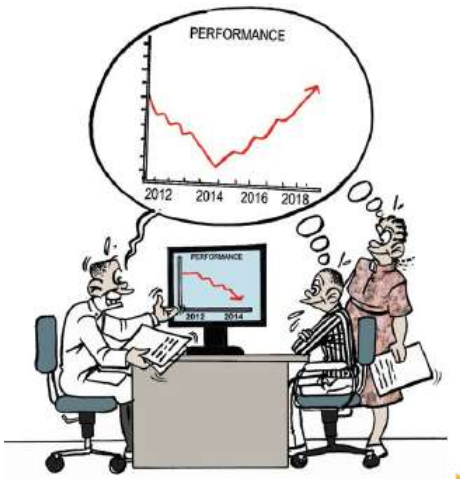
THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

MINISTRY OF WATER IRRIGATION AND ELECTRICITY

RURAL PIPED SYSTEM WATER SUPPLY OPERATION AND MAINTENANCE MANAGEMENT



Part B: Module A-Session C

A Trainer's Manual for Monitoring, Evaluation, MIS and Reporting Requirements

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PART – B COMMUNITY BASED SCHEME MANAGEMENT FOR RURAL PIPED SYSTEM AND PASTORAL AREAS

MODULE NO.	SESSION	SESSION TITLE	ESTIMATED TIME (Hours)
MODULE – A	Session – A	Community Based Scheme Management for RPS	8
	Session – B	Community Based Financial Management for RPS	12
	Session – C	**Monitoring, Evaluation, MIS and Reporting System**	**8**
		TOTAL	**28**

PART A-MODULE A- SESSION C: M&E, MIS AND REPORTING

Table of Contents

List of Tables

List of Annexes

Acknowledgements

Acronyms and Abbreviations

EWB	Executive Water Board
M&E	Monitoring and Evaluation
MIS	Management Information System
RPS	Rural Piped System
WAO	Water Administration Office

1 SESSION – C: M&E, MIS, RECORD AND REPORT REQUIREMENTS FOR RPS

1.1. Session Outline	This session covers the following core topics: ▪ Introduction to M&E, MIS, RECORD AND REPORT REQUIREMENTS. ▪ O&M Monitoring tool and Framework ▪ Performance Measurement and Evaluation of O&MM Management Information System (MIS) ▪ Records and Report s
1.2. Appropriate Facilitator	M & E specialist, IT specialist or technician with experience on M&E, MIS, RECORD AND REPORT.
1.3. Objective of the Training	At the end of the session, the participants will able to: ▪ Understand Monitoring and evaluation of an O&M system. ▪ Describe each of Monitoring Aspects and its plan. ▪ Illustrate Monitoring Matrix
1.4. This Guiding Manual	This manual deals with the fundamental and the bases of the monitoring and evaluation of the rural piped system as well as pastoral water supply technologies which is at the grass root level of the Water Administration Office and WASHCO.
Timing	Approximately 16 hours
Methodology	▪ Presentation, discussion and group exercises ▪ Demonstrate different recording and reporting formats for the day to day operation of the system, ▪ Set out performance indicators for the evaluation of the performance.
Materials	Flip charts, markers, pens, different forms, even overhead projector.
Session Guide and Content	
1.5. Introduction	The training facilitator start by introducing by defining what monitoring and evaluation mean with the following statements. Monitoring and evaluation provide a systematic assessment of the functioning of an O&M system and its benefits to the community. Monitoring involves measurement – and what is measured? Is the progress towards achieving an objective or goal (result)? However, the goal cannot be measured directly. It must first be translated into a set of indicators that when regularly measured will provide information whether or not the goal is being achieved. Performance monitoring can be viewed as periodically measuring of progress towards explicit short, intermediate, and long-term results. It also

	can provide feedback on the progress made (or not) to decision-makers who can use the information in various ways to improve performance. Once we designed a monitoring system at the grass root level, it is the aggregation of information into analytical reports at different levels, to mention; Federal, Regional and Zone and Woreda. Good monitoring promotes "**Transparency**" and "**Accountability**", which can be established through "**Communication**" and "**Information sharing**".
1.6. What is Monitoring?	The training facilitator should first define what water audit and NRW mean as: Monitoring is a regular collection and analysis of information to assist timely decision-making, ensure accountability and provide the basis for evaluation. It is a continuing function using methodical data collection to provide early indication of progress and achievement of objectives. Involves checking to see if progresses toward goals have been made **1.6.1. Objective of Monitoring** 1. Determine whether communities have access to adequate quantities of safe drinking water as per the UAP/GTP, 2. Assess performance of different stakeholders and strategies; 3. To follow up overall success rates for a O&M Management; 4. To follow up water service coverage figures; 5. Identify problems early in order to find timely solutions and pre-empt failures; 6. Identify RPS and Pastoral water supply technologies needs for technical and financial support; 7. Measure service effectiveness, efficiency and equity; and Inform decision-makers to improve performance. **1.6.2. What are the different aspects of Monitoring?** The following are main aspects to be monitored. ❖ **Organizational or Managerial aspects** ▪ Practice of meeting ▪ Topics to be discussed and to be decided ▪ Keeping different records ❖ **Technical aspects**

- Function of the facility
- Practice of preventive maintenance
- Availability of spare parts
- Regular replacement of consumable parts of the equipment

❖ **Financial aspects**

- Practice of fee collection
- Amount of income & expenditure of the month
- Last balance in hand (cash) and in the bank

The casher needs to report regularly to Executive Water Board (EWB)/ WASHCO and then EWB/WASHCO report to the users in the General Assembly meeting and/or to the Zone or Woreda Water Offices, other means of communication such as “water billboard”.

- ✓ How much money has been collected and has been spent & on what?
- ✓ How much money is left in account?
- ✓ Who has not paid their contribution?

EWBs or WASHCOs should check the accounts book and income and expense book on a regular basis. These financial records should be made available to all members of the community to inspect, ask questions, and get answers.

1.6.3. Monitoring Plan

Before starting to formulate monitoring plan, you should answer the following questions:

1. What do you want to monitor?
2. What kind of information is required?
3. How will this information be collected?
4. How often will it be collected?
5. Who will participate in the monitoring activities?
6. How will the findings be utilized?
7. How will the information be shared?

1.6.4. Monitoring Tools

There is a large range of different monitoring tools that can be used and many agencies have developed their own. Most monitoring tools are user-focused while some are facility-focused.

Monitoring is most effective where a balance of **'hardware'** and **'software'** issues is achieved. Monitoring also needs to occur at different levels and from different perspectives.

Table 1-1 presents a monitoring matrix which addresses key issues related to sustainability for each performance theme.

Table 1-1: Monitoring Matrix

Performance theme	*Sustainability Indicators*			
	Effectiveness	**Efficiency**	**Equity**	**Replicabil**
Management	Record keeping Relationship with users	Financial and resource management	Pro-poor strategies Gender equity	Manageme capacity & commitme
Operation	Flow rates Water quality	Ease of operation Waiting times	Use of alternative sources	User acceptabili
Maintenance	Workmanship Frequency of breakdown	Average downtime of facility	Cost to communities	Ease of maintenan Affordabilit
Environment	Water quality	Well yields	Effect on all other water sources	Water leve

1.6.5. Monitoring Framework

In order for monitoring to be effective, it is essential that a practicable and sustainable framework be set up. This should include:

1) stakeholder responsibilities,
2) monitoring schedules and
3) Data requirements.

1.6.5.1. Stakeholder responsibilities

Regional Water Bureaus and its successor offices provide the optimum institution to assume overall responsibility for monitoring of rural piped system performance.

Government institutions such as:

Zone and Woreda Water Offices are normally close responsible for managing monitoring activities, but rather than setting up completely new systems, existing networks can often be used to conduct monitoring. These may include:

- Regional Water Bureau for RPS crossing over one Zone,
- Zone Water Offices for RPS crossing over one Woreda,
- Woreda Water Office for RPS crossing over one kekeble
- Executive Water Board / WASHCOs
- Community Members

1.6.5.2. Monitoring Schedule

Quarterly monitoring should take place based on the performance indicators set to implement as described in Annex-C. Some of the sampled monitoring schedule is presented in Table 1-2 below.

Table 1-2: Quarterly Monitoring Schedule Example

Activity	1st	2nd	3rd	4th
Observe facility status	√	√	√	√
Sustainability snapshot	√	√	√	√
User satisfaction survey		√		√
Interview with Executive Water Board's/WASHCO's		√		√
Interview with the Water Administration Office Managers and staff		√		√
Referring Reports	√	√	√	√
Measure water quality		√		
O&M Audit	√			

1.6.5.3. Data processing

Monitoring is only useful if the data collected is managed and used effectively. Performance indicators can be given different weights depending on perceived importance in order to analyze collected data and draw conclusions. Data collecting using the format provided should be filled and stored in the database with computer or recorded file.

1.6.6. Monitoring of O&M

1.6.6.1. Problem statement

The major problem with monitoring in RWSS has been the lack of appropriate monitoring tools, inadequate funding to Woreda Water Offices to carry out monitoring activities and the inadequate institutional framework to define the roles and responsibilities in monitoring (lack of a Monitoring mechanism).

1.6.6.2. What and How to Monitor in O&M activities?

The entire O&M process revolves around the status of the RPS schemes. To maintain the status of the water sources, transmission main, service reservoirs, distribution lines, water point, and several parameters should be taken into consideration.

Below is an explanation of the parameters and how they relate to O&M of RPS.

Table 1-3: Four Parameters which affect O&M

No.	Parameters	Description
1	Customers payment	Customers pay for the water used as per the tariff set to ensure the O&M and future expansion and rehabilitation
2	Availability of spare parts	spare parts and tool kits should be readily available at WAO store

3	O&M records/IMS/Monitoring	WAO prepare records of their repair work, maintenance books, treasurers prepare and keep records of income & expenditure books, and prepare minutes of meetings
4	Availability of skills	For all the components, skills are necessary to manage finances and to know the technical problems to effectively carry out O&M activities

The following table describes what and how to monitor O&M activities according to five (5) O&M mechanisms.

Table 1-4: What and how to monitor O&M activities

Parameters/ factors	Five O&M Mechanisms	Indicator to show that system is working	Instruction on What to monitor?
2. Customer Payment	**1.** Community contribution mechanism	**a)** Availability of O&M funds with EWB Treasurer (either at bank or with Treasurer) **b)** Adoption of banking system for bill by EWB that are willing to do so **c)** Adoption and utilization of cash book for recording amounts contributed and expenditures **d)** Existence of RPS Bank Account at district for O&M with funds from EWB's	**a)** EWB members inspect available funds with finance section. Check how the finance controller writes & keeps records of contribution by users **b)** Check quarterly accumulation of O&M funds at bank
2. Availability of spare parts & tool kits	**2.** Supply chain of spare parts mechanism	a. Availability of established store with spare parts b. Presence of trained sales & accounts officers at district level. c. Issuance of receipts on sales made d. Cash deposits at bank e. Stock taking & replenishment	a. Depending on which institution manages the supply chain, (WWO) Checks physical stock through stock taking quarterly using stock cards. b. Checking of bank statements & Sales records should be carried out quarterly c. Reports (sales & financial) should be submitted to WWO quarterly
	3. Tool kit management Mechanism	a. Availability of tool kits at identified ADC centers in wards b. Tool kit management guidelines prepared c. Records of tool kit usage and movement d. Deposits of received tool kit user fees &	a. WWO conduct quarterly visit to EWB/WASHCO tool kit centers to inspect & verify availability of tools and status, and checking tool kit movement forms to confirm APM

			receipts issued	activities b. Physical count of cash and receipts of cash received from Area Mechanics
	3. O&M records/ IMS/ Monitoring	**4.** Monitoring mechanism	a. Established systems adopted and operational by WWOs b. O&M information on status of hand pumps from EWB/WASHCOs reach WWOs quarterly c. Properly filled in WAO reports d. IMS data base established & fully operational at WAOs	a. Focuses on, performance of WAO, on their roles and responsibilities. b. Holding of quarterly review meetings with WAO is essential. All reports must be submitted to EWB and feedback obtained
	4. Availability of skills/knowledge/ (Capacity development)	**5.** Repair work mechanism	a. Availability of trained WAO personnel and able to carry out their roles/ responsibilities in O&M. b. Availability of technicians (inventory) with necessary skills/capacity to repair the water supply schemes & timely submission of reports.	a. Check WAO reports for operation and maintenance carried out reduction in down time and function of the schemes completes this form after each repair, and submits report to EWB members b. Analyze frequency of maintenance by each technician to determine how active WAO operators are, and how well they understand the nature of the problems.

1.7. Performance Measurement and Evaluation of O&M

1.7.1. Performance Evaluation

Effective evaluation of the status of operation and maintenance depends primarily on the ability to measure current performance. This can be achieved using indicators and targets for the performance of different functions.

The concept of monitoring the performance of operation and maintenance is to use the results to improve the situation. Evaluation is made through performance indicators defined as variables whose purpose is to measure change in a process or function. Indicators are collected at regular intervals through regular reports, to track the way in which a system is performing or an activity is unfolding.

Indicators may be used to assess the change resulting from a particular activity. In one way, performances indicators are used to monitor the progress of the process; another way, indicators are used to evaluate the

outcome of the system.

Evaluation requires the situation to be assessed both at the beginning and at the end of a certain activity.

1.7.1.1. Performance Contract Agreement

The Executive Water Board need to make a contract agreement with the Water Administration Office/Operator management based on the agreed performance indicators to be implemented in annual basis. This performance contract agreement is considered to measure the performance of the WAO, in which the condition to incentivize and penalize in place.

Weighting criteria for the performance measurement in place based on the target set at a national level with the UAP's/GTP's.

In turn the WAO management will make a performance agreement with the staff. Each of the staff will be evaluated based on the performance indicators assigned to implement.

1.7.1.2. Performance Indicators

Performance indicators allow the contracting Executive Water Board (EWB) and WASHCO to measure the performance of the operator in a more objective and transparent way.

For RPS, the bonus and penalty system which is often built into performance-based contracts may be also directly linked to the achievement of the performance indicators. This is one of the reasons why parties to contracts are so much concerned with the definition and methodology for setting and measuring indicators. In this context, the main lessons learnt include:

- The contracts include clearly specified technical, financial and efficiency performance indicators,
- Indicators should be few and easy to monitor and verify. They should be targeted at the needs of the individual RPS and should reflect the most urgent and critical issues to be solved by the operator.
- Providing a clear definition of the indicators is crucial. Indicators need to be defined in terms of levels, timeframe for their achievement and methodologies for their monitoring, calculation and measuring. See Annex-A.
- Where initial data are poor, it is better to set indicators as increments, or improvements defined in terms of percentage above a baseline, rather than as absolute values. Indeed, using a percentage of the improvement as an indicator makes it easier to integrate modifications to the baseline calculations, when necessary.
- Closely and regularly monitoring progress with achieving performance indicators makes the system credible and allows parties to the contract to better understand the challenges as well as encourages them to seek timely and effective solutions.

1.7.1.3. Contract monitoring

Contract monitoring and reporting obligations are a major element in all performance-based contracts. Regular, timely and consistent reporting by the operator on progress with contract implementation allows detecting

problems early in the process. All reviewed contracts include reporting requirements but with a different degree of specificities.

1.7.1.4. Performance Targets

The setting of appropriate performance targets is by no means straightforward. No attempt is made to prescribe arbitrary performance targets as this must be done within the local context.

Performance target sets based on the national planning targets such as UAP and GTP or Sustainable Development Goals. The rural piped system, water administration office and executive water board should refer those plans and bring to them to the local context.

1.7.1.5. Schedule for Performance Review

The performance of each key performance area in relation to the WAO performance agreement shall be reviewed on the following dates with the understanding that reviews in the first and third quarter may be verbal if performance is satisfactory:

- First quarter — July to September
- Second quarter — October to December
- Third quarter — January to March
- Fourth quarter — April to June

The Board shall keep a record of the mid-year review and annual assessment meetings.

Performance feedback shall be based on the Board's assessment of the Manager's performance.

The Board will be entitled to review and make reasonable changes to the provisions of Annex C from time to time for operational reasons. The Managers will be fully consulted before any such change is made.

The Board may amend the provisions of Annex C whenever the performance management system is adopted, implemented and/or amended as the case may be. In that case the Manager will be fully consulted before any such change is made.

1.7.1.6. Reporting

Reporting is an indispensable part of all management functions and provides the key input to performance evaluation.

Technical personnel of the RPS - WAO shall understand the value of the records and keep the forms filled and in their routine operation activity and make the reporting process realized. Such record reports allow management to measure performance and compare actual performance with standards and targets. The results may indicate that corrective action is required to obtain conformity with the plan.

The WAO/utility is required to know the importance of reporting and make sure that all forms generated in the operation and maintenance activities are complete and filed for the use of the different management level, when the need arises.

1.7.1.7. Review and Evaluation

	The Executive Water Board reviews the performance of the Water Administration office/Operator and evaluate with the agreed performance indicators entered in the contract. Based on that with the specified target whether they meet or not evaluated. The Water Administration office/operator and then will be incentivized or dis-incentivized. **1.7.2. Incentive/Disincentive** **1.7.2.1. Rewarding for best performed** The evaluation of the WAO performance will form the basis for rewarding outstanding performance or correcting unacceptable performance. A performance bonus of up to …. % of the annual remuneration package may be paid to the Employees in recognition of outstanding performance. The WAO personnel will be eligible for progression to the next higher remuneration package within the relevant remuneration band after completion of at least twelve months service at the current remuneration package on 30 June (end of financial year) subject to a fully effective assessment. **1.7.2.2. Penalizing for the bad performed** In the case of unacceptable performance, the Board shall provide systematic remedial or development support to assist the WAO to improve the performance, and after appropriate performance counseling and having provided the necessary guidance and/or support as well as reasonable time for improvement in performance, the Board may consider steps to penalized the personnel and even can terminate the contract of employment of the WAO according to the provisions of the Ethiopian Labor Law. **1.7.2.3. Relationships with users/consumers** The Water Administration Office should form a regular customer forum, at least every 3 months to consult the community on the service delivery, potential constraints and hearing their complaints and make a solution.
1.8. Management Information System	**1.8.1. General** The RPS's management needs regular reports to give it basis for evaluating performance, formulating policies, planning, making decisions, and informing member users of the financial status of the WAO. A Management Information System (MIS) is an integrated information system, which prescribes the reports that should be provided, and when and to whom they should go. When installed, an MIS simplifies the process of generating needed reports and establishes a regular flow of information that enables management to provide timely and informed responses to the requirements of the business. It is recommended that an adviser be tapped to assist the WAO in the formulation of an MIS to address its needs. The development of an MIS requires the following: 1. Determining what information is needed at the Board and management levels, and the format and frequency of the reports;

2. Determining how the data/information should be obtained;
3. Determining the person (or organizational unit) responsible for the obtaining the data and preparing the report; and
4. Determining where the records will be kept and those responsible for updating the files.

In large systems, the MIS is typically computer based. The collection, processing, data storage, generation of reports and even their dissemination is programmed and generally done electronically. Thus, the MIS can be set up to provide the most up-to-date information on WAO's performance.

Refer to **Annex B** for a suggested monthly Form for the O&M information required by the RPS Board and management. This form is intended to help the WAO determine the priority data to be gathered. It will facilitate reporting to various stakeholders, make the monitoring of operations easier, and generate a recorded history of the WAO.

The efficient and effective performance of RPS-WAO depends on a clear relationship between management activities such as planning, organization, selection and training of staff coordination, direction and control of the functions of the WAO. The interaction between the individuals at different management levels, together with use of information in the decision making process, is important to the WAO's performance. Each of the management levels has different centers of decision and each of these is supported by an information system.

Management Information System is defined as a formal system of making available to the management accurate, timely, sufficient, and relevant information to facilitate the decision making process to enable the organization to carry out the specific functions effectively and efficiently in tune with WAO's objectives. Organizations have many information systems serving at different levels and functions within the WAO. The data fed into the MIS initially is internal data and later data from other institutions such as from community and others can also be fed. Each agency has to decide as to which information is relevant and then evolve its own procedures for accurate collection, measurement, recording, storage and retrieval of data. The MIS can be developed either by manual data collection or by use of software.

1.8.2. Organizational Structure

In order to achieve the objectives of the operational system, efficient administration of the processes is necessary. Management uses the productive capacity of the WAO's staff to achieve the objectives.

Executive Water Boards (EWBs) are responsible for influencing how the WAO is organized to attain its objectives. The organizational structure should be such that it allows coordination between all units of O&M. Human, Financial and Material Resources should be constantly available for carrying out the O&M activities. Management activities and centers of decision are organized according to the authority and coordination (functional).

1.8.3. Size of Organization and Scale of Operations

The Water Administration Office (WAO) has to adapt to the environment

in which it operates and hence will have organizational units to suit its size and complexity. In a WAO that serves only one local area, all managerial functions can be carried out at the local level. WAO covers various rural and small town areas, it will need to regroup senior and middle management centrally and delegate operational management to local or area levels. Depending on the number of localities for water supply, the WAO may set up intermediate (circles), Woreda (divisions) or sub-Woreda (kebele) for operational management of O&M with a concentration of technical resources such as equipment, qualified staff, workshops, transport etc. to supervise and support operations at local level.

1.8.4. Management Indicators

The results of actions by EWB at the strategic, tactical and operational level are measured by management/performance indicators. These indicators represent a situation, an event or a change brought about by an action aimed at achieving a target set by the agency. These indicators allows the management to set targets, monitor the O&M, evaluate the performance of the WAO and take necessary decisions and corrective actions.

1.8.4.1. How to use Indicators?

The performance indicators and the information generated thereon can be the basis for the decision making process involving determining targets, deciding priorities, drafting schedules of O&M, assigning responsibilities and in distribution of human, material and financial resources. In the planning process these indicators provide basis for preparing long term, medium term or short-term plans with appropriate finances allocated in the budgets.

These performance indicators provide a measure of what has been achieved so that the results can be evaluated and disparities corrected. Based on the results the targets and indicators need to be changed so as to be nearer to reality. Some of the uses of these indicators are:

i) Maintenance information can be used to assess changes in conditions of installations and equipment and identify potential problems such as weaknesses of structure, reliability of equipment or obsolete equipment and also determine how long the facilities can function usefully.

ii) The maintenance activities can be reformulated to achieve maximum yield at minimum cost.

iii) The data can be used for the preparation of budget. The best justification for the next year's budget is an accurate record of previous year's activities, costs, workload, growth and production. Similarly the records on use of spares and materials and performance of equipment can be used to document the importance of the program and get adequate financial support.

iv) The trend in the agency's workload can indicate where the workload has increased or where the performance has deteriorated requiring more staff.

v) The need for new equipment can also be justified while preparing budget. Age is not necessarily the only factor for replacing the equipment. Record on production, use and cost of maintenance to

keep the equipment operational may also substantiate the need for replacement.

vi) The review shall bring out need for buying new equipment. Additional equipment (including safety equipment) may become necessary from a review of the performance either due to hiring of staff or the need for developing of equipment for specific purpose.

vii) The review will provide an assessment of what spares, and consumables are required for the next year/future.

viii) The review can also bring out the need for economy, for hiring external specialized agency or hiring additional staff for attending to routine or breakdown maintenance or repair work.

ix) The indicators can be used to measure productivity, reduction in breakdowns or frequency of breakdowns linked to productivity levels so as to achieve reasonable level of maintenance with minimum cost.

x) Each WAO has to choose appropriate methods of evaluating effectiveness in achieving the O&M objectives.

1.8.5. Computerized MIS

With the advancement of the Information Technology in this millennium, there is a need to adopt a methodology to align the information strategy with the business strategy of the WAO to derive maximum benefits of computerization. A computerized system is a more sophisticated method of providing useful information in different formats to different levels within the WAO for discharging duties in a more efficient way. Computers are good at rapid and accurate calculation, manipulation, storage, and retrieval but less good at unexpected or qualitative work or where genuine judgment is required. It has been suggested that computers can be used to best advantage for processing information, which has the following characteristics.

a) Number of interacting variables.
b) Speed is an important factor.
c) Accuracy of the output.
d) Operations are repetitive.
e) Involves large amounts of data.

1.8.6. Various Main/Sub Systems for MIS

In order to make an effective MIS, it is necessary to identify the potential sources of data in each and every functional area and create reports needed by all users irrespective of their proficiency in data processing. The following are the main/sub systems of a WAO from which the reports for MIS can be generated.

1.8.6.1. Financial MIS

a) Financial Accounting
b) Payroll
c) Revenue Management
d) General Ledger
e) Accounting
f) Funds

1.8.6.2. Project Management Information System

a) Engineering Planning and Design
b) Construction
c) Contracts and Monitoring

1.8.6.3. Human Resource Management Information System

a) Manpower planning and Recruitment
b) Personnel Development and Training

1.9. Performance Reporting System

Performance reporting provides the essential input to performance evaluation. It is not only reveals whether planned actions have achieved their objectives, but identifies common problems and allows improvements to be built into the system for the future. The developments of a sound performance reporting system, along with the choice of appropriate performance indicators, are important elements in O&M management.

Any RPS (Water Administration Office) should have at least a quarterly report of certain key performance indicators (KPIs) to enable the management/Board to determine the system's performance efficiency and to track the progress of the WAO activities.

Table 1-5 below provides lists of minimum key performance indictors to be included in the report. The detailed definition and formula for various performance indicators are presented in **Annex – A, which the training facilitator refers during this session.**

These KPIs should be part of the information that the Board should get from its management at least every quarter. These KPIs are also required in the annual report that the RPS must submit to the Regional Water Bureau or Zone Water Office or Woreda Water office to comply with regulatory reporting requirements.

Table 1-5: Lists of the minimum key performance indicators

Key Result Areas	Key Performance Indicators	Formula
Service level	1. Water Supply Coverage	People served by the system
	2. Water Supply Availability	Duration of water supply in hours per day
	3. Water Quality	Percentage of samples passing bacteriological testing
Operational Efficiency	4. Non-Revenue Water	$\frac{Water\ Produced - Water Sold}{Water\ Produced}$
	5. Cost of Water Produced (per m^3 of water)	$\frac{Total Expense (Birr)}{Water\ Produced\ (m^3)}$

Financial Performance	6. Operating Ratio	$\frac{Operating Expense(Birr)}{Operating revenue(Birr)}$
	7. Collection Efficiency	$\frac{Total year to data collection}{Total year to data billing}$
Customer Service	8. Percentage of Customer Complaints/ Requests (C&R) Resolved	$\frac{Customer(C\ \&\ R)\,\text{Resolved}}{Total C\ \&\ R\,\text{Received}}$

- ***Operational control level*** **-** Handling transactions, process data, preparing detailed reports of various activities, lists, documents, schedules, summary.
- ***Management control level*** **-** obtaining operations data, sorting, analyzing and Prioritizing, Modifying all information to the requirements for higher level, planning, scheduling, identifying out-of control situations, making decisions, reporting,
- ***Strategic planner level*** **-** response to the queries, projections with regard to objectives, resources, and policies of WAO.

1.9.1. Formats for Reporting

Various reports to be generated and their exact formats will have to be decided by the Regional Water Bureaus and Executive Water Boards concerned so that the MIS together with norms that have been set up will clearly highlight the performance indicators. Some of the following type of information in a water utility is suggested for strategic planner's level.

a) Financial Information System
   - Monthly capital budget progress details
   - Annual Billings, Collections, O&M expenditure, Surplus/Deficit

b) O&M MIS
   - Daily reservoir levels, rainfall details, quantity available at source, quantity treated and consumed.
   - Weekly % samples with residual chlorine more than 0.2 ppm.
   - Weekly pending complaints.
   - Fortnightly report on details of new connections.
   - Monthly % of unaccounted for water.

1.10. Records and Reports

1.10.1. General

The Water Administration Office collect, encode, analyse and store all the 1) technical, 2) O&M, 3) Financial, 4) Customers, 5) Human Resources, 6) tools and equipment and other in the MIS, either using software or Excel or Access Database management tools. The report need to produce initiated from those database using performance indicators.

Database management need to create for the following elements of the rural piped system:

a) Water Sources
   - Groundwater sources (hand dug wells, shallow wells, deep wells, spring water)

- Surface Water (river, lake, impounding reservoir etc)
- Rainwater (roof or rock catchments)

All the important data based on the format provided in this manual and other package manual along with shall be used.

b) Daily pump operational record

The operator should take the record of the pumping operation when start and stop the system on daily basis. The recordings are both the water production and the corresponding electric consumptions with the formats provided.

c) Chemical records

The operator is also needed to record the chemical application on the system. Like Chlorine, Aluminium sulphate and other chemical with the record format provided.

d) Operational records

The fuel, lubricants and related consumable materials are properly recorded to identify the operation expenses.

e) Operation and maintenance records

Any maintenance carried out in the system should be recorded in the respective formats and entered into the database.

f) As-Built System record

As-built records of the drawing of the system should be recorded and updated from time to time.

1.10.2. Reports

Daily reports from the various units of the Water Administration Office based on the record should be prepared and deliver to each of the section head. The section head in turn compile and prepare the daily report from which the monthly, quarterly and annual reports are summarized.

1.10.2.1. Monthly Report

The daily report created by each of the section heads are summarized with the monthly reporting format based on the performance indicators that the Manager of WAO prepared submitted to Executive Water Board and RPS management body.

1.10.2.2. Quarterly Reports

The Executive Water Board / WASHCO should aggregate the monthly performance report based on the target set and submit to the respective Zone or Woreda Water Offices. The Zone and Woreda Water Offices should submit the entire aggregated and summarized quarterly performance reports to the Regional Water Burau. These reports will provide data on the performance of O&MM activities, which could be used for analysis. Special trends, needs or requirements should also be conveyed to concerned authorities.

1.10.2.3. Annual Reports

Each of the 4 - Quarterly reports summarized in terms of performance measurements by comparing the target set. First the Water Administration

	Office (WAO) submits to the Executive Water Board, and then the EWB to the respective ZWO or WWO. The ZWO or WWO compile all the annual reports come from each of the RPS and then submitted to RWB. The Zone or Woreda Water office shall provide technical assistance in the preparation of the report. The following are some of examples of reporting system of WASHCO at two levels; (1) Reporting to the administration (WWO) and (2) Reporting to the user community. The uniformity of the reporting formats is of paramount importance to all stakeholders involved. It will be highly useful for the reporting format to be uniform and revisable. This means, all Woredas will report in the same way and all reports will provide the same data. Such uniformity allows cross comparison, which will be useful to the Zonal WO & the Bureau, and also will allow WASHCOs and Woredas to "grade" themselves against others. It is also important that the reporting process should not be static. The above performance measures system should be added in the report. A quarterly report format (form 5) is developed for use by the programme woredas. For the purpose of implementing this procedure, the programme shall apply this reporting format.

Annexes

Annex A: Selected Performance Indicators: Definitions and Formula

a) Operational Performance Indicators

i. Working Scheme

KPI	Unit	Definition	Reason for selection
Working Schemes	**%**	A simple count of the number of functioning on-spot supply is a direct indication of Operation and Maintenance status	It is one of the performance evaluation of the WASHCO's and Caretakers

Data required calculating coverage:

A Total Number of functioning on-spot Schemes

B Total Number of existing Schemes

The indicator is calculated as:

$$\textbf{Working Schemes (\%)} = \left[\frac{A}{B} * 100\right]$$

This indicator also points to the actual benefits that the water supply scheme provides because it is indirectly related to: i) the % of the population using the scheme, and ii) the per capita consumption.

'Functioning' means operational at least long enough every day for users to obtain their water requirements.

ii. Revenue collection efficiency

KPI	Unit	Definition	Reason for selection
Revenue collection efficiency	%	It is expressed as the total revenue collected in a year (Birr) divided by the total billed revenue in a year	Standard KPI which can determine the collection ratio can be used as a proxy for customer satisfaction with services provided.

The following data are required to calculate the indicator:

A. Total revenue collected in a year (Birr),
B. Total tariff revenue in a year (Birr),
C. The revenue collection efficiency expressed as (%)

The indicator is calculated as:

$$C = \left[\frac{A}{B} * 100\right]$$

Note:

This indicator measures the revenue collection efficiency of the WASHCO. This shows how much revenue has been collected compared with how much has been sold in the reporting year.

iii. Stock Availability

KPI	Unit	Definition	Reason for selection
Stock Availability	**%**	Effective stock control relies on: i) whether regular stock-takes are carried out, and ii) whether minimum stock levels of spare parts are maintained. Not having the required parts (especially critical items) in stock may seriously affect the WASHCO's ability to provide a reliable water supply.	In order for this indicator to be evaluated it is necessary for the WASHCO to have a list of the stock items considered necessary for the maintenance of the scheme.

Data required calculating coverage:

A Number of necessary items in stock

B Total Number of necessary items in stock

$$\textbf{Stock availability \%} = \left[\frac{A}{B} * 100\right]$$

iv. Water Consumption

KPI	Unit	Definition	Reason for selection
Water Consumption	l/c/d	Total volume water sold to customers per person per day. Calculated as the total volume of water sold (per day) divided by the number of population served Consumption is a function of tariff, reliability, distance to supply point and availability of alternative sources of water.	The provision of an adequate quantity of potable water to ensure the target set by MoWE for rural community that 15 l/c/d at a distance of 1.5km radius. The per capita consumption measure is particularly useful when viewed over a number of years so that trends in customer use can be tracked at each kebele/Woreda.

The following data are required to calculate the indicator:

A. Total annual consumptions at point water sources (litres)
B. Number of households uses the point water source
C. Average number of persons living in the household
D. Per capita consumption of point water source (l/c/d)

$$D = \left[\frac{A}{(B * C * 365}\right]$$

Note:

- Total annual consumption of each user at each point water source should be recorded by the caretaker. Each Jeri can container should be converted in to litres. For example there are Jeri can containing 20 litres and 25 litres.
- The lists of households using each point water sources should be recorded by the Caretaker including the corresponding daily water sold
- The average family size should be taken from CSA or can be obtained from the households

b) Financial Performance Indicators

i. Basic O&M Cost Recovery

KPI	Unit	Definition	Reason for selection
Basic O&M Cost Recovery	**%**	This indicator shows whether the basic O&M cost recovery meets or not. The WASHCO must receive more money that it pays out each month if it is to remain in cost recovery. The scheme is in a break-even position if this indicator is consistently greater than 0%.	It is one of the crucial indicators to be measured to ensure the sustainability of the schemes and meet the water policy.

The following data are required to calculate the indicator:

A. Total expenditure for operation & maintenance in a year (Birr)

B. Total revenue (sales) in a year (Birr),

C. The basic O&M cost recovery expressed as (%)

$$C = \left[\frac{A}{B} * 100 \right]$$

Note:

- Account receivable (i.e. debtors) are included as part of sales,
- A portion of arrear may have to be written off each year according to the probability of being paid,
- Use a twelve-month moving average to smooth out monthly variations.

ii. Cash Balance

KPI	Unit	Definition	Reason for selection
Cash Balance	**Birr**	This indicator shows whether the basic O&M cost recovery meets or not. The WASHCO must receive more money that it pays out each month if it is to remain in cost recovery. The scheme is in a break-even position if this indicator is consistently greater than 0%.	It is one of the crucial indicators to be measure to ensure the sustainability of the schemes and meet the water policy.

The following data are required to calculate the indicator:

A. Closing balance at end of previous month (Birr)

B. Payment made in current month (Birr),

C. Amount received in current month (Birr)

D. Cash Balance (Birr)

$$D = [A - B + C]$$

Note: cash on hand is very important in order for the WASHCO to meet its current expenses. Cash flow problems may be experienced depending on the amount of money tied up, for example, in arrear payments for water. The cash balance indicator will indicate positive or negative trends.

iii. Late Payment

KPI	Unit	Definition	Reason for selection
Late Payments	**%**	If the ratio of accounts receivable (arrears) versus sales is steadily growing, it means that consumers are getting further and further behind in the payment of their accounts.	This indicates the actual collection of the revenue.

The following data are required to calculate the indicator:

A. Total of arrears payment at end of period (Birr)

B. Total of sales for period (Birr),

C. Late payment (%)

$$C = \left[\frac{A}{B} * 100 \right]$$

Note: use a twelve-month moving average to smooth out monthly variations.

c) Management Performance Indicators

Management performance addresses the capacity and effectiveness of the management structure and stakeholders, whether WASHCO, Caretaker or private service provider.

i. Financial Accountability

KPI	Unit	Definition	Reason for selection
Financial Accountability	**%**	Good management is not possible without financial accountability. The most basic requirement is that all income and expenditure is recorded in a generally accepted way. From this record, income and expenditure statements can be drawn up and the financial health of a system can be assessed.	This indicator is useful to the EWB/WASHCOs to ensure the sustainability of the schemes**.**

Recommended rate of this indicator are as follows:

Rating	Description
0%	If the WASHCO either cannot or will not disclose details of their income and/or expenditure
33%	If the WASHCO is willing to open its financial records for the inspection, but the

	records are incomplete and/or inaccurate and/or disorganized.
67%	If the WASHCO is keeping complete and accurate cashbooks for both their Petty Cash and their Current Account.
100%	If the WASHCO is able to produce income and expenditure statements (using generally accepted accounting principles) from their financial records (including accounts payable and account receivable).

Note:

At this stage the understanding of the more advanced aspects of the financial statements (for example concepts such as fixed assets, current assets, long term liabilities etc), is not critical. In time, however, those WASHCOs who prove most competent in their financial management could be given further training and taken onto a more advanced level.

ii. Accountability "Up" to Woreda Water Office

KPI	Unit	Definition	Reason for selection
Accountability for reporting to WWO	**%**	The WASHCO's should accountable to reporting O&M management at regular interval specified in this guideline to the Woreda Water Office. Reporting lead to notify the status of the provision of water supply system in terms of technical, financial and managerial aspects.	Such indicators are important to identify the problems in day to day O&M management of the schemes and to look for immediate solution if problem exists. It is also important for the sector report in terms of the functionality rate of the schemes.

The following data are required to calculate the indicator:

A. Number of report submitted to WWO
B. Number of reports required to be submitted
C. Accountability in delivering reports as (%)

$$C = \left[\frac{A}{B} * 100 \right]$$

Note:

- It is unlikely that any reports will be submitted by the WASHCO unless they are requested by the WWO. The WWO will need to take an active and informed interest in the affairs of the WASHCO, it is to get useful reports from them,
- It is essential that the WWO give clear instructions to the WASHCO's as to what is required to be included in the reports, and that the reporting requirements are both reasonable and achievable.
- The indicator could be made more sophisticated by adding a "Quality of Reporting" rating. If reports are complete and accurate, that should earn the WASHCO a 100% rating. Less complete or accurate reports should earn a lower rating.

iii. Accountability "Down" to Community

KPI	Unit	Definition	Reason for selection
Accountability	**%**	**The WASHCOs should**	**Such indicators are important**

for reporting to Community		**accountable to reporting O&M management at regular interval specified in this guideline to the user community. Reporting lead to notify the status of the provision of water supply system in terms of technical, financial and managerial aspects.**	**to report to the user community because it requires contribution of money and problems happening to find out a solution.**

The following data are required to calculate the indicator:

A. Number of meeting held with the community
B. Number of meetings required to be held
C. Number of meeting conducted as (%)

$$C = \left[\frac{A}{B} * 100 \right]$$

The WASHCO as service provider has an obligation to provide adequate water service to the community. Regularly assembled community meeting, to which representative of the Woreda Water Office are invited, are considered essential to ensure that problems (and compliments!) are heard.

Notes:

- It is essential that the WWO give clear instructions to the WASHCO as to what are the minimum reporting requirements for community meetings,
- The most basic requirements for the reporting to community meetings is to tell people how funds have been managed,
- As with the indicator in item (ii) above, the indicator could be made more sophisticated by adding a "Quality of Reporting" rating. If reports are complete and accurate, that should earn the WASHCO a 100% rating. Less complete or accurate reports should earn a lower rating.

d) Maintenance Performance Indicators

Maintenance performance is linked to functionality and applies to how well the system is actually maintained. This considers the quality of workmanship, response time, average downtime of the system, and relationship between maintenance provider and users. This applies to observed physical characteristics and customer views and perceptions.

i) Maintenance costs as a %age of total operating costs

KPI	Unit	Definition	Reason for selection
Maintenance cost against total operating cost	%	It is a measure of the relative level of maintenance costs in comparison with total operating costs.	Useful to know the expenses for maintenance activities with the over all operation cost, to plan for the future.

The following data are required to calculate the indicator:

A. Total Annual maintenance cost (Birr),
B. Total Annual operation and maintenance cost (Birr) excluding depreciation and financing charges
C. The ratio of the maintenance cost against the overall operation cost (%)

The indicator is calculated as:

$$C = \left[\frac{A}{B} * 100 \right]$$

ii) Preventive Maintenance costs as a %age of total Maintenance costs

KPI	Unit	Definition	Reason for selection
Preventive Maintenance cost against total Maintenance cost	%	It is a measure of the relative level of preventive maintenance costs in comparison with total maintenance costs.	Useful to know the expenses for preventive maintenance activities with the overall maintenance cost, to plan for the future. It indicates how the WASHCO planned to maintain before the scheme dies.

The following data are required to calculate the indicator:

A. Total Annual preventive maintenance cost (Birr),
B. Total Annual maintenance cost (Birr)
C. The ratio of the preventive maintenance cost against the overall maintenance cost (%)

The indicator is calculated as:

$$C = \left[\frac{A}{B} * 100 \right]$$

iii) Preventive Maintenance costs as a %age of total Maintenance costs

KPI	Unit	Definition	Reason for selection
Material cost against total Maintenance cost	%	It is a measure of the relative level of material costs in comparison with total maintenance costs.	Useful to know the expenses for spare parts and maintenance materials against that of the total maintenance costs,

The following data are required to calculate the indicator:

A. Total material cost (Birr),
B. Total annual maintenance cost (Birr)
C. The ratio of the material cost against the overall maintenance cost (%)

The indicator is calculated as:

$$C = \left[\frac{A}{B} * 100 \right]$$

e) Environmental performance

Environmental performance concerns environmental issues that influence or are influenced by the operation of the system. In particular, groundwater issues such as well yields, water levels and water quality can have a major impact on the operation and sustainability of a hand-pump water supply. By regularly monitoring such environmental indicators, problems such as falling water tables can be recognized in good time and appropriate remedial action, such as lowering the hand-pump cylinder, undertaken.

i) Water Quality

KPI	Unit	Definition	Reason for selection
Water Quality	No.	A water quality monitoring programme can detect any changes in water quality, which may indicate an Operation and Maintenance problem.	Useful to assess the operational practices of the WWO to ensure the health of the community. In this assessment: assess number of water quality tests undertaken every 6 months

The following data are required to calculate the indicator:

Indicator = Average of quality indices for selected key determinants,

Note:-

- The two key determinants recommended for the water quality monitoring programme are faecal coli forms and turbidity. It is recommended that residual chlorine is measured for reference purposes, but that this does not form part of the indicator.
- It is recommended that the quality index for a particular determinant for a sample meeting the WHO standard be seat at 100%, that a Class I be set at 90% and a Class II be seat at 70%. The quality index of a determinant which is below Class II standard should be set at 0%.
- It is recommended that at least three samples be taken on at least one sampling trip every six month. The samples should be taken accordingly to the prescribed method, and from different points in the scheme.

Daily recorded observations by the WASHCO (using simple qualitative criteria such as colour, taste and smell) should be encouraged to supplement the formal water quality monitoring programme.

Annex B: Monthly Operational Report

For the month ending _____

1. Water Supply Coverage Data

Connections	No.	Type of Connections	No.	Population served (No.)
a) Total metered (functioning)		**Domestic:**		
b) Total metered (defective)		1. House connection		
c) Total unmetered		2. Yard Connection		
		3. Yard connection (neighbourhood)		
		4. Communal Water Point Users		
		Non-Domestic:		
		5. Commercial		
		6. Institutional		
		7. Industrial		
		8. Bulk sale		
Total				

Note: To calculate the water supply coverage, follow the following procedures:

1. House connected population is calculated as the number of customers as house connected (HHs) multiplied by family size (4 to 6 usually)
2. Yard connected population is calculated as the number of customers as yard connected (HHs) multiplied by family size (4 to 6 usually)
3. Yard connected neighbourhood population is calculated as the number of customers as yard neighbourhood connected (HHs) X family size (4 to 6 usually) X average number of neighbours
4. Number of population utilize the water point calculated as (AxBxC)
   - Count the number of water points in the system, (A)
   - Register the number of households use each of the water point regularly (B)
   - Obtain the average family size in the household (C)
5. Obtain the population number in the service area, the Central Statistics Agency CSA) Projection (

$$WaterSupply\,\mathrm{cov}\,erage(\%) = \frac{(1+2+3+4)}{5} * 100$$

2. Water Supply Availability (Hrs)

Hrs available per day	Avg. Hrs (1)	Estimated Connections (2)	(3) = (1) X (2)
24	24		
>18 to <24	21		
>12 to 18	15		
>8 to 12	10		
>4 to 8	6		
<4	2		
Total			

$$WaterSupplyAvailability(Hrs) = \frac{Col.(3)total}{Col.(2)total}$$

3. Financial Data_1

3.1	Billing	This Month	Year – To – Date (YTD)
a)	Current metered		
b)	Non-metered		
c)	Penalty charges		
d)	Billing adjustments		
e)	Others		
3.2	**Collections**		
a)	Current accounts		
b)	Arrears (current year)		
c)	Arrears (prior years)		
	Total		

Collection Efficiency (%) = (3.2a + 3.2b) YTD / 3.1 YTD Total) * 100

Collection Ratio (%) = {(3.2 YTD Total) / (3.1 YTD Total)} *100

4. Financial Data_2

		This Month	Year – To – Date (YTD)
4.1	**Revenues**		
a)	Operating		
b)	Non-Operating		
	Total		
4.2	**Expenses**		
a)	Salaries and wages		
b)	Pumping costs		
c)	Chemical costs		
d)	Maintenance		
e)	Other O&M		
	Total		
	Depreciation + Interest		

Operating Ratio = 4.2 Total / 4.1 Total

5. Water Production Data (m^3)

5.1	Water Sources	Number	Total capacity (m^3)
	Shallow Wells		
	Boreholes		
	Springs		
	Surfaces		
	Total		
5.2	Water Production	This Month	Year to Date
	Gravity		
	Pumped		
	Total		
5.3	Accounted Water Used		
a)	Metered Billed		
b)	Un-metered Billed		
c)	Total Billed (5.3a+5.3b)		
d)	Estimated Emergency Use		
e)	Water Maintenance		
f)	Total Accounted (5.3c+5.3d+5.3e)		

Total Water Production Cost = 4.2 Total /5.2 Total

Operating Revenue / Billed Volume = (4.1 / 5.3)

6. Water Use Assessment

No.	Description	This Month	Year – To – Date (YTD)
a)	Domestic consumption (house connections + yard connection + YC shared + Water Point) m3		
b)	Average per capita consumption		
c)	Revenue Producing Water (%) (5.3c x 100)		
d)	Accounted-for water (%) [5.3f x 100]/5.2 Total		

7. Water Quality Bacteriological

a)	**Required no. of samples**	_____
b)	Total Samples taken	_____
c)	No. of Negative Results	_____
d)	***Percentage Negative***	

8. MISCELLANEOUS DATA

8.1 Employees

a) Total _____

b) ***Total Employee / 000 Connections***: _____

9. CUSTOMER SERVICE

a) Connection Requests this month _____

b) Feasible connection request _____

c) Connection Request backlog _____

d) Connections made this month _____

e) % connections made (9d / 9b+c) x 100 _____

f) No. of Customer Request/Complaints _____

g) Complaint & Request Backlog _____

h) Requests/Complaints Resolved _____

$$\%\,\mathrm{Re}\,solved = \frac{9h}{9f + 9g}$$

Annex C: Example for Contents of Performance Plan for Rural Piped System

1. Water Administration Office (RPS) Mission Statement

Supply clean, adequate and reliable water services for the population and organizations of the rural communities and small town covering all of the supply areas through the introduction of modern technologies and operation systems and the adoption of transparent and efficient services with application of affordable tariffs and the implementation of cost-recovery systems that ensure the financial sustainability of the Water Board.

2. Strategic Goals:

Goal No.	Goal Description
I	Provision of adequate and sustainable water supply services efficiently and effectively
II	Increase efficiency of bill collection
III	Provide efficient and effective maintenance services
IV	Reduce Non-Revenue Water (NRW)
V	Increase Annual Revenue
VI	Reduce Annual Operation Costs
VII	Enhance Network Rehabilitation and Expansion
VII	Reduction of illegal connections and use of water
IX	Enhance customer's satisfaction and management
X	Maintain and implement WHO and National standards for quality of treated water supply

3. Budget Allocation for ---- EFY

No.	Components of Budget	Budget (ETB)
1	Remuneration	
2	Office running costs	
3	Procurement of E-M equipments, pipes and fittings, Water meters and others	
4	Rehabilitation and Expansion Works	
5	Purchase of maintenance tools and Instruments	
6	Purchase of spares and other materials	
7	Purchase of Leakage Detection Instrument	
8	Office Supplies	
9	Fuel and Oil	
10	Computers and Software's	
11	Research and studies Costs	
12	Incentives and Rewards	
13	Other Costs	
	TOTAL	

4. Ways of Performance Measurements

The performance of the Water Administration Office shall be measured with the following aspects:

a) periodic Executive Water Board review
b) formal audits of operations
c) refinement of performance measurement
d) systematic sampling of performance measurement system effectiveness
e) performance based on the target set

5. Performance target based on strategic goals

STRATEGIC GOAL – I: Provision of adequate and sustainable water supply services efficiently and effectively in the service rural and small towns

Performance targets for achieving UAP/GTP-II (2020)	
Target 1.1	By 2020 end of the GTP-II, the percentage of households having house connection will rise to ----%, yard connection to ----% and yard shared or Neighbourhood Tap Users (NTU) to -----%; and Public Tap users reduced (PTU) to ------% with particular focus on the unreached rural & urban poor communities.
Target 1.2	By 2020 all applications for new connections shall be managed in less than 4 hour by establishing operational branch offices
Target 1.3	By 2020 all pressure zones shall be equipped/ monitored with electronic devices adjusting excessive or deficiencies of pressures in the system to maintain a minimum of 20 m and a maximum of 70 m of head.

Performance Indicators for EFY 2015/16	
Indicator 1.1	An increase of --% of the households in the RPS will have house connection, ---% yard connection, and ---% and ----% of NTU and public taps decrease respectively and ----% of applications for connections dealt in the RPS.
Indicator 1.2	Applications for new connections processed in less than 6 hours and ready for technical sections actions and 75% of the opinions pulled from applicants indicate that the services provided are satisfactory.
Indicator 1.3	Al least three units of centrifugal surface pumps erected to provide additional pressure in the water scarce areas and one Pressure reducing valve calibrated for excess pressure zone in the rising main.

Expected Outcome for EFY 2015/16	
Outcome 1.1	Access to water supply in the un-covered areas of the service area increased and data on access and coverage updated.
Outcome 1.2	In RPS-WAO customer's management units prepared easy and robust forms that enables to perform services for each step including start and completion time.
Outcome 1.3	Irregularities in the pressure system of the supply zones improved and reliability increased.

Expected Milestone for EFY 2015/16
Final accomplishment report prepared and supervision conducted by water board and management

Data Source
Performance measurement and reporting system and quarterly performance report to the Office.

6. Verification and Validation

Indicator 1.1 An increase of ---% of the households in the RPS will have house connection, ------% yard connection, and ----- and ---- % NTU and public taps constructed in low income residential areas.

Performance data required	**2015/16**	**2016/17**
Total number of households applied for new connection		
Number of households with new connection by type of facilities and service type		
Number of public taps constructed and functioning		
Beneficiaries increase in the year		

Indicator 1.2 Applications for new connections processed in less than 6 hours and ready for technical sections actions and 75% of the opinions pulled from applicants indicate that the services provided are satisfactory.

Performance data required	**2015/16**	**2016/17**
Total number of applications for new connections		
Number of applications responded		
Average time taken per application in hrs		
Opinion polls collected and positively responded in %		

Indicator 1.3 At least three units of centrifugal surface pumps erected to provide additional pressure in the water scarce areas and one aeration valve calibrated for excess pressure zone in the mains.

Performance data required	**2011/12**	**2012/13**
Number of centrifugal surface pumps erected to provide additional pressure in the water scarce areas		
Number of Pressure reducing valve calibrated for excess pressure zone in the rising main.		
Number of households complaining on low pressure		

STRATEGIC GOAL – III: Provide efficient and effective maintenance services

Performance targets for achieving UAP/GTP-II (2020)	
Target 3.1	By 2020 all maintenance requests and services performed in less than 3 hours.
Target 3.2	By 2020 the Water Administration Office (WAO) of the RPS equipped with leakage detection equipment
Target 3.3	By 2020 radio frequency (walky- talky) system installed for operation and maintenance system.
Target 3.3	By 2020 the WAO maintenance crew team received regular and refresh training

Performance Indicators for EFY 2015/16	
Indicator 3.1	Improved response time on maintenance request reduced to 1 day and proper record on maintenance request established in WAOs
Indicator 3.2	WAO supported with electro-magnetic leakage detection equipment and 4 technicians trained on equipment operation and maintenance.
Indicator 3.3	WAO provided at least with one free call communication means for maintenance information flows and support rendered on promotion of the new communication system to the public.
Indicator 3.3	The WAO prepared regular preventive maintenance schedule and Plan and able to meet 80% of their maintenance plan

Expected Outcome for EFY 2015/16	
Outcome 3.1	Database on maintenance requests and response time practiced
Outcome 3.2	Maintenance facilities and automation improved in WAO
Outcome 3.3	Community involvement and awareness in water savings enhanced.
Outcome 3.4	Early preparedness of maintenance services exercised

Expected Milestone for EFY 2015/16
Final accomplishment report prepared and supervision conducted by water board and management

Data Source
Performance measurement and reporting system and quarterly performance report to the Office.

7. Verification and Validation

Indicator 3.1 Improved response time on maintenance request reduced to 1 day and proper record on maintenance request established

Performance data required	**2015/16**	**2016/17**
Average time spent per maintenance request		
Number of maintenance requests		

Indicator 3.2 WAO supported with electro-magnetic leakage detection equipment and 4 technicians trained on equipment operation and maintenance

Performance data required	**2015/16**	**2016/17**
Number of WAO supported with electro-magnetic leak detection equipment		
Number of technicians trained on equipment operation and maintenance		

Indicator 3.3 WAO provided at least with one free call communication means for maintenance information flows and support rendered on promotion of the new communication system to the public.

Performance data required	**2011/12**	**2012/13**
Free call communication for maintenance information flows installed		
Number of rural Kebelles/ small towns participated in promotion of the new communication system.		

Indicator 3.4 The WAO prepared regular preventive maintenance schedule and Plan and able to meet 80% of their maintenance plan.

Performance data required	**2011/12**	**2012/13**
Number of WAO prepared preventive maintenance scheduled in their plan		
% of maintenance plan achieved.		

STRATEGIC GOAL – IV: Reduced Non-Revenue Water (NRW)

Performance targets for achieving UAP/GTP-II (2020)	
Target 4.1	By 2020, visible leakages reduced to 10% of the total water distributed
Target 4.2	By 2020, residents fully understand water as finite economic resources that require conservation
Target 4.3	By 2020, 50% of existing old faucets replaced by modern water saving faucet technologies.
Target 4.3	By 2020, the Executive Water Board accepted the legal and regulatory codes as a legal proclamation

Performance Indicators for EFY 2015/16	
Indicator 4.1	Leakage detecting and controlling system installed in the WAO and two technicians trained on leakage detection and control system
Indicator 4.2	Forums organized in at least 3 rural kebeles and two small towns on community consultation, involvement and education on leakages and NRW and more than 200 residents attended the forums.
Indicator 4.3	Water saving technologies such as modern faucets introduced in at least five institutions with large consumptions and follow-up of progresses done for three months.
Indicator 4.3	The WAO initiated draft documents on legal and regulatory measures and at least two legal experts communicated to generate proposals

Expected Outcome for EFY 2015/16	
Outcome 4.1	Non - Revenue Water trends declining
Outcome 4.2	Behavioural changes on water conservation expected from participants
Outcome 4.3	Water saving technologies introduced.
Outcome 4.4	The concept of legal and regulatory on water use issues conceptualized

Expected Milestone for EFY 2015/16
Final accomplishment report prepared and supervision conducted by water board and management

Data Source
Performance measurement and reporting system and quarterly performance report to the Office.

8. Verification and Validation

Indicator 4.1 Leakage detecting and controlling system installed in WAO and four technicians trained on leakage detection and control system

Performance data required	**2015/16**	**2016/17**
Number of leakage detecting and controlling equipment installed		
Number of technicians trained on leakage detection and control system		

Indicator 4.2 Forums organized in 3 rural kebeles and 2 small towns on community consultation, involvement and education on leakages and NRW and more than 100 residents per forum attended the forums

Performance data required	**2015/16**	**2016/17**
Number of forums organized on consultation, involvement and education on leakages and NRW		
Number of participating residents on the forum		

Indicator 4.3 Water saving technologies such as modern faucets introduced in at least 5 institutions with large consumptions and follow-up of progresses done for three months

Performance data required	**2011/12**	**2012/13**
Number of institutions adopted water saving technologies		
Frequencies of follow-up of progresses		

Indicator 4.4 The WAO initiated draft documents on legal and regulatory measures and at least two legal experts communicated to generate proposals

Performance data required	**2011/12**	**2012/13**
Number of proposals initiated on legal and regulatory measures		
No. of legal experts communicated to generate proposals.		

STRATEGIC GOAL – VII: Enhance Network Rehabilitation and Expansion

Performance targets for achieving UAP/GTP-II (2020)	
Target 7.1	By 2020, 90% of network uncovered areas benefited from network rehabilitation and expansion works
Target 7.2	By 2020, all PVC pipelines aged 25 years and old aged DCI pipelines to be replaced scheduled and 50% tackled
Target 7.3	By 2020 pipeline size, type, length, ages, location and related database computerized and 90% of pipe foremen able to manage the software
Target 7.4	

Performance Indicators for EFY 2015/16	
Indicator 7.1	Financing arranged for network expansion to areas of low income households that are uncovered by network and allocated to WAO
Indicator 7.2	By 2020, data of PVC pipelines aged over 25 years and old aged DCI pipelines to be replaced generated and supplied to WAO.
Indicator 7.3	The WAO able to manage at least for 10 kms length of the network mapping and trained 5 technical staff
Indicator 7.4	

Expected Outcome for EFY 2015/16	
Outcome 7.1	low income households have been considered as valued customers
Outcome 7.2	Routine maintenance reduced due to replacement of old pipelines
Outcome 7.3	Network database introduced and able to manage.
Outcome 7.4	

Expected Milestone for EFY 2015/16
Final accomplishment report prepared and supervision conducted by water board and management

Data Source
Performance measurement and reporting system and quarterly performance report to the Office.

9. Verification and Validation

Indicator 7.1 Financing arranged for network expansion to areas of low income households that are uncovered by network and allocated to WAO

Performance data required	**2015/16**	**2016/17**
Budget allocated and utilized for network expansion in uncovered rural areas and urban slums		
Water Administration office met the plan		

Indicator 7.2 By 2020, data of PVC pipelines aged over 25 years and old aged DCI pipelines to be replaced generated and supplied to WAO

Performance data required	2015/16	2016/17
Length of old and corroded pipelines covered in the data		
WAO supplied with data		

Indicator 7.3 The WAO able to manage at least for 10 kms length of the network mapping and trained 5 technical staff

Performance data required	2011/12	2012/13
Length of pipeline the WAO able to manage by network map		
No. of technical staff trained on the map reading		

All the above mentioned performance plan are just examples. All the strategic goals are not worked out