes or uses the services provided by the Board
- (g) *Customer* – mean any person who has entered into a contract with the Board for the provision of water and/or sewerage service
- (h) *Drinking water* – means water intended primarily for human consumption but which has other personal, domestic or household uses such bathing, washing clothes, cooking, etc.
- (i) *KPI* - Key Performance Indicator
- (j) *KRA* – Key Result Area
- (k) *Marine Pollution Control Authority*
- (l) *Minister* – Minister in charge of water supply, drainage and sewerage services
- (m) *NRW* – non-revenue water
- (n) *Planned Water Interruption* – is an event which commences when the supply of drinking water is interrupted following the receipt by the customer of prior water interruption notice and stops when a normal supply of drinking water is restored
- (o) *Regulatory Period* – period covered by each review of the Regulator (5 Years) which coincides with the business planning for tariff adjustment purposes
- (p) *RSC* – Regional Support Center
- (q) *Services* - means the services provided by the Board which includes water supply and sewerage services
- (r) *SLS* - Sri Lanka Standards
- (s) *Uncontrolled sewage overflow* - sewage overflow which is not controlled
- (t) *Unplanned water interruption* - is an event which commences when the supply of drinking water is interrupted without the customer receiving a prior water interruption notice and is caused mostly by reasons other than the failure of the Board.