UNITED REPUBLIC OF TANZANIA

MINISTRY OF ENERGY

ENERGY AND WATER UTILITIES REGULATORY AUTHORITY (EWURA)

PERFORMANCE BENCHMARKING GUIDELINES FOR WATER SUPPLY AND SANITATION AUTHORITIES

MAY 2022

FOREWORD

In year 2018, EWURA issued the second version of Performance Benchmarking Guidelines for Water Supply and Sanitation Authorities (WSSAs) after revised the first version that was issued in 2014. The objective of the Guidelines was to detail and clarify how EWURA benchmark and compare the performance of WSSAs. The Guidelines were issued pursuant to Section (29) (2)(a) of the Water Supply and Sanitation Act, 2019 which obliges EWURA to prepare an annual report which include comparative analysis of the performance of regulated water utilities.

Over the past three years, benchmarking of WSSAs has been following the Guidelines and EWURA has been ranking the performance of WSSAs based on the same. Based on experience in application of the 2018 Guidelines, comments from stakeholders and developments in provision of water and sanitation services; EWURA learnt that some sections in the Guidelines required to be reviewed so as to enhance performance improvement in water supply and sanitation services.

In view of the above, the Performance Benchmarking Guidelines for Water Supply and Sanitation Authorities (2022) have been prepared. The 2022 Guidelines have included various improvements whereas major changes have been reflected in the section regarding legal framework for regulating water sector, Key Performance Indicators (KPIs) and their assigned weights, determination of Overall Ranking of WSSAs and evaluation of Compliance to Regulatory Requirements (CRR). Further, performance clusters of WSSAs have been reviewed whereas WSSAs will be clustered in terms of size which is determined by number of water connections so as to facilitate performance comparison with WSSAs of similar size.

It is expected that WSSAs will appropriately utilize the Guidelines to evaluate their performance in comparison to their peers, standards and best practices; and ultimately take appropriate steps for improvement. On the other hand, it is expected that the use of these Guidelines will foster improvement in water supply and sanitation services in Tanzania.

Finally, I would like to thank all stakeholders for their valuable inputs in preparing these Guidelines. I am looking forward for your continued cooperation in improving provision of water and sanitation service.

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Director General
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TABLE OF CONTENTS

ABREVIATIONS AND ACRONYMS

BOD	= Biochemical Oxygen Demand
COD	= Chemical Oxygen Demand
CRR	= Compliance to Regulatory Requirements
DT	= District and Townships
ESAWAS	= Eastern and Southern Africa Water and Sanitation (ESAWAS) Regulators
EWURA	= Energy and Water Utilities Regulatory Authority
MaJIs	= Web Based Water Utilities Information System
O&M	= Operation and Maintenance
NP	= National Project
KPI	= Key Performance Indicator
WSSA	= Water Supply and Sanitation Authority

1. INTRODUCTION

The Water Supply and Sanitation Act No.5 of 2019 and the Energy and Water Utilities Regulatory Act Cap 414 oblige EWURA (the Authority) to monitor the performance of Water Supply and Sanitation Authorities (WSSAs). Furthermore, Section (29) (2)(a) of the Water Supply and Sanitation Act No.5 of 2019 obliges the Authority to prepare reports on comparative analysis of the performance of licensees in relation to performance targets specified in the licenses.

The Authority has adopted performance benchmarking framework as one of the tools for monitoring the performance of WSSAs. Benchmarking (comparative analysis) can be defined as: *"A systematic process of searching for best practices, innovative ideas, and effective operating procedures that lead to superior performance and then adapting those practices, ideas, and procedures to improve the performance of one's own organization*[1]". Benchmarking seeks to identify standards or best practices to apply in measuring and improving performance.

Benchmarking enables utilities to identify the following:

(i) what they are doing;
(ii) how they are doing it;
(iii) how others do it;
(iv) how well they are doing it with reference to standards and best practices/performance; and
(v) what and how to improve.

These Performance Benchmarking Guidelines provide details and clarifications on how EWURA will evaluate the performance of WSSAs. The Guidelines include a detailed description of the performance benchmarking approach, key performance indicators and targets, collection and validation of data and information, comparative analysis and dissemination and disclosure.

2. PERFORMANCE BENCHMARKING PROCESS

The process of performance benchmarking involves continuous actions aimed at performance improvement. The overall objective of the benchmarking process is to trigger implementation of appropriate actions that will enable a WSSA to improve its current performance. It is important for WSSAs to provide awareness to all staff on the performance benchmarking process including the key performance indicators.

Performance benchmarking process starts by identification of key performance indicators and setting of performance level targets. Performance benchmarking will be implemented annually using the following five steps:

i. data collection and validation;
ii. data analysis and evaluation;

[1] American Water Works Association - AWWA (2005), Water Utility Management – Manual of Water Supply Practices(M5)

iii. discussion of draft data and information with WSSAs;
iv. writing of Water Utilities Performance Review Report; and
v. dissemination and disclosure of the Performance Report.

3. PERFORMANCE INDICATORS

The performance of WSSAs will be evaluated using performance indicators. *Performance indicators are measures of efficiency and effectiveness of the delivery of services that result from a combination of several variables*[2]. A Performance indicator consists of a value which is a ratio between variables expressed in specific units. Performance indicators can be analyzed, interpreted and compared by taking into consideration context information and the quality of data for each WSSA. For example, collection efficiency is a ratio of two variables which are revenue collected and amount billed.

3.1 CATEGORIES OF PERFORMANCE INDICATORS

In these Guidelines, performance indicators have been categorized into the following three groups: -

(i) Protection of the consumer interests

This group of indicators assesses the degree to which the consumer's interests are protected in terms of accessibility and quality of service provision.

(ii) Sustainability of the operator

This group of indicators assesses the degree of sustainability of the WSSA in terms of economic and financial, infrastructure, operational and human resources aspects.

(iii) Environmental sustainability

This group of indicators assesses the degree to which the environmental aspects associated with the WSSA's activities are being considered.

3.2 KEY PERFORMANCE INDICATORS

There are many performance indicators that are used by WSSAs to monitor the achievement of their activities and objectives as stipulated in the Business Planning Guidelines. However, only key performance indicators which address overall performance and common objectives of WSSAs, have been selected for use in the benchmarking process. Key Performance Indicators have been assigned Acceptable Boundaries and Service Level Benchmarks based on best practice for each of the specified indicators within the African Region (for example the Regional Benchmarking of Large Water Supply and Sanitation Utilities 2017/2018 Report by ESAWAS), water supply and sanitation service targets set in the National Five Year Development Plan (2021/22-2025/26) and Water Supply Regulations GN.828, 2019. The Key Performance Indicators are presented in Table 1 and are defined in Appendix 1.

[2] Alegre, H., Baptista, J. M., Cabrera Jr, E., Cubillo, F., Duarte, P., Hirner, W., ... & Parena, R. (2016). *Performance indicators for water supply services*. IWA publishing.

Table 1: Key Performance Indicators

Indicator No.	Performance Indicators	Acceptable Boundaries	Service Level Benchmark
Protection of the User Interests			
	Consumer service accessibility		
KPI 1	Proportion of population served with water (%)	84%-95 %	100%
KPI 11	Proportion of population receiving WSSAs regulated sanitation services (%)	40%-50%	100%
KPI 2	Average hours of supply (hrs.)	15-20	24
	Quality of service supplied to consumers		
KPI 3	Water quality compliance		
	E. coli	100%	100 %
	Turbidity	95%-98%	100%
KPI 12	Percentage of complaints resolved	100%	100%
Sustainability of the Operator			
	Operator's financial and economic sustainability		
KPI 4	Metering ratio (%)	100%	100 %
KPI 5	Non-Revenue Water – NRW (%)	25%-20%	<20%
KPI 6	Revenue collection efficiency (%)	90%-95%	>95 %
KPI 7	Working ratio (ratio)	1.0-0.67	<0.67
KPI 8	Operating ratio (ratio)	1.0-0.8	<0.8
	Operator's human resource Efficiency		
KPI 9	Personnel/1000 (W&S) connections (ratio)	5-8	<5
Environmental sustainability			
KPI 10	Effluent quality compliance -COD and BOD_5 (%)	95%-98%	100%

4. SETTING AND REVIEW OF KEY PERFORMANCE INDICATOR TARGETS

Key Performance Indicator Targets are set and reviewed in the WSSA's Business Plan in accordance with the Business Planning Guidelines issued by EWURA. The Business Plan indicates how the WSSA intends to reach the proposed Targets. Key Performance Indicator Targets are revised in tandem with the review of the Business Plan.

WSSAs should work towards achieving set targets and as they improve in performance, they should finally work towards achieving Service Level Benchmarks. While the benchmark values for some indicators may be challenging initially, they need to be recognized and internalized as the performance levels that WSSAs need to achieve in due course of time.

5. COLLECTION AND VALIDATION OF DATA AND INFORMATION

5.1 Data Collection

(a) According to Rule 16 of the Water Supply and Sanitation (Licensing and Quality of Services) Rules, 2020, submission of data and information by WSSAs to the Authority is made through the following reports;

i. monthly operational reports in accordance with Water Utilities Information System (MaJIs) or any other system established by the Authority latest by 14th of the following month;

ii. draft annual reports prepared in accordance with the format established by the Authority detailing activities and operations of the WSSAs during the year, to be submitted not later than three months after the closure of the financial year. It shall be accompanied by draft financial statements; and

iii. final annual report prepared in accordance with the format established by the Authority detailing activities and operations of the WSSAs during the year, to be submitted not later than six months after the closure of the financial year. It shall be accompanied by a copy of the audited accounts together with the auditor's report and replies thereto.

(b) Draft and final annual reports shall also include a Performance Score Card in a format as shown in Appendix 2. The Performance Score Card consists of:

i. key performance indicators;
ii. input data and confidence grading in terms of reliability and accuracy;
iii. actual achievement of the performance;
iv. targeted performance levels; and
v. a brief plan of actions for improving data reliability and accuracy.

(c) The data and performance indicators will be validated by:

i. comparing aggregated monthly data and performance indicators from MaJIs with annual report data;
ii. comparing with data and performance indicators from previous years;
iii. conduct consultative meetings for data validation; and
iv. ascertaining incoherent data by means of site visits or audits.

(d) In order to evaluate compliance to regulatory requirements, WSSAs are also required to submit their business plans, customer service charters, water quality monitoring programme, water meter policy, NRW reduction strategy and standard operation procedure for faecal sludge management in accordance with respective Guidelines issued by EWURA.

5.2 Data Quality

Data quality is measured in terms of reliability of the source and the accuracy of the data (confidence grading). WSSAs shall indicate the quality of each of the variable which constitute a key performance indicator as shown in the performance score card (Appendix 2).

5.2.1 Data Reliability

The reliability of the source of data accounts for uncertainties in how reliable the source of data may be, such as the extent to which data source yields consistent, stable, and uniform results over repeated observations or measurements under the same conditions each time. Reliability of the data will be analysed as shown in Table 2.

Table 2: Data Reliability Bands

Reliability Bands		Definition
A	Reliable	Data based on sound records, procedures, investigations or analyses that are properly documented and recognized as the best available assessment methods
B	Fairly reliable	Data based on records, procedures, investigations or analyses that are properly documented and recognized as the best available assessment methods. However, up to 30% of the data is based on extrapolation.
C	Unreliable	Data based on extrapolation from records that cover more than 30 percent of the service provider's system.

5.2.2 Data Accuracy

The accuracy accounts for measurement errors in the acquisition of input data, i.e. the closeness of observations, computations or estimates to the true value. Accuracy of the data will be analysed as shown in Table 3.

Table 3: Data Accuracy Bands

Accuracy Band	Associated uncertainty
1	(0 – 5%): Better than or equal to +/- 5%
2	(5 – 20%):Worse than ± 5%, but better than or equal to + / -20%
3	>20%

5.2.3 Confidence Grading

Confidence grades can only be estimated directly for the variables. Based on these, Performance Indicators confidence grades can either be assessed quantitatively or

qualitatively. Data source reliability and data accuracy should be assessed for every input variable.

The overall confidence grade of the indicator will be the minimum of the confidence of the any of the constituting variables. For example, Non-Revenue Water (NRW) is computed from two variables namely water production (input into the distribution network) and billed volume (water consumption). If water production is measured with an estimated uncertainty of ±15% and from a reliable source will have a confidence grade of A2 and if billed volume is measured from a fairly reliable source with estimated uncertainty of ±15 will have a confidence grade of B2. Therefore, the overall confidence grade for NRW will be B2. WSSAs should aim for a grade of at least B2.

6. COMPARATIVE ANALYSIS

The essence of the benchmarking process is to provide WSSAs with the ability to compare their performance in relation to similar water utilities or similar processes. The comparative analysis will ultimately rank performance levels for individual indicators both numerically and graphically. Comparative analysis will involve the following steps:

6.1 Performance Clusters

In order to evaluate the performance of WSSAs, it's imperative to cluster WSSAs according to their size. In this Guidelines, WSSAs have been clustered in terms of number of water connections which are large, medium and small as shown in Table 4.

Table 4: WSSAs Performance Clusters

Cluster	Description	Number of water connections
C-1	Large	>20,000
C-2	Medium	5,000 to 20,000
C-3	Small	<5,000

WSSAs that provide bulk water service will be included in the cluster for very large utilities (C-1). Further, there will be performance comparison for water utilities using both water supply and sanitation indicators.

6.2 Performance Indicator's weights

The key performance indicators are assigned weights depending on the overall importance of the indicator to utility performance, customer focus, and level of resources committed by the utility in increasing efficiency and/or improving quality of service. Weights have been assigned to Key Performance Indicators as shown on Table 5.

Table 5: Key Performance Indicator Weights

Indicator	Performance Indicators	Weight
KPI 1	Proportion of population served with water (%)	8%
KPI 2	Average hours of supply (hrs.)	8%
KPI 3	Water quality compliance	
	E. coli	10%

Indicator	Performance Indicators	Weight
	Turbidity	8%
KPI 4	Metering ratio (%)	8%
KPI 5	Non-Revenue Water – NRW (%)	8%
KPI 6	Revenue collection efficiency (%)	10%
KPI 7	Working ratio (ratio)	4%
KPI 8	Operating ratio (ratio)	5%
KPI 9	Personnel /1000 (W&S) connections (ratio)	5%
KPI 10	Effluent quality compliance -COD and BOD (%)	8%
KPI 11	Proportion of population receiving WSSAs regulated sanitation services (%)	8%
KPI 12	Percentage of complaints resolved	10%

6.3 Data Analysis

Data analysis involves calculation of key performance indicators and comparing performances of WSSAs both for the current year and for the past two years. WSSAs will also be evaluated on the extent to which they have achieved their performance targets and complied to regulatory requirements. Performance comparison is done by using tables, graphs and charts. Performance trends and differences are then determined and explained.

6.4 Scores and Ranking

Ranking of the performance of WSSAs will be two-fold, that is firstly overall ranking; and secondly utility ranking. The output of overall ranking is identification of the overall best performing WSSA in terms of achievement of KPIs, service level benchmarks and compliance to regulatory requirements. Utility ranking intends to rank WSSAs based on their individual efforts towards attainment of performance targets set in their Business Plans.

The details on how the two types of ranking will be implemented are provided below.

6.4.1 Overall Ranking

In obtaining the score for overall ranking EWURA considers two type of scores which are utility indicator performance score and compliance to regulatory requirement score. The utility indicator performance score accounts for 60% and compliance to regulatory requirement is 40% of the total performance score. The total performance score of a WSSA will be computed as a sum of the performance score for each indicator and the compliance to regulatory requirement score as follows:

$$Total\ Performance\ Score = 60\% \times \sum_{i=1}^{n} PS_{X,i} + 40\% \times CRR\ score$$

where

n = the total number of key performance indicators used for ranking,
CRR = compliance to regulatory requirements, and
$PS_{X,i}$ = Performance Score for utility X in Indicator i

Details on the calculation of performance score and compliance to regulatory requirement score are as described below.

6.4.1.1 Performance Score for each Indicator

Performance Score (PS) for each performance indicator is calculated as a summation of scores based of best performer, attainment of performance target, confidence grading and attainment of service level benchmarks multiplied by the respective indicator weighting as described below:

$$PS_{X,i} = W_i x(SBP + SPT + SCG + SSLB)$$

Where

$PS_{X,i}$ = Performance Score for utility X in Indicator i
W_i = Weight assigned to Indicator i
SBP = Score Based on Best Performer
SPT = Score Based on Performance Target
SCG = Score Based on Confidence Grading and
$SSLB$ = Score Based on Service Level Benchmark

i. Score based on best performer (SBP)

The maximum score for the best performer on each performance indicator is 70 points. The score for attaining a national average (median) on any performance indicator is 50 points while a WSSA will be awarded a score of 0 points for attaining a minimum performance on any indicator. Intermediate performances are allocated pro rata by interpolating between the minimum, average and best performance. The formulae for calculating the scores based on best performers are as shown below:

$$If\ X_i \le X_{average}\ then\ S_i = 50x\left[\frac{X_i - X_{\min}}{X_{average} - X_{\min}}\right]\ else\ if$$

$$X_i > X_{average}\ then\ S_i = 50 + 20x\left[\frac{X_i - X_{average}}{X_{\max} - X_{average}}\right]$$

Where

X_i = performance attained by utility i in indicator X
X_{max} = maximum performance attained by WSSAs for indicator X
X_{min} = minimum performance attained by WSSAs for indicator X
$X_{average}$ = average performance attained by WSSAs for indicator X
S_i = score based on best performer attained by utility i in indicator X

Note: For indicators whose values become better as they increase (the more the better) then the X_{min} and X_{max} should be the respective minimum and maximum value of attained performance while for indicators whose values become better as they decrease (the less the better), then X_{min} and X_{max} should be the respective maximum and minimum of actual performance.

ii. Score based on attaining the performance target (SPT)

A WSSA will be awarded 10 points for attaining or surpassing the performance target on each performance indicator. Intermediate performances will be allocated pro rata by interpolating between 0 and 10 points. In addition, decreasing performances as compared to actual performance in the previous year will be awarded 0 points. The formulae for calculating scores based on attainment of performance targets are as shown below: -

$$If\ P_n \geq PT_n\ then\ SPT = 10\ else$$

$$If\ P_{n-1} < P_n < PT_n\ , then\ SPT = \left[\frac{P_n - P_{n-1}}{PT_n - P_{n-1}}\right] x10\ else$$

$$If\ P_n < P_{n-1}\ then\ SPT = 0$$

Where

P_n = Actual performance in year n (current year)
PT_n = Performance target for the current year
P_{n-1} = Actual Performance for the previous year

The source of data for performance target will be the WSSA's approved Business Plan. In the absence of Business Plan, the WSSAs will score zero (0).

iii. Score based on Confidence Grading (SCG)

A WSSA will be awarded 10 points for surpassing the Confidence Grading of B2, 5 points for attaining a confidence grading of B2 and 0 points for a Confidence Grading below B2 on each performance indicator.

iv. Score based on attaining the Service Level Benchmark (SSLB)

A WSSA will be awarded 5 points for being within the acceptable boundaries and 0 points for not attaining the acceptable boundaries for KPIs as shown in Table 1. Scores for utilities that surpass the acceptable boundaries will be allocated pro-rata by interpolating between 5 and 10 points. This implies that 10 points will be allocated for attaining or surpassing the service level benchmarks.

6.4.1.2 Compliance to Regulatory Requirements

Compliance to regulatory requirements will be evaluated based on the evaluation criteria and scores shown in Table 6.

Table 6: Compliance to regulatory requirements

Code No.	Regulatory Requirement	Total Score
CRR1	Submission of Utility Plans	15
CRR2	Submission of Reports	15
CRR3	NRW Management	15

Code No.	Regulatory Requirement	Total Score
CRR4	Water Meter Management	15
CRR5	Customer Service Management	20
CRR6	Faecal Sludge Management	10
CRR7	Payment of Regulatory Levy	10

The scores for compliance to regulatory requirements will be awarded as shown in Table 7.

Table 7: Evaluation Criteria for CRR

SN	Item	Score	Evaluation Criteria
CRR1: Submission of Utility Plans (15)			
1	Business Plan	10	Presence of approved business plan and water quality monitoring programme will be awarded full scores while non-availability of the documents will be given zero (0) scores.
2	Water Quality Monitoring Programme	5	
CRR2: Submission of Reports (15)			
3	Timely submission of acceptable monthly MaJIs reports	6	Timely submission of the reports will be awarded 6 scores divided equally in 12 months (0.5 scores per month). Late or non-submission will be awarded zero (0) scores.
4	Timely submission of draft annual MaJIs report	2	Timely submission of each report will be awarded full scores while late and non-submission of any report will be given zero (0) scores.
5	Timely submission of draft annual report	2	
6	Timely submission of draft financial statements	2	
7	Submission of final annual report for the previous year	3	
CRR3: NRW Management (15)			
8	Availability of NRW Reduction Strategy	9	Presence of approved NRW reduction strategy will be awarded full scores while non-availability of the document will be given zero (0) scores. The strategy should be prepared as per Guidelines for Development of Non-Revenue Water

SN	Item	Score	Evaluation Criteria
			Reduction Strategy for WSSAs issued by EWURA.
9	Submission of annual water balance	6	Timely submission of annual water balance as per Guidelines for Development of Non-Revenue Water Reduction Strategy for WSSAs will be awarded full score while late or non-submission will be awarded zero (0) score.
CRR4: Water Meter Management (15)			
11	Availability of water meter policy	7	Presence of approved Water Meter Policy will be awarded full scores while non-availability of the document will be given zero (0) score. The policy should be prepared as per Guidelines for Water Meter Management for WSSAs issued by EWURA.
12	Availability of water meter database	4	Presence of updated water meter database will be awarded full scores while non-availability of the database will be given zero (0) score. The database should be prepared as per Guidelines for Water Meter Management for WSSAs issued by EWURA.
13	Availability of operating bulk water meter at all water production points	2	Scores will be allocated based on the proportion of water production points with operating water meters
14	Percentage of installed water meters re-verified by Certification Agency	2	Scores will be allocated based on the proportion of total number of water meters re-verified to those required to be re-verified.
CRR5: Customer Service Management (20)			
14	Implementation of customer service charter	10	Presence of approved customer service charter will be awarded twenty percent (20%) of the full score while implementation of the charter will have a weight of 80% distributed in the proportion of actual implementation as per Second Schedule of the Water Supply and Sanitation Services (Licensing and Quality of Service) Rules, 2020.

SN	Item	Score	Evaluation Criteria
			Further details on evaluation are provided in Appendix 3.
15	Availability of complaint handling register	6	Presence of customer complaints register will be awarded full score while non-availability of the document will be given zero (0) score. The register should as a minimum contain identity of the complainant; type of complaint or malfunction; location and time of the occurrence complained of; and time taken to address such complaints or malfunction as stipulated in rule 25 (5) the Water Supply and Sanitation Services (Licensing and Quality of Service) Rules, 2020
16	Customer satisfaction survey report	4	Submission of customer satisfaction survey report will be awarded full score while non-submission of the report will be given zero (0) score. The report should be prepared at least once every three years.
CRR6 : Faecal Sludge Management (10)			
17	Availability of faecal sludge treatment facilities	7	Availability of faecal sludge treatment facilities will be awarded scores based on progress attained as follows: (a) submission of evidence for acquisition of treatment facility sites will be awarded two (2) scores; (b) submission of evidence for having an approved design of the treatment facility will be awarded three (3) scores; (c) ongoing construction of the treatment facility will be awarded five (5) scores; and (d) operational treatment facility will be awarded seven (7) scores.

SN	Item	Score	Evaluation Criteria
18	Availability of approved Standard Operating Procedures (SOPs) for Faecal Sludge Management (FSM) Services	3	Presence of approved Standard Operating Procedures (SOPs) for Faecal Sludge Management will be awarded full score while non-availability of the document will be given zero (0) score.
CRR7 :Payment of Regulatory Levy (10)			
19	Payment of Regulatory Levy	10	Full remittance of regulatory levy will be awarded 10 scores, non-remittance will be given zero (0) scores and intermediate remittance will be allocated pro rata by interpolating between 0 and 10 scores based on percentage compliance. Percentage compliance to remittance of regulatory levy will be computed by considering amount remitted during the year under review divided by total invoiced and outstanding amounts.

6.4.2 Utility Ranking

Utility ranking is determined by summing up scores for attainment of performance targets. The total Performance Target Score (PTS) will be computed as follows:

$$Total\ PTS = 10 \times \sum_{i=1}^{n} w_i SPT_{x,i}$$

Where,

$SPT_{x,i}$ = Performance Target Score for utility X in Indicator i
w_i = weight assigned to indicator i, *and*
n =total number of key performance indicators used for ranking

The methodology for determination of SPT is as described in the overall ranking section.

6.5 Presentation of Performance

The total performance scores of each WSSA will be classified as A, B, C, D and E where A represents excellent performance while E represents unsatisfactory performance. The performance levels of WSSAs showing percentage scores and each classification will be identified with a distinct color. The details of the classification, color code and interpretation is as shown in Table 8.

Table 8: Classification of Performance Scores.

Total Score	Classification	Color	Interpretation
100 - 85	A		Excellent
84 - 70	B		Very Good
69 - 55	C		Good
54 - 40	D		Fair
39 - 0	E		Unsatisfactory

6.6 Draft Comparative Data and Information

The conclusion of steps 6.1 to 6.3 above is the draft comparative data analysis and information for WSSAs. EWURA will discuss the data and information with WSSAs before coming up with the final report in order to:

(i) get a common view on the general evaluation results by presentations of the draft data and information;
(ii) comment and make any corrections;
(iii) analyze reasons for good performance and poor performances;
(iv) deliver examples of good practices; and
(v) exchange practical experience among WSSAs.

6.7 Water Utilities Performance Review Report

The Water Utilities Performance Review Report will incorporate comments, corrections, reviewed performance improvement actions and best practices as concluded in section 6.6. The report will include results of performance ranking as detailed in section 6.4 and 6.5.

7. DISSEMINATION AND DISCLOSURE

Dissemination and disclosure is an essential element of the performance benchmarking of water utilities and this may include official launch of the Water Utilities Performance Review Report. The Report will be shared with various stakeholders, media and the public in the interest of transparency and for enhanced accountability. Dissemination of the Report may include conducting a meeting for launching and discussing the report. The best performing WSSAs will be awarded. However, awards will be issued to WSSAs who have scored at least a very good performance as classified in Table 8.

APPENDIX 1: DEFINITIONS OF KEY PERFORMANCE INDICATORS

KPI 1: Proportion of population served with water (%)
The proportion of population served with water is the percentage of the total population living in the service areas that is served through household/premise connections and public stand posts or kiosks. The population served is obtained by adding the following; (i) the number of domestic connections multiplied by the average number of persons using that connection. (ii) the number of operating public stand posts and/or kiosks multiplied by the average number of people served by public stand posts and/or kiosks (iii) the population living in residential institutions, industrial and commercial complex.

KPI 2: Average hours of water supply
Average hours of water supply is defined as the hours per day a consumer can draw drinking water from the tap at his household connection or the public stand post or kiosks. This number of hours is not necessarily identical with the operation time of treatment plants or wells, as tanks, part of the distribution system, are used for storage. The average hours' service is calculated as the average hours of service in each water supply zone weighted by the total number of water connections in each supply zone.

KPI 3: Water quality compliance (%)
Water quality compliance (%) will be obtained by evaluating compliance to minimum required number of tests as specified in applicable Water and Wastewater Quality Monitoring Guidelines for WSSAs issued by EWURA and compliance to applicable water quality standards. Compliance to standards will have a weight of 60% and Compliance to minimum required tests will carry a weight of 40%.

*Hence, Water Quality Compliance (%) = (% compliance to Standard)*0.6 + (% compliance to minimum required number of tests) *0.4*

Compliance to standard = the percentage of the total number of water samples tested that passed the tests for drinking water quality standards.

Compliance to minimum required tests = the total number of water samples tested expressed as a percentage of the minimum number of tests required. The maximum compliance to required tests will be 100%.

KPI 4: Metering ratio (%)
Metering ratio is the percentage of the total water connections that have operating water meters.

KPI 5: Non-Revenue Water or NRW (%)
NRW is the amount of water that the Licensee produces (or purchases from other entities) minus the amount that is sold to consumers, presented as a percentage of water produced.

NRW can be the result of physical (leaks, overflow) and commercial (illegal connections, collection of revenue) losses.

KPI 6: Revenue collection efficiency (%)
Revenue collection efficiency is the percentage of bills collected during the financial year.

KPI 7: Working ratio
Working ratio is the proportion of operational expenses to operational revenue. The operational expenses do not include depreciation, interest and debt service.

KPI 8: Operating ratio
Operating ratio is the proportion of operational costs to operating revenues. Operational costs include all the expenses together with depreciation and interest's costs (but no debt service payments).

KPI 9: Personnel/1000 (W&S) connections ratio
Personnel/1000 (W&S) connections ratio is the number of staff to a 1000 water and sewerage connections.

KPI 10: Wastewater quality compliance (%)
Wastewater quality compliance is the percentage of the total number of wastewater samples tested that passed the tests for wastewater effluent quality standards.

KPI 11: Proportion of population receiving WSSAs regulated sanitation services (%)
The proportion of population receiving WSSAs regulated sanitation services is the percentage of the total population living in the service area that is served with sewerage services through household/premise connections and that is served by WSSA-regulated faecal sludge emptying and safe disposal services [that is served by safe emptying, transport, treatment and safe disposal services that are duly regulated (monitored and controlled) by the WSSA]

KPI 12: Percentage of complaints resolved
Complaints resolved during the year divide by total complaints. Total complaints are calculated as a sum of complaint received in a year under review and the number of complaint carried forward from previous period.

APPENDIX 2: PERFORMANCE SCORE CARD

Indicator No.	Key Performance Indicator	Performance Target	Achieved Target	Input Data	Reliability	Accuracy	Improvement Actions
KPI 1	Proportion of population served with water (%)			Connected Population			
				Total Population			
KPI 2	Average hours of supply (hrs)			Hours of supply in each zone			
				Number of connections in each zone			
KPI 3	Water quality compliance (%)						
	E. coli			*E.coli* samples passed			
				E.coli samples tested			
	Turbidity			Turbidity samples passed			
				Turbidity samples tested			
KPI 4	Metering ratio (%)			Connections with working meters			
				Total number of connections			
KPI 5	Non-Revenue Water (NRW) (%)			Total Water Produced			
				Total Water Sold/billed			
KPI 6	Revenue collection efficiency (%)			Revenue Collection			
				Total amount of bills			
KPI 7	Working ratio (ratio)			O&M Cost excluding Depreciation and Interest			
				Total Revenue			
KPI 8	Operating ratio (ratio)			Total Expenses (O&M + Depreciation + Interest payments)			
				Total Revenue			
KPI 9	Personnel/1000 (W&S) connections (ratio)			Total number of personnel			
				Total number of water and sewerage connections			

Indicator No.	Key Performance Indicator	Performance Target	Achieved Target	Input Data	Reliability	Accuracy	Improvement Actions
KPI 10	**Wastewater quality compliance (%)**						
	BOD_5 compliance			BOD_5 samples passed			
				BOD_5 samples tested			
	COD compliance			COD samples passed			
				COD samples tested			
KPI 11	Proportion of population receiving WSSAs regulated sanitation services (%)			Connected Population + Population *served by WSSA-regulated Faecal Sludge emptying and safe disposal services.*			
				Total Population			
KPI 12	KPI 12: Percentage of complaints resolved			number of complaints resolved			
				Total number of complaints			

APPENDIX 3: EVALUATION FOR IMPLEMENTATION OF CUSTOMER SERVICE CHARTER

No.	Item	Description	Points/weight	Evaluation
1	Access	Connecting to water supply and/or sewerage	5	A utility that managed to connect all new customers/connections within maximum time of 7 working days after a customer has made full payment of connection costs and/or fee will score 5 points. If the number of connections is more than 50% of the total new connections the utility will score 2 points and if the number of connections made within the recommended time is below 50%, the utility will score zero
2	Water meters	Meter reading	3	A utility that managed to read all water meters at least once every month will score 3 points, otherwise the utility will score zero
3	Reconnection	Reconnection after payment of overdue amount	2	A utility that conducted all reconnections within a maximum of 24 hours after debt settlement will score 2 points, otherwise will score zero. If the number of connections is more than 50% of the total reconnections the utility will score 1 point, and if the number connections made within a recommended time is below 50%, a utility will score zero. Full scores will be provided if there were no disconnections
		Total required points	**10**	

Note: A utility should maintain verifiable records on implementation of the above requirements. If sufficient and verifiable records are not maintained will result into the utility scoring zero.