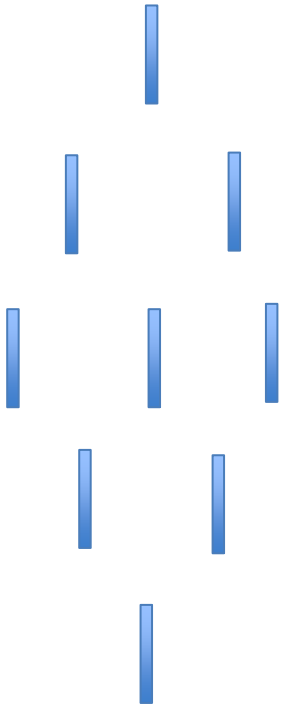
Rural Drinking Water Service Support Center Operation Guideline

(SSC Guideline 2080)



Government of Nepal

Ministry of Water Supply

Department of Water Supply and Sewerage Management

December 2023

CONTENTS

Chapter 1

Background

Sections 3 and 7 of the Drinking Water and Sanitation Act of 2079 emphasize the right to drinking water and sanitation. To ensure this right and enhance professionalism in water supply service delivery, the Act mandates the establishment of Service Support Centers (SSCs) to provide technical assistance in the operation, management, and maintenance of rural water supply projects implemented under programs related to institutionalization. These SSCs are necessary to increase professionalism in the delivery of water supply services.

The Act further clarifies that the responsibility of respecting, protecting, promoting, fulfilling, and implementing citizens' right to access clean and high-quality drinking water and sanitation rests with all tiers of governments - the federal government, provincial governments, and local governments. This responsibility can be undertaken either through mutual coordination by themselves or through organized entities under their ownership or control. This guideline has been prepared to assist service support centers at the province level in facilitating such coordination.

The Water Supply Service Support Center (WS-SSC) proposed by the Institutional Support and Service Advisory Unit (ISSAU) of the Water Supply and Sewerage Management Department primarily targets large water supply projects in urban or peri-urban areas, considering the needs of consumer committees and service providers. While this concept is seemingly appropriate, it can be effectively adapted to support small and rural water supply systems in remote areas falling under the local level's purview.

1. Service Support Center (SSC)

1.1 Concept of SSC

Currently, a lack of appropriate mechanisms at the federal, provincial, and local levels hinders the smooth operation and long-term sustainability of completed rural water systems. Recognizing this critical issue, the establishment of Water Supply Service Support Centers (WS-SSCs) is facilitated by a clear provision within the National Water Supply and Sanitation Policy 2080 (Section 5.6.13 'C') to implement this Government of Nepal policy.

The ideal approach involves establishing and operating a service support center under the relevant ministry of the provincial government or under a coordinated mechanism between the federal and local levels. This service center will play a pivotal role in coordinating between user committees managing rural water supply projects at the local level and the water, sanitation, and hygiene units (WASH Units) of the respective rural/municipalities.

1.2 Objectives of SSC

The service center aims to provide technical, managerial, and operational support to water users and sanitation committees (WUSCs) as needed. Its goals are to improve operation and maintenance (O&M) processes, increase service levels, and assist users/beneficiaries in achieving sustainable and cost-effective water supply. The center will offer integrated services through various activities tailored to the specific needs of water supply systems within its designated area. It will operate with the support of the Department of Water Supply and Sewerage Management (DWSSM) under the federal Ministry of Water Supply (MoWS), relevant provincial ministries, local governments, and related water supply projects.

The main objectives of the service center are as follows:

1. Rural/municipality level Water, Sanitation and Hygiene Units (WASH Units) and Water User's and Sanitation Committees (hereinafter "Users' Committee or UC") are responsible for operating all water infrastructures under their jurisdiction. These entities will also receive technical assistance and facilitation from the service center to aid in maintenance work.

2. Through data analysis of water supply project management and operation, the service center will assess the condition of all water distribution system structures, effectively monitor maintenance, and maintain up-to-date information on the functionality of the systems.

3. The service center will facilitate effective and results-oriented coordination among all levels of government (federal, provincial, and local), including Water Users and Sanitation Committees and other relevant stakeholders. Additionally, the center will provide technical support to integrate qualified service providers into the water management system.

4. Following its establishment, the service center will leverage its operational experience, collaboration with relevant stakeholders, and learnings in financial management to explore ways to improve the service delivery structure.

1.3 Key factor for a successful SSC

The success of the SSC hinges on its ability to deliver impactful services in close collaboration with relevant stakeholders, including relevant provincial government ministry, water user associations, provincial and local government entities, and WUSCs. Here are some key factors influencing its effectiveness:

a) Written commitment (Memorandum of Understanding – MoU) from all relevant agencies to follow its policies, conditions and bear responsibility for project operation.
b) Regular and continuous collection and management of functionality data is essential for ongoing service delivery. Initially, the SSC may rely on existing National WASH (NWASH) data until the rural/municipality establishes its own data system for effectively managing data collected through the service center.
c) Based on the business plan submitted by the service center as a prerequisite, funds will be arranged from users' committees, relevant rural/municipalities, the provincial and federal governments, development partners, and potentially, the cooperative system and public-private partnerships. This ensures comprehensive financial management and aligns with Section 6.1.e of the National Drinking Water and Sanitation Policy, 2080, which prioritizes budget allocation from all relevant ministries to address the challenge of unfunded commitments.

Therefore, the successful implementation of the service center hinges on strong stakeholder collaboration, effective dialogue, and equitable cost-sharing across all levels of government and development partners.

1.4 Current Status of Drinking Water Management

According to the statistics of the Department of Water and Sewerage Management (DWSSM), 63% of the water projects in Nepal are fully operational (DWSSM-NWASH MIS). Looking at the provincial statistics, in Karnali Province, which has the highest number of projects, only 61% of the 4,692 projects are operational, while only 39% of the 258 projects in Madhesh Province, which has the lowest number of projects, are operational. Similarly, completion rates vary across other provinces: Koshi (75%), Gandaki (64%), Lumbini (76%), Far-West (56%), and Bagmati (69%).

In order to address this situation, there is a need for extensive changes in the operation and maintenance of water supply systems. Although there is a clear policy framework and organizational

structure in many aspects of the water supply system, there is a gap in implementing technical requirements and ensuring effective coordination, regular monitoring, regulation, and technical assistance for the O&M process. The main factors for such a situation are as follows.

- Ambiguity in roles and responsibilities
- Lack of facilitation through networking among consumer associations
- Poor monitoring and reporting of completed infrastructure
- Lack of establishment of maintenance funds or lack of access to financial assistance at the project operational level

In such a situation, the service center will act as a strong intermediary to address the existing problems and its factors, thus providing remote technical assistance, monitoring, supervision and facilitating network establishment to the water service providers. Remote assistance under Phone, SMS Or technical support through visual study materials (Video tutorials) etc. In addition, the service center stores the maintenance materials needed for the water supply system and sells them to the consumer committee or prepares an inventory of vendors and informs them, when necessary, provides regular system servicing and necessary technical training or schedules related to their training. Training Calendar can help and facilitate by informing.

1.5 Benefits from the Operation of SSC

After the establishment of the service center, the drinking water users' committee or the service provider and the consumers are expected to have the following written benefits:

a) Track the performance of system infrastructures and observe their lifespan
b) Identify and implement timely solutions to problems in a timely manner to ensure the timely operation of the water supply system
c) Preparation of effective plans to address growing population and changing needs/demands
d) The facilities of necessary maintenance and regular check-up will be readily available whenever necessary.

Chapter 2

2.1 Asset Management Aspects of Water Systems

By paying attention to the various aspects of asset management of the water supply system, continuous and reliable delivery of water services can be ensured at an appropriate cost. Management of regular maintenance of water supply project structures, given adequate resources, can reduce the excessive financial expenses incurred in major repairs, increase the lifespan of the system and ensure the continuity of service flow. Through this, the smoothness, sustainability and quality of the water supply system can be maintained. Due to the lack of maintenance, there is a problem in the system or due to a decrease in functionality, it is more effective to carry out the necessary maintenance and reconstruction of the systems that do not have sufficient service flow than to invest in a new system.

2.2 Role of service center in asset management including operation and maintenance of water supply system and basis of its work system

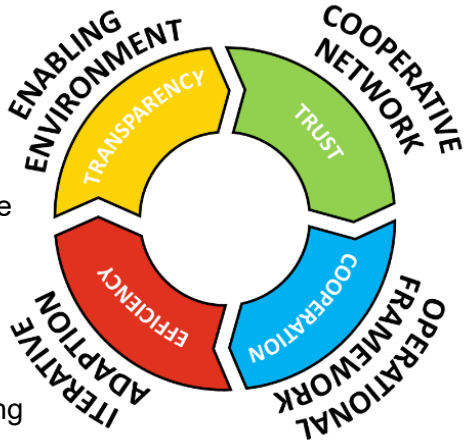
The concept of the service center has been designed keeping in mind the appropriate management (Life Cycle Management) throughout the expected life of the water supply system. Service center helps to address the technical aspects of the regular maintenance of the water supply system in a timely manner. Regular and effective maintenance is key to system sustainability. It not only extends the lifespan of water supply infrastructure but also ensures service continuity and financial sustainability.

The service center's work system rests on three pillars: **good governance, operation and financial management**. By effectively addressing the complex interrelationships between these pillars, complications in water distribution system structures can be avoided.

2.2.1 Facilitation Aspect of Service Center

Facilitation of the service center is expected to improve the following aspects of the water supply project:

1. Creating a conducive working environment through the creation of clear, transparent and accountable policies and a good governance environment,
2. Build trust in the system through creating mutually supportive networks,
3. Strengthen service center support by identifying operating procedures and institutional limitations and implementing effective frameworks,
4. Adopt appropriate methods of regular "operation and maintenance" of the system, identifying problems and correcting them in a timely manner.



2.2.2 Basic Pillars of Service Center Management

Good Governance

1. Clear policies, definitions and guidance taking into account the roles and responsibilities of all stakeholders involved in the water supply system.
2. Clear guidelines on ownership and responsibility for systemic infrastructure.
3. The dynamics of mutual support networks between each level of government.
4. Accelerate the development and implementation of formal coordination processes in aspects such as financial support/technical support/data collection and reporting among stakeholders.

Operation

1. Clarity in operational guidance for all stakeholders.
2. Preparation of updated contact list of stakeholders at each level (maintenance workers, drinking water users and sanitation committee, ward, rural/municipality, provincial and federal government).

3. Operational agreements (data, funding, technical support etc.) between stakeholders at each level and the network of consumer committees.
4. Ensuring minimum progress by deciding the action plan in agreement between the stakeholders.

Financial management

1. A transparent and universally accepted financial management plan is prepared for service center operation and maintenance, including clear cost-sharing mechanisms for all stakeholders.
2. Establishment of a clear and transparent mechanism for access to maintenance work, fund accumulation and distribution for the improvement of water system structures between each level of government.
3. Local pricing structure for operation, maintenance costs, spare parts and tools, and labor.
4. Technical guidance and assistance to rural/municipality and consumer committees on various options (formation of savings and credit groups, infrastructure insurance, expansion of cooperatives and construction of multi-utility system) to increase revenue and improve financial security.

2.3 The Service Center's Role in Operations and Maintenance: Ensuring Optimal Outcomes

The service center plays a crucial role in achieving effective operation and maintenance (O&M) for the water supply system by focusing on four key areas:

a) Clearly defined roles and responsibilities – ownership, management, maintenance – who does what, when?
b) Proper financial mechanism, tariff collection and potential government support - who pays, for what, when?
c) Promotes clear and transparent processes and procedures for all stakeholders – well defined approach to problem identification and resolution.
d) Emphasizes regular system monitoring, data collection and reporting - optimize O&M activities based on the functionality of water supply systems.

2.4 Functionality of the Water Supply System

Indicators of functionality and measurement of water system performance for effective service delivery: To improve service delivery with the support of the service center, establishing an evaluation system is crucial. This system will measure performance against set targets and ensure the water supply system operates sustainably, delivering quality services over a specified period.

While defining system sustainability can be complex, measuring it often involves tracking proxy indicators over an extended period.

2.4.1 Functionality of Taps

The functionality of water system indicates that water is running at full capacity in the streams/taps within the water supply system. In the monitoring and evaluation framework (M&E Framework) of NWASH, improvement is defined by the following five characteristics.

1. Flow
2. Velocity
3. Pressure
4. Quality of water in tap
5. Duration of Flow

2.4.1.1 Simplified Indicators for O & M

Keeping in view the existing capacity of consumer committees in rural areas and the practical aspects of facilitation from service centers to monitor functionality and for effective O&M work, the above mentioned five indicators have been simplified and reduced to the following three main indicators.

1. **Water Quantity** - 100% taps have the condition of 'Sufficient for all daily needs'
2. **Quality** - 100% taps are no turbidity taps
3. **Duration of flow (Supply)** - 'Adequate service' = >2 hours per day if flow is sufficient

These indicators set the basis for evaluating the functionality status and the following conditions mentioned in the Monitoring and Evaluation Framework (M&E Framework, page: 15-20) are considered to meet the streamlining criteria:

1) Taps with sufficient water quantity- Defined by sub indicator F2A-a
2) Taps with acceptable water quality- Defined by sub indicator F2A-b
3) Taps with adequate supply hours- Defined by sub indicator F2A-c

2.4.1.1.1 Water Quantity

Flow conditions are categorized in 5 levels in the M&E Framework:

1. No water at all
2. There is water but not sufficient for drinking, cooking and toilet use
3. Sufficient for drinking, cooking and toilet use
4. Sufficient for drinking, cooking, washing utensil, toilet use and bathing
5. Sufficient for all daily needs

Indicator 1 (Sufficient for all daily needs) includes the situation '3', '4' or '5' above.

2.4.1.1.2 Quality

The National Drinking Water Quality Standard, 2079 (NDWQS) defines water quality for community drinking water systems. While the NDWQS requires regular testing of all water quality parameters, resource limitations currently prevent service providers from exceeding the capacity of water consumer committees. Therefore, this indicator has been considered as the basis for 'acceptable' quality water in this guide. Only after the technical and financial capacity of drinking water consumer committees are developed, other parameters of water quality can also be included. Acceptable water quality is measured based on the following three conditions of turbidity in taps:

a. No turbidity
b. Turbid water during rainy season
c. Always turbid water

As the rainy season is brief (approximately two months), this condition is considered equivalent to "no turbidity." Therefore, taps with conditions (a) or (b) are considered to have acceptable water quality.This method, while relying on consumer perception of turbidity, serves as a practical alternative until formal water quality testing becomes feasible for water consumer committees.

2.4.1.1.3 Water Supply at Taps

The M&E Framework for Water Supply System Functionality and Sustainability considers taps supplying water for at least two hours per day to have sufficient water quantity. This is because many water supply systems operate for limited hours or intermittently (for example, in the morning and evening-intermittent system). Only few water supply systems have round-the-clock water supply. The supply hours of a tap can also indicate the fairness of water distribution within the community.

According to the M&E Framework, a minimum supply duration of >= 2 hours is considered "adequate." This assumes a typical flow rate of 0.1 liters per second (LPS). A 2-hour supply period (2 hours * 60 minutes/hour * 60 seconds/minute) translates to a total daily volume of 720 liters. Considering the standard of 45 liters per person per day (lpcd), this translates to sufficient water for 16 people (720 liters / 45 lpcd = 16 people). Given that the average rural family size in rural Nepal is approximately 4.8 people, a tap with a >= 2-hour daily supply can provide enough water for roughly 3.3 households (16 people / 4.8 people/household = 3.3 households).

Source: Monitoring and Evaluation Framework

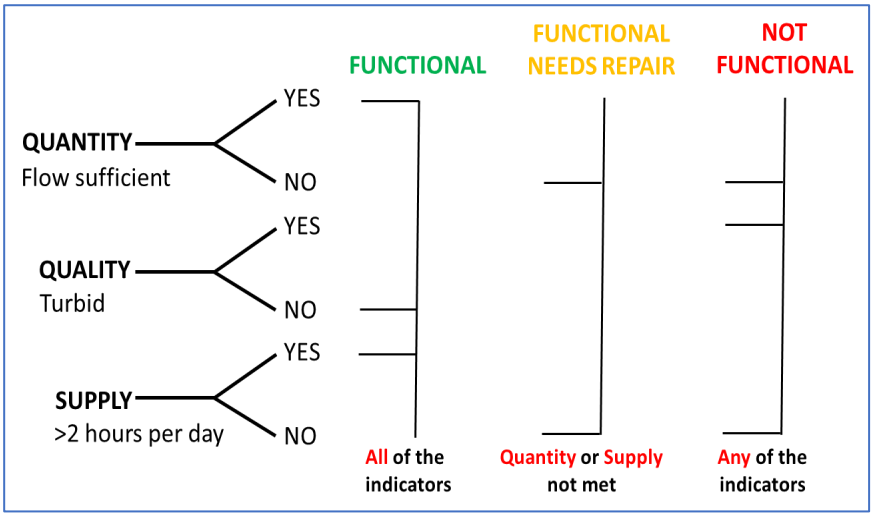
2.4.2 Measuring Functionality

Selecting appropriate indicators is crucial for the service center's operational success. Due to limited local and community resources, simplified O&M indicators are necessary. These indicators should be cost-effective, regularly collectable, and align with NWASH guidelines and government policies.

The proposed functionality measurement indicator categorizes taps into three conditions:

- **Functional,**
- **Functional but needs repair, and**
- **Not Functional.**

'Functional' applies to taps consistently meeting water quantity, quality, and supply standards. 'Functional, but Needs Repair' applies to taps delivering water that meets quantity, quality, and supply standards, but require maintenance. Taps with no water flow, or water that is turbid, are classified as 'Not Functional.'



These indicators are suitable for establishing the service center's initial operational system and stakeholder collaboration. Once this system is established, the indicators can be adjusted to integrate with NWASH indicators (as per JMP requirements). For example, quantitative data can be combined with the 5 M&E indicators related to consumer experience of water supply adequacy. This integration might involve maintenance workers periodically conducting sampling surveys on household water supply experiences.

2.4.3 Red Flag Indicators

The service center facilitates the management of red flag indicators through a two-part approach:

Reason Indicators: These indicators identify whether there's sufficient water flow from the tap. This helps pinpoint the general issue (lack of water) without needing immediate diagnosis of specific parameters.

Problem Indicators: Once a reason indicator suggests a problem, these indicators delve deeper. They focus on specific parameters (quantity, quality, or supply time) to identify the exact cause (e.g., low flow rate, turbidity, or limited supply hours).

By pinpointing the root cause quickly, the service center can develop targeted solutions and expedite maintenance activities. This efficient approach ensures that resources are directed towards addressing the actual problems in water quantity, quality, or supply duration, leading to faster repairs.

Chapter 3

3.1 Policy Landscape

A framework of adequate water sector policies and regulations is in place. These specific policy rules will be referenced to ensure clear implementation of this guidance in service center operations.

1. Drinking Water and Sanitation Act, 2079
2. National Drinking Water, Sanitation and Hygiene (WASH) Policy, 2080
3. Guidelines for Formulating WASH plan, 2076
4. National Water Quality Standards Implementation and Monitoring Guideline, 2079
5. Nepal WASH Sector Development Plan, 2016-2030 (community ownership of property, community operation and maintenance will be fully responsible for consumer committee)
6. Institutional Support and Service Advisory Unit (ISSAU) - WASH-SSC, Concept and Methodology
7. ISSAU - Demand Collection Form for Establishment and Operation of Water Service Support Center

The Drinking Water and Sanitation Act of 2079 (Section 7) lays the groundwork for organized service delivery. Specifically, it states that "the three levels of government shall operate and manage drinking water and sanitation services themselves or through organized entities under their ownership or control," acting in cooperation. Similarly, the National Drinking Water and Sanitation Policy of 2080 (Section 5.6.13, rule 'f') calls for the establishment of service support centers under the relevant provincial ministry or through a collaborative mechanism involving the federal, provincial, and local levels. This policy provision aligns with the government's desire to create an effective support system for water service delivery.

3.2 Definition of Functionality

For monitoring purposes, the functionality is defined as a measure of the percentage of water facilities that are working at any given time. The functionality indicators as mentioned in section 2.4 (source: M&E Framework, page 7) are normally measured by a one-time check and when repeated over time is often used as a proxy measure for sustainability. Moreover, the three indicators of functionality include water quantity, acceptance level of water quality and the duration of water supply (refer section 2.4.1.1 for details).

3.3 Definition of Service Levels

NWASH have now fully aligned their water supply service level definitions and indicators with those of the UNICEF/WHO Joint Monitoring Program (JMP). The guidelines for these definitions and indicators are outlined below, as referenced from the Guidelines for Formulating water, sanitation, and hygiene plan, 2076, GON/MoWS/DWSSM (page 26 and 27).

3.3.1 Safely Managed Drinking Water Service

The safely managed drinking water service level denotes safe drinking water available at any time from an improved source in the house yard, pollution-free (especially from microbiological (E-coli) and chemical pollution (e.g.: arsenic, fluoride) parameters according to the quality standards of drinking water implemented by the Nepal government.

Generally, during the survey, if all the following statements are answered as “Yes” then water service is: can be said safely managed.

1. Water connection inside the premises.
2. Availability of water within 5 minutes.

3. Availability of water for 12 months.
4. The water quality test list of the systems being used showing that E-coli, arsenic and fluoride are in accordance with the drinking water quality standards of the Government of Nepal.

3.3.2 Basic Water Service

Similarly, to determine the **basic drinking water service**, the answer should be "Yes" to all the following statements.

1. Individual tap stand, community tap stand connection, springs, rivers, wells, rainwater collection.
2. Time taken less than 30 minutes to collect water collection.
3. Water availability less than 12 months.
4. The water quality test of the systems currently in use reports free from bacterial contamination.

3.3.3 Limited Drinking Water Service

In case of limited drinking water service, drinking water is available from improved water sources but the time taken to collect water is more than 30 minutes.

3.3.4 Unsafe Drinking Water Service

Unsafe drinking water service includes the surface water sources like streams, rivers, ponds, irrigation canals etc. and unprotected wells and wells are all unsafe drinking water sources. The condition of consumption from such sources is called unsafe drinking water service.

3.4 Provision for Ownership of Water Schemes

Nepal's drinking water sector laws and policies clearly assign responsibility for managing clean and quality drinking water and sanitation services. All three levels of government (Federal, provincial, and local) are expected to collaborate on operation and management. This can be done directly by the government or delegated to an organized entity under its control. Importantly, ownership of the water system infrastructure rests with the Government of Nepal. However, the responsibility for operating and managing the system can be transferred to the local government. The Drinking Water and Sanitation Act, 2079 and the Drinking Water and Sanitation Policy, 2080 reflect these provisions.

3.5 Classification of Water Supply and Sanitation Schemes and Stakeholders' Roles

Section 8 of the Drinking Water and Sanitation Act 2079 defines the roles and responsibilities for operating and maintaining water supply and sanitation schemes. These responsibilities are based on factors such as scheme size, type, and regulatory requirements. The Act also addresses financial management and ownership in service delivery. Annex 1 provides a table that further clarifies these classifications and stakeholder roles.

3.6. Types of Maintenance

To ensure sustainable asset management of the water supply system, maintenance should be a technical priority throughout its lifespan. Early resolution of minor repairs, instead of waiting for major problems, helps maintain service continuity and extend system life. The service center plays an active and effective role in this process. The following three types of maintenance are described in Schedule 3 of the monitoring and evaluation framework (M&E framework) currently used by the MoWS/DWSSM.

3.6.1 Minor Repairs

When there are no major damages in the water supply system and only minor problems (functional incontinence) are observed the system needs minor repairs. This type of repair consists of no cash component. Small quantity of pipe, fittings, and materials are required and the repair can be done by the Village Maintenance Worker - VMW. Tools not available in the local market should be supported by district level Water Supply, Irrigation and Energy Development Office (WIEDO). Generally, spare parts are not provided. The VMW should generally be able to undertake minor repairs. In some cases, however, help of Maintenance Technician may be needed.

3.6.2 Small Repair

Small repairs of a water supply scheme are those when technical assistance is required, materials are needed and a cash component involved. The estimated cost of all materials, transportation, and cash component, required for the repair. Small Repairs have to be estimated quickly to ensure that the task work can be started as soon as the maintenance status survey is completed. The cash component comes from the maintenance budget, while the materials from the Maintenance Store.

3.6.3 Major Repairs

It refers to the situation where the water supply system is functioning under major repair but needs to be repaired immediately (Major Functional Disruption) and external technical assistance is required for the repair work. In this situation, if timely attention is not paid to the necessary maintenance work, the condition of the water supply system will deteriorate and the subsequent improvement work will become more expensive. In the case of major repairs, the impact on the water supply system and the priority of its solution are moderate and major repairs of one or more components may be necessary.

3.6.4 Rehabilitation

Rehabilitation or reconstruction is needed for projects that have reached the end of their service life or become non-functional. Such systems will soon reach a state of closure, and in order to bring them back into operation, they need to be improved or restored by gathering technical and financial resources from external sources. In the case of restoration, the impact on the system is of a serious nature and the priority of its solution is also high and restoration or reconstruction of one or more components (components) may be necessary. If more technical assistance is required in this work, the District Water, Irrigation and Energy Development Office (WIEDO) can be contacted.

3.7 Responsibility and Management of Financial Liability for Maintenance

While there's consensus on the importance of regular maintenance for water system asset management during the design phase, existing guidelines identify those responsible for maintenance. However, the burden of responsibility remains at the water user level. It is not found that the governments at all levels are doing enough and result-oriented homework to manage the financial resources needed for maintenance. Due to the lack of budget allocation, the sudden problems in the water supply system are not adequately addressed. As mentioned in sub-section 3 of section 1.3 above, this guidance assumes that the government of the same level of the government of Nepal will allocate an effective cost-sharing budget for maintenance. Therefore, for convenience, in this guidance, a structure has been proposed in which the cost sharing will be at least as per the table below, and in this regard, it is believed that a suitable financial contribution structure will be formed in the future in coordination with the service center.

Contributor	Minor Repairs	Small Repairs	Major Repairs	Restoration
Federal Government	0%	0%	60%	70%
Province Government	0%	0%		
Rural/Municipality	0%	50%	20%	10%
Users Committee/ Service Provider	100%	50%	20%	20%

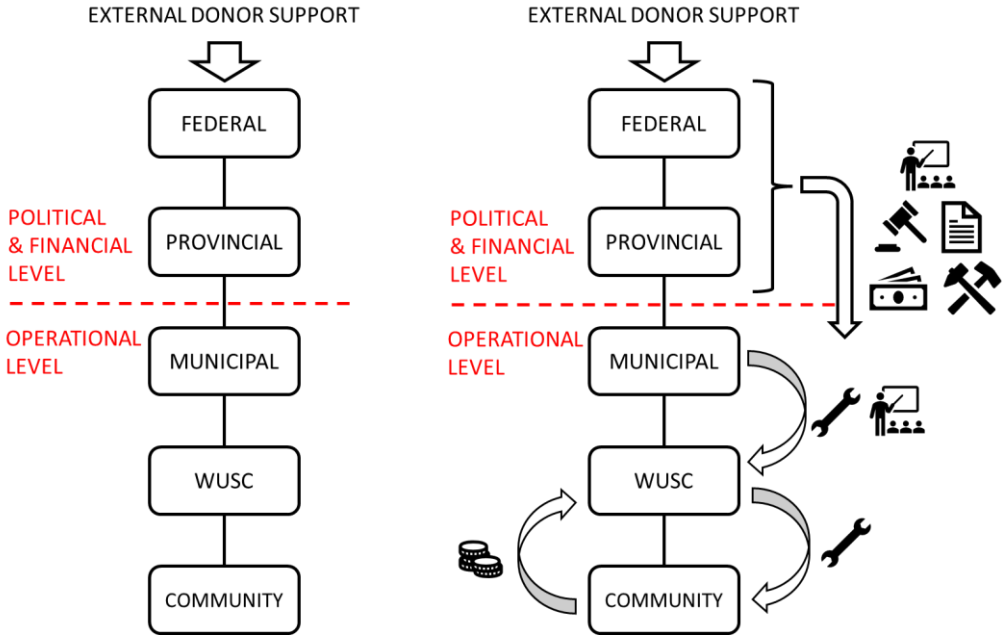
In this context, in Section 5.6.21 of the National Drinking Water and Sanitation Policy, 2080, in 'B', based on geographical location, economic, social conditions and technology, the local community will contribute five percent of the total cost in cash, and the relevant provincial government, local level and other sources, it has been mentioned that the project can be implemented through cost sharing from sources. Therefore, the cost sharing of the consumer committee/service provider mentioned in the above table will be 5% in cash and the rest will be labor donation and in-kind sharing.

Chapter 4

4. Operational landscape & Network Process Structures of SSC

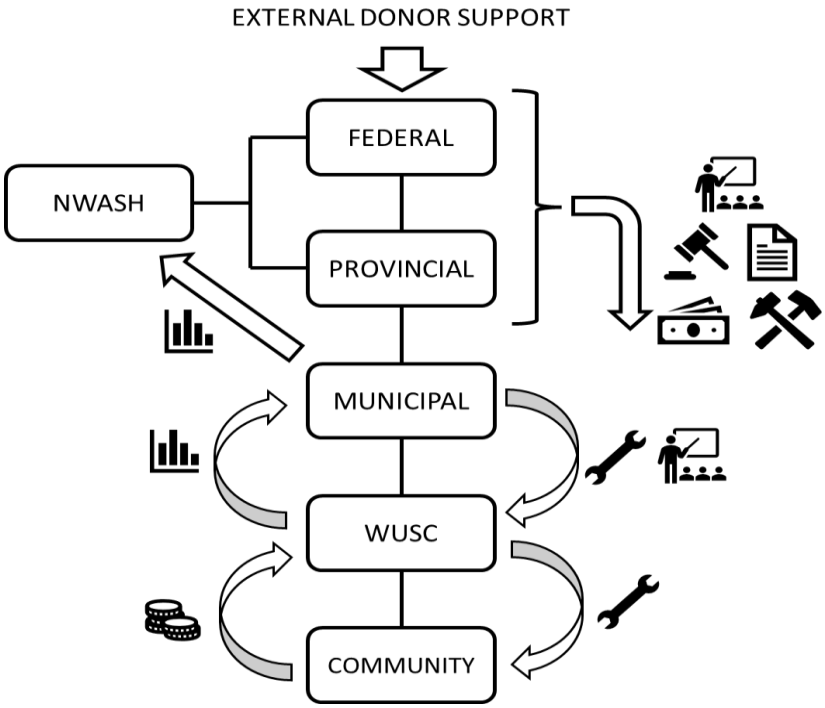
4.1 Role of Stakeholders

By mapping out the operational landscape diagrammatically, it allows us to visualize how the governance and operational pillars will function in the real world. The ward level is excluded from this map at this stage simply because of the lack of WASH capacity currently available at the ward level. The proposed creation of ward level WASH focal persons would create an additional layer of support and facilitation particularly for data collection, thereby alleviating the size of the task for the Municipality.



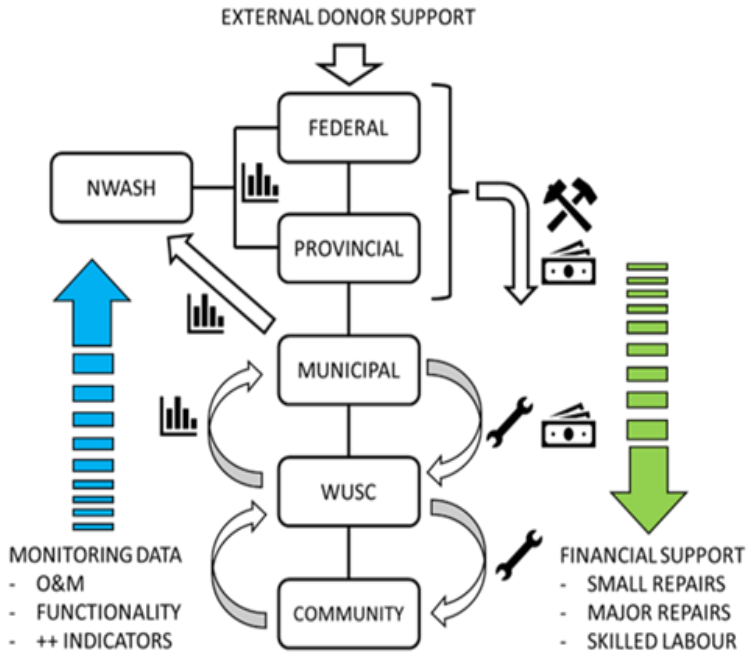
4.1.1 Stakeholders Network Relationships and - Group Cooperative Framework

The aim of this approach is to produce an operational framework that openly encourages cooperation between the various actors. This cooperation will not be driven by financial incentives that are unsustainable in the long term but by using a 'network commodity' transfer model that looks approximately like this:



The idea of this is to show the reciprocal exchange of 'network commodities' between different parties in the system. Network commodities include financial support, technical support, data reporting, training, policy guidelines & legal frameworks. These exchanges are fundamental to establishing cooperative networks between actors.

4.1.2 Data Flow Network

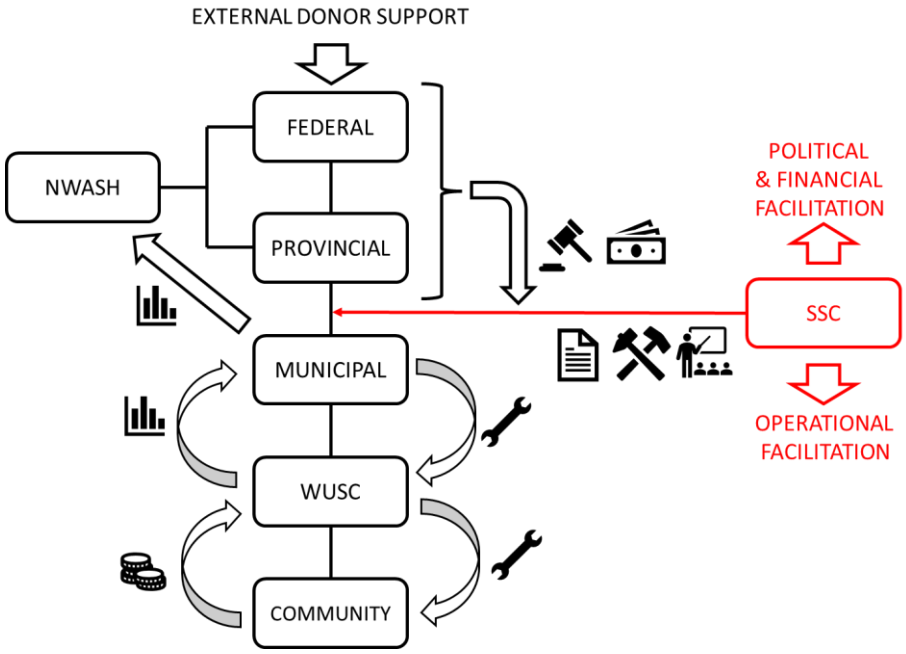


Accurate and timely data flow is essential for effective O&M, and in this SSC system, data is the 'base currency'. Community level tap data delivered monthly provides a simple but effective system for identifying problems and driving the requisite action from actors within the network. As such the system creates a bottom-up data flow that in turn drives a top-down financial flow. This is the basic circulatory system of O&M. If this process flows correctly repairs are correctly carried out and the service level improves.

4.2 Structure of Network & position of SSC within it

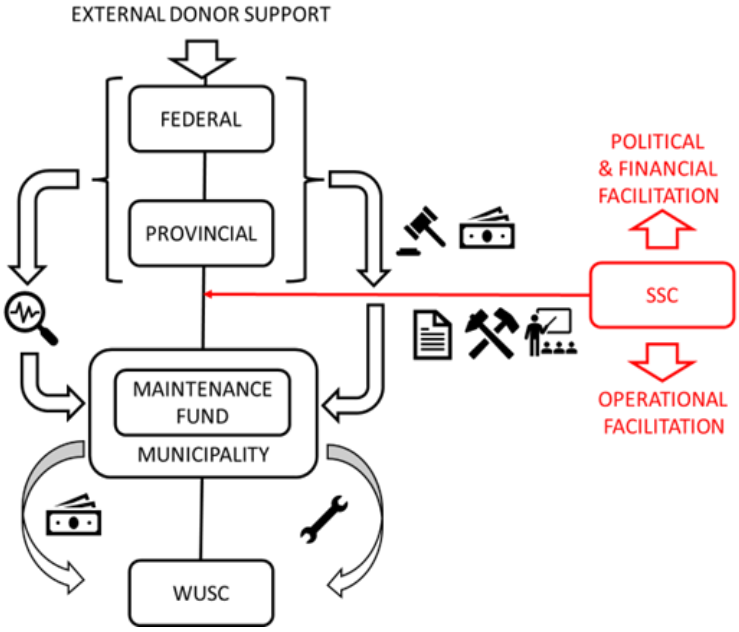
Knowing how actors will perform within the network helps us to establish the best position for the SSC. By positioning the Centre in between the Provincial and Municipal levels we can clearly divide the role

of the SSC between that of political and financial support and facilitation with the Federal and Provincial layers of government, and the operational facilitation role with Municipalities and WUSC's.



4.3 Role of SSC in Financial Flow and Management

Mapping out these processes diagrammatically, helps us to visualize how the governance and operational pillars will function in the real world. The same applies to the economic pillars whereby we can draw up basic structures of how the economic flows can work across both government and community levels.

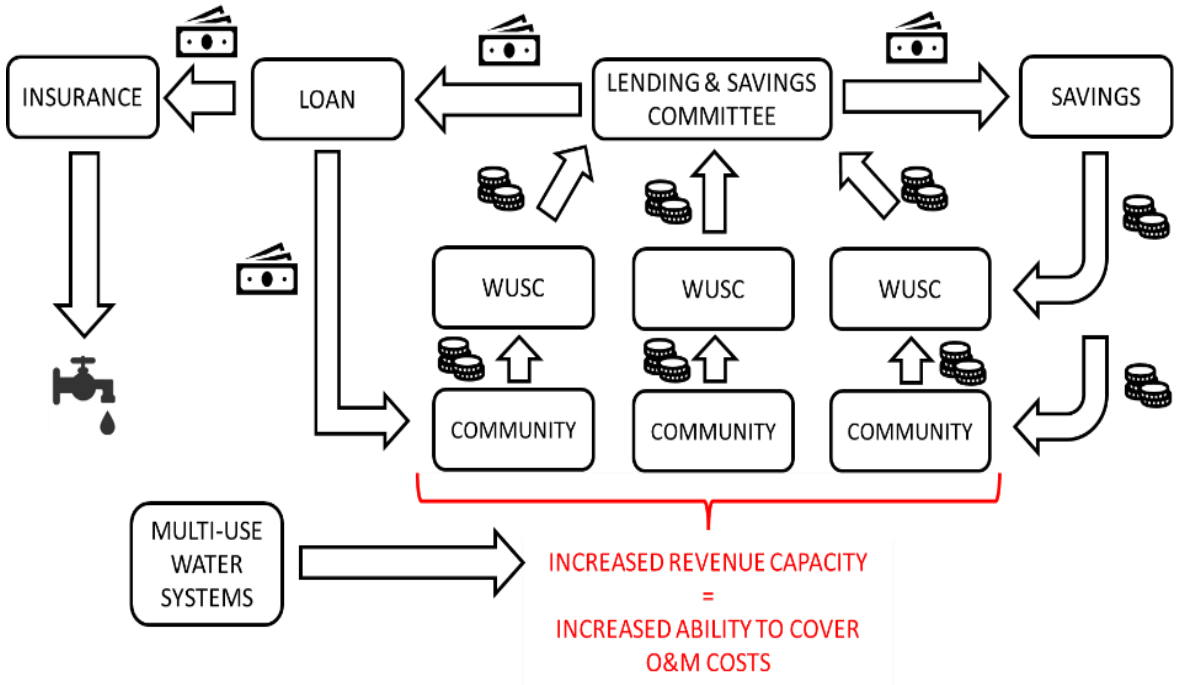


In addition to building capacity of Municipal WASH teams with dedicated MWASH staff, SUSWA also aims to assist Municipalities in establishing dedicated maintenance funds for O&M. This would be audited annually to ensure transparency and accountability. The SSC could then use its facilitation role to help expedite the flow of available funds to municipalities most in need of financial support, and to assist those municipalities in the effective allocation and use of those funds to best improve water supply service levels across their communities.

The SSC and Municipal WASH teams can also play a vital role in helping communities diversify and consolidate their revenue streams through mechanisms such as the creation

of co-operatives, the establishment of lending and savings schemes, the use of insurance mechanisms to protect water supply infrastructure, and the development of multi-use water systems (MUS) to better maximize and monetize the use of water.

Savings and Credit Cooperatives and Lending groups such as Savings and credit cooperatives (SCCs) and more informal dhikuri's are relatively common across all regions of Nepal. In Karnali there are over 1967 cooperatives currently in operation, including 26 in Naumule Rural Municipality and 19 in Bangad Kupinde Municipality (Source: Sahakari Jhalak 2077, Government of Nepal, Ministry of Land Management, cooperatives and Poverty elevation, Department of cooperatives). The opportunity is therefore present for WUSC's to join existing SCC's or form co-operatives with other WUSC's and create their own SCC. Such approaches are already in operation in Naumule Rural Municipality where two SCC's have incorporated 9 WUSC's and have increased their reserve funds through lending revenues to the community. This provides a mutually beneficial arrangement that has led to 100% of taps being functional across the nine schemes.



Chapter 5

5.1 Process Set up

Within this system setup there are two specific stages of implementation and operation. The first is the process setup, this involves the establishment of all of the operational requirements needed to allow the O&M system to work. Once the operational structure is in place the procedural structure can start producing monthly outputs in terms of the monitoring, reporting and reviewing of data, and the cycling of O&M procedures that will drive better service delivery.

5.1.1 Concept of SSC Process Structure

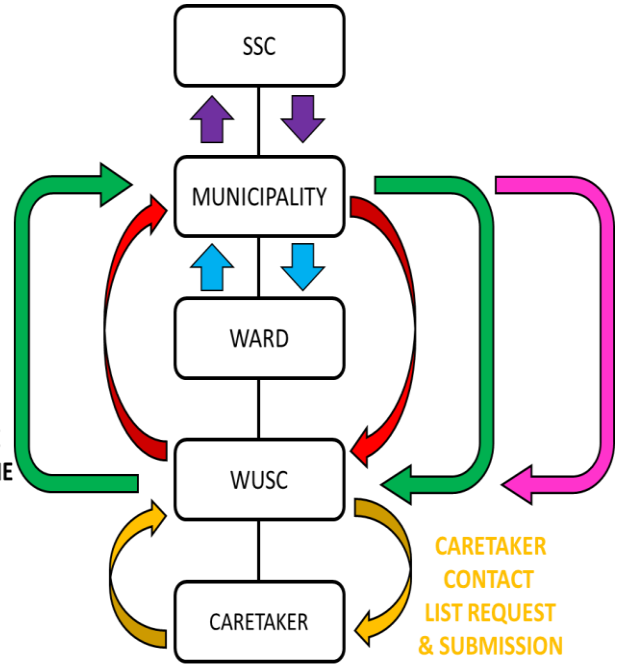
Process Structure:

PROCESSES

1. WARD CONTACT LIST REQUEST & SUBMISSION
2. WUSC CONTACT LIST REQUEST & SUBMISSION
3. CARETAKER CONTACT LIST REQUEST & SUBMISSION
4. WUSC INVENTORY REQUEST & SUBMISSION
5. INVENTORY CLEAN WITH SUPPORT FROM SSC
6. CLEANED POPULATED O&M MONITORING TEMPLATE

OUTPUTS

1. FULL LIST OF ALL WARD CONTACTS
2. FULL LIST OF ALL WUSC CONTACTS FOR EVERY SCHEME
3. FULL LIST OF CARETAKER CONTACTS FOR EVERY SCHEME
4. UP-TO-DATE TAP LEVEL INVENTORY FOR ALL SCHEMES
5. O&M TEMPLATE FOR MONTHLY MONITORING



5.1.2 Roles & Responsibilities of Stakeholders in Process Establishment

During the Process Setup phase, the various actors will fulfil the following roles and actions:

SSC

The SSC will act in a facilitation role, supporting the municipalities, wards and WUSC's in fulfilling their roles. The basis of this role will be in a technical support and advisory capacity. The SSC will also play a direct support role to Municipalities in assisting in the cleaning and structuring of the inventory data for each scheme and municipality to create an up-to-date inventory and O&M template for monthly monitoring and reporting.

Municipality

Each Municipality will be responsible for the collection and collation of:

- all of the contact lists for key contacts within each Ward and WUSC under their jurisdiction. This will also include a contact list for all caretakers working on every scheme.

- a complete, up-to-date inventory of all the tap level infrastructure in the Municipality, as per the inventory template. Municipalities will be responsible for providing NWASH with a full, up-to-date inventory of ALL water supply infrastructure EVERY year.

Ward
Each ward will provide a complete contact list for all WASH focal persons operating in their ward. This will highlight gaps in representation for future fulfilment.

WUSC
Each WUSC will be responsible for the collection and collation of:

- a complete contact list of key contacts within their WUSC (including at least the Secretary and Treasurer). The list will include the name, role and telephone number for each member listed.
- a complete contact list for all of the caretakers working on every scheme under the jurisdiction of the WUSC.
- a complete, up-to-date inventory of all the tap level infrastructure under the management of the WUSC

Refer **Annex 4.2** for the Roles and Responsibilities of Stakeholders in Process Establishment

5.1.3 Task List of Stakeholders in Process Set Up Phase

5.1.3.1 Municipality
The Municipality will be required to fulfil the following tasks in the Process Setup phase:

1. Establish a list of ALL WUSC's operating within the Municipality
2. Use the contact template to collect the names, role and contact number for at least one contact person within each WUSC (two contacts is preferable e.g. secretary & treasurer
3. Use the WUSC contact list to collect the names and contact numbers for all water infrastructure caretakers under the management of the WUSC
4. Use the data template provided to establish an up-to-date inventory of all tap level data within each scheme – the WUSC network should be used to expedite this task and to validate the data collected
5. Collate all of the scheme level data into a single inventory for the Municipality
6. Share a copy of the completed inventory and the full list of WUSC and caretaker contacts with the SSC

5.1.3.2 WUSC
Each WUSC will be required to fulfil the following tasks in the Process Setup phase:

1. Submit up-to-date contact details for at least two members of the WUSC to the Municipality WASH officer
2. Submit up-to-date contact details for all water infrastructure caretakers working for the WUSC listing which schemes they work for and which infrastructure they are responsible for.
3. Work with the caretaker network within the WUSC to update the inventory list provided by the Municipality to ensure that the inventory data is up-to-date – this should include the current functionality status of the tap based on the functionality definitions provided.
4. Collate all of the scheme level data into a single inventory for the WUSC and submit it to the Municipality WASH office

5.1.3.3 SSC

The SSC will be required to fulfil the following tasks in the Process Setup phase:

1. Support the Municipality WASH office in collecting a list of contacts for all WUSC's & caretakers
2. Support the Municipality & WUSC's in establishing their up-to-date inventories of water infrastructure
3. Provide technical support and remote training in the process and procedures to ensure a smooth adoption of the O&M methodology

5.1.4 Timeline to Complete Tasks by Stakeholders in Process Set Up Phase

All of the actions outlined in the task list must be completed by each actor within one month of the initial request for information.

This will ensure the continuous progress in the completion of the process setup. In situations where actors are slow or reluctant to submit their information or data within the designated deadline, the SSC and Provincial focal person will assist in facilitating the completion of the work.

In order to ensure the continuous progress of the tasks expected for the establishment of the process, all the tasks mentioned in the task list should be completed within one month from the date of first receipt of the information by each concerned entity. In the event that the officers of the relevant entities are late or unwilling to provide their information or data within the specified time line, the service center and the Provincial Level Focal Person will facilitate the completion of the work.

For the contact list of WUSC officials **Annex 4.1** and **Annex 4.3** for inventory can be used. Sample form of consumer committee level and rural/municipality level project inventory and inventory is attached in **Annex 4.3** and **Annex 4.4**. In addition, the monitoring schedule of the water and sanitation consumer committee's improvement work will be as per **Annex 6.1** and the monitoring schedule of rural/municipality level improvement will be as per **Annex 6.2**.

5.2 Inter Dependency among Stakeholders & Role and Facilitation of SSC

The principle behind this approach is focused on developing a network of co-operation between all actors in the system. This type of networked approach is dependent on each actor fulfilling their part in the submission of the requisite information. The system is therefore designed to have as little path dependency as possible i.e. the failure of some actors to fulfil their tasks within the designated timeline will not hinder the advancement of the other actors in achieving their goals.

It is inevitable that different actors, with varying levels of capacity and resources will not all have the same ability to respond effectively to these requests. In these instances, the SSC will again act in a facilitation role, providing the necessary additional support to help these actors fulfil their responsibilities in order to remove bottlenecks and improve efficiency.

5.3 Measuring Success

Output Indicators

These are reflected in the MoU outlining and confirming each partners commitment to completing their tasks and responsibilities.

	Output Deliverable
	A full up-to-date inventory for each municipality

	A full up-to-date contact list for key personnel in each Municipality, Ward, and WUSC, including all active caretakers.
	A clear policy landscape – including clear delineations for operational roles and responsibilities and financial obligations for all actors and circumstances.
	Consensus on the policy landscape, functionality definitions and roles & responsibilities from all actors
	Consensus on the agreed O&M plan & methodology for implementation
	Agreement on clear performance benchmarks against which to measure success

Once all of these outputs are achieved the set-up phase will be complete and the actors can move on to the Procedural set up phase that establishes the monthly operational reality of the system.

CHAPTER 6

6.1 Procedural Set Up

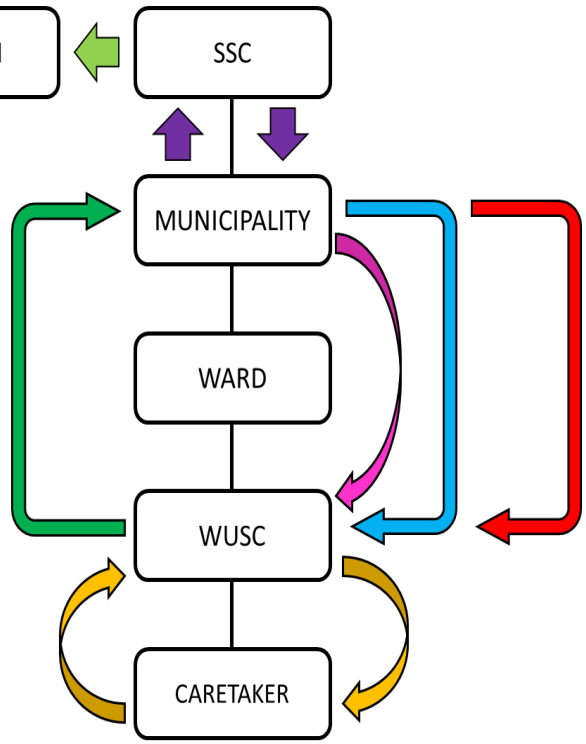
The procedural setup relates to the monthly procedural structures that will need to operate to create an effective system for O&M. These frameworks have been divided into ordered sets of processes for data collection and reporting, and for operations and maintenance actions. The data process serves to highlight issues with functionality or infrastructure failure, while the O&M framework documents the various actions required by parties to prompt and facilitate the repair.

6.2 Monthly Procedural Framework

Ensuring the smooth operation and maintenance of water supply systems requires coordinated efforts from various stakeholders. This document outlines a monthly procedural pattern for data collection and maintenance activities, adhering to the roles and responsibilities defined in Section 5.1.2. Stakeholders including the rural /municipality, water and sanitation users' committee, service center, federal, provincial and NWASH will collaborate each month to establish specific tasks and timelines for data collection, operation, and maintenance. Following this collaborative plan, the rural/Municipality, users' committee, and service center will carry out their designated functions, particularly focusing on data collection and operation & maintenance activities as outlined in work lists established according to Section 5.1.3.

For detailed information on specific monthly tasks, refer to Schedules 5.1 and 5.2, which provide a comprehensive monthly calendar.

Data



PROCESSES

1. REMINDER SMS MUNICIPALITY TO WUSC'S – 15TH OF MONTH
2. 2ND REMINDER SMS – 25TH OF MONTH
3. WUSC'S CHECK INVENTORY & COLLECT DATA
4. MUNICIPALITY CALL TO WUSC'S TO COLLECT DATA
5. DEADLINE FOR WUSC DATA SUBMISSION TO MUNICIPALITY
6. MUNICIPALITY CALLS FOR MISSING DATA SUBMISSIONS
7. MUNICIPALITY COLLATES DATA WITH SUPPORT FROM SSC
8. FINAL DATA SETS SHARED WITH SSC
9. SSC COLLATES DATASETS AND SHARES WITH PROVINCIAL AND FEDERAL GOVERNMENT (NWASH)

OUTPUTS

1. COMPLETE UP-TO-DATE INVENTORY FOR ALL SCHEMES
2. REGULAR O&M INDICATOR REPORTING & ANALYSIS
3. ALIGNED AND UPDATED NWASH INVENTORY
4. IMPROVED COMMUNICATION NETWORK BETWEEN ACTORS
5. IDENTIFICATION OF ISSUES AT THE TAP LEVEL

6.2.1 Task Lists for Data Collection

Task List – monthly task requirements of the stakeholders

6.2.1.1 Municipality

The Municipality will be required to fulfil the following data and O&M tasks on a monthly basis:

Data

1. Send data collection reminder SMS to WUSC'S on the 15th of the month
2. Send second reminder SMS to WUSC'S on the 25th of the month
3. Call each WUSC to collect data and input it into the template on the 30th of the month.
4. Call all remaining WUSC's for missing data submissions
5. Collate data into a single Municipality level inventory with support from the SSC
6. Submit final data sets to the SSC

O&M

1. Municipality reviews previous month's monitoring data to identify issues
2. Municipality works with related WUSC to categories the repair (Minor/Small/Major/Rehabilitation)
3. WUSC & caretaker address minor repairs
4. If Small repair – Municipality works with WUSC to establish cost of repair
5. Municipality provides 50% of costs and supports WUSC in meeting their cost requirements
6. Municipality works with WUSC with support from SSC to supervise the repair
7. If Major repair – Municipality works with SSC to initiate a funding and technical support response from the Provincial and Federal Government
8. Municipality works with the Provincial and Federal government with support from SSC to supervise the repair

6.2.1.2 WUSC

Each WUSC will be required to fulfil the following data and O&M tasks on a monthly basis:

Data

1. WUSC'S review and amend inventory following SMS reminder – 15th of the month
2. WUSC contacts caretakers and commences the collection of data – 25th of the month
3. WUSC documents functionality using the monitoring template or their own document record
4. WUSC fields call from Municipality on deadline for the data submission – 30th of the month

O&M

1. WUSC holds meeting to review month's functionality data to identify problems
2. Minor repairs are agreed with caretakers, and funds for necessary spare parts are released from WUSC bank account
3. WUSC contacts the Municipality WASH team regarding small repairs to facilitate the collection and dissemination of funds and technical support to carry out the repair
4. WUSC contacts the Municipality WASH team and SSC regarding the facilitation of funds and technical support for Major repairs or rehabilitation. The SSC will then coordinate with the provincial and federal government to manage the release of funds and allocation of technical support to the relevant Municipality or WUSC.

6.2.1.3 SSC

Data

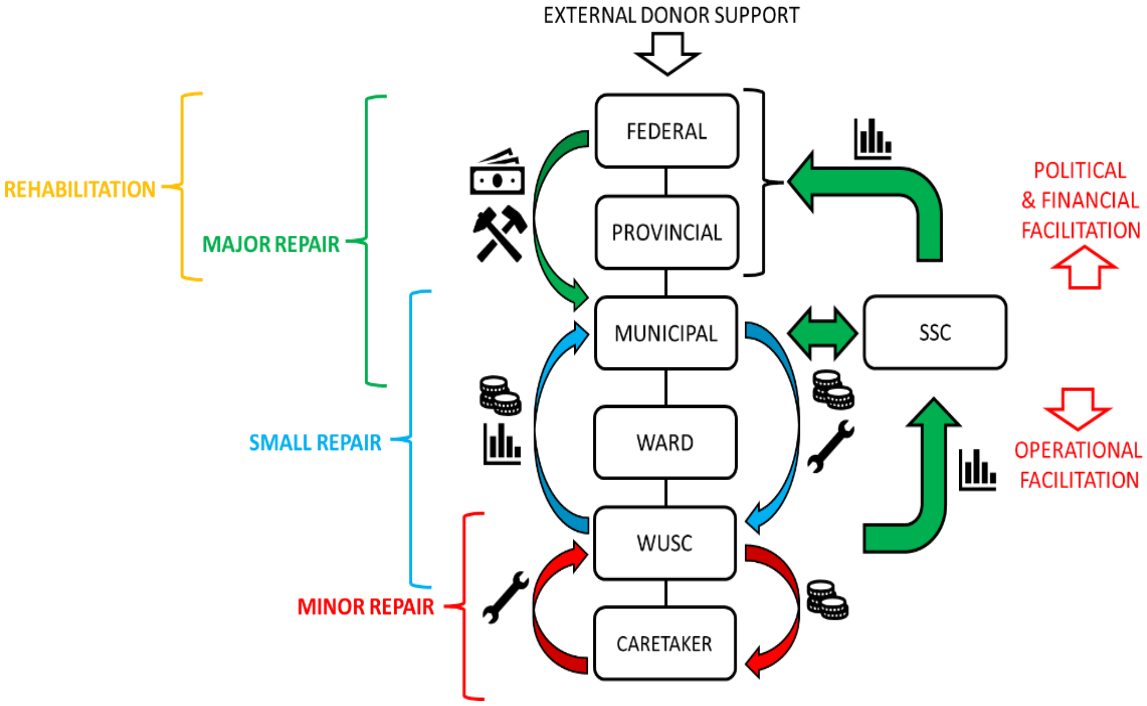
1. Collate data into a single Municipality level inventory with support from the SSC
2. Submit final data sets to NWASH for translation into NWASH indicators for updating the inventory
3. SSC carries out basic functionality analysis to track the performance of Municipalities and to assist Municipalities in identifying infrastructure or service delivery issues within their schemes.

O&M

1. Review data with Municipality and provide functionality percentages for benchmark indicator
2. Create target performance thresholds for each Municipality during each stage of the project.

6.2.2 Operation and Maintenance Work

Regarding the operation and maintenance works of the three types of O&M such as small, major repairs and rehabilitation of water supply schemes as mentioned in section 3.6, the municipalities, WUSCs and SSC functions according to their roles. The operation and maintenance flow are presented in the diagram below including the detailed roles and responsibility of each stakeholder.



6.2.2.1 Task of Municipalities in Operation and Maintenance

1. Review the previous months monitoring data to identify problems
2. Organize discussion with relevant WUSC to categorize maintenance work (small repair major repair or rehabilitation)
3. Coordinate with WUSC for maintenance expenses in case of small repairs. The small repairs need to be solved by WUSC and village maintenance worker
4. Coordinate with WUSC to fix the maintenance cost
5. Provide the fund under their part and assist WUSC to complete the work as per the estimate

6. Coordinate with Service Support Center to obtain funds and technical support from Provincial and Federal Government in case of major repair and rehabilitation
7. Supervise the operation and maintenance works in coordination with Provincial and Federal Government and supports from SSC

6.2.2.2 Task of WUSC in Operation and Maintenance

1. Organize meeting to review the functionality data to identify problems
2. Mobilize maintenance worker (caretaker) for small repairs and release cash from WUSC account to purchase necessary fittings. If technical support required, contact with municipality, WASH Unit and SSC.
3. In case of major repairs and rehabilitation works, contact with municipality, WASH Unit and SSC for obtaining funds, technical support and facilitation.

6.2.2.3 Task of Service Center in Operation and Maintenance

1. Review the functionality data with municipality and on the basis of key indicators inform about the working capacity percentage of the system
2. Provide target working capacity thresholds to each municipality at every steps/phase of the scheme
3. Provide regular system servicing and necessary technical training; and provide technical support remotely through the means of phone calls, S.M.S or video tutorials
4. Coordinate with respective municipality or committee and Provincial and Federal Government in case of major repair and rehabilitation for managing necessary budget and technical support

The sample formats of WUSC and municipality level data inventory and taps inventory are given in Annex 4.3 and 4.4. Moreover, the WUSC level functionality monitoring form is given in Annex 6.1 and municipality level functionality monitoring form is given in Annex 6.2.

6.2.3 Task of Federal and Provincial Government

Provincial and Federal government offices will be responsible for responding to requests for technical and financial support in relation to major repairs and rehabilitation works.

6.2.4 Data Updating in NWASH System

NWASH will receive the functionality report for all tap level data from each participating municipality each month. The NWASH team will be responsible for the translation of these O&M indicators into NWASH indicators and for the updating of this functionality status in the NWASH inventory. This includes the amendment of inventory data based on the construction of new infrastructure or the dereliction of existing infrastructure.

6.3 Information Updating through Phone Calls

In order for the Municipality WASH team to be able to collect data in a simple yet efficient manner, we have designed a simple call methodology to guide the caller and the WUSC through the data collection process.

Each month, following the notification SMS the Municipality will call each WUSC to collect the functionality status of each tap. This call can be made to any of the provided WUSC contacts or to the provided caretaker numbers (ensuring a variety of options for accessing the required data).

On each call the Municipal WASH team will simply ask whether there is any problem with each tap listed in the WUSC inventory.

If the answer is **NO**, then the tap is listed as F**UNCTIONAL**.

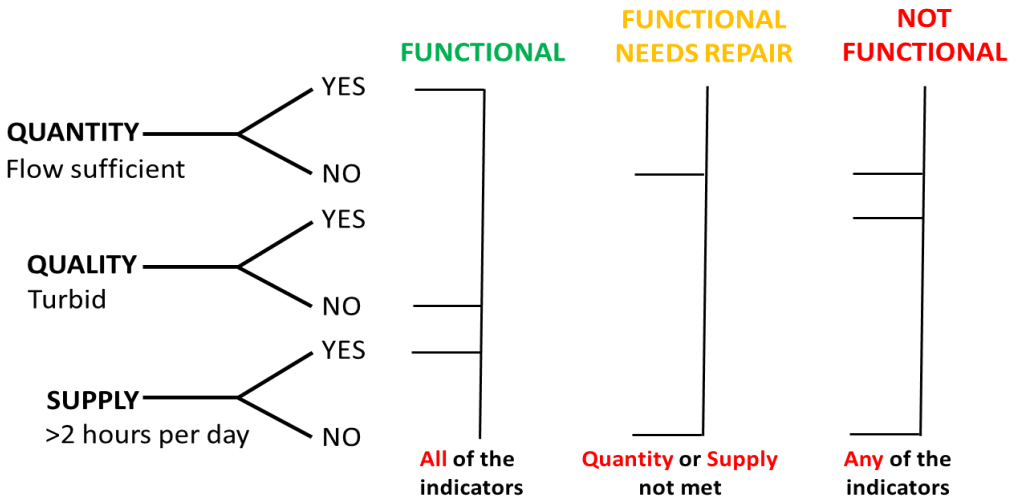
If the answer is **YES**, then the WASH team asks about the state of the **QUANTITY**, **QUALITY** and **FLOW**. This requires three simple questions:

QUANTITY – Is the tap flow sufficient?

QUALITY – Is the water turbid?

SUPPLY – Does the tap operate for more than 2 hours per day

The outcome of these three simple questions provides the functionality status of the tap, and this can then be entered into the data collection template based on the conditional flow diagram below:



Timeline

Detailed timelines are outlined for the operational monthly task requirements for both data collection and O&M responsibilities. These can be found in template form in A**nnex 4**.

6.4 Path Dependency

Review of data

O&M data are data for use, not just reporting. These indicators tell us the status of the system and so reviewing the data for issues or anomalies is essential. The SSC will assist Municipalities in reviewing data and identifying issues to be addressed.

Flow of funds to address small and major repairs

If WUSC's and Municipalities are doing a good job or collecting and reporting functionality status data, then all of the information required to understand the area of need and the extent of support required. At this stage it is essential that the Provincial and Federal governments are accessible and supportive in their provision of funds and technical support for the repair and rehabilitation of infrastructure.

6.5 Key Performance Indicators (KPIs) Measuring Success

Measuring Success

It is proposed that the baseline functionality for each scheme is collected during the setup phase of inventory collection. This is then used as the baseline indicator for functionality progress through each phase of the project. This data will be collected at tap level and then can be aggregated up to scheme, WUSC, Ward and Municipality levels.

Functionality performance over time – measured at WUSC & Municipality level

		Phase 1		Phase 2		Phase 3	
STATUS	**Baseline**	**Target**	**Achieved**	**Target**	**Achieved**	**Target**	**Achieved**
Functional							
Functional needs Repair							
Not functional							

Note: The Baseline functionality rate will be collected for each WUSC and Municipality at the Process Setup stage. The Phase target levels can then be set by the Implementation Team prior to the start of the project.

CHAPTER 7

7.1 SSC Establishment, Administrative Operation and Financial Management Model

The financial coordination between different government levels hinders access to clean drinking water for consumers. Since LGs manage the water supply systems, their financial capacity and priorities directly affect service delivery. To address this, mandatory financial contributions from both federal and provincial levels are crucial for major repairs and restoration works. To facilitate this coordination, a highly effective mechanism is envisioned, with service assistance centers playing a key role.

Given the potential of service assistance centers to improve water access, various models for their establishment and operation will be explored initially. Based on the results of these models, the most suitable approach will be prioritized for wider implementation. Each service center will be staffed with at least one WASH Support Officer, responsible for coordinating, communicating, and providing support throughout the service network. Details regarding the job description, qualifications, and other aspects of the WASH Support Officer position can be found in Schedule 2.

7.1.1 Service Center Establishment Options

Since the water supply service support center is a specific method of coordination, facilitation and technical support, the wishes of the local governments, the relevant regional environment, the possible models of federal government and provincial government subsidies and the proposals of development partners, etc. guide how to operate the service center. As stated in the Drinking Water and Sanitation Act, 2079 (Section 7), "The operation and management of basic drinking water and sanitation services shall be carried out by the governments of those levels in mutual coordination by themselves or through organized organizations under their ownership or control". Taking this as a guide, various options can be proposed. Possible Service Center Management Models

1. Management under the Provincial Ministry
2. Operating on a Private Model
3. Management by Non-Governmental Organizations
4. Management by Cooperatives or Consumer Committees
5. Management of drinking water consumer committees with special experience and competence within the respective province.

If a service center is established under the provincial ministry, basic costs such as office rent, lighting, electricity and communication will be saved. When setting up a service center in a private model, it is necessary to ensure that the association, state and potential development partners bear the administrative expenses in the financial arrangement and it is appropriate to start by preparing a plan for the sustainability of the service center. In the cooperative model or the consumer committee model, it is possible to make sure plans for human and financial resources required for the operation of the service center. In particular, regardless of the model of the service center, it should be managed by ensuring the cost and sustainability of the project, and in terms of the system's return, the project should be very economical (Value for money) and it is appropriate to make a decision based on the relevant geographical location, the possibility of federal and provincial subsidies, etc. Also, if the concept of service center is gradually accepted in the policy, tactics and other legal documents of the provincial government and local government, the development of sustainable and effective service center will take place.

7.1.2 Financing and Sustainability of Service Cconcerns

Securing initial financial resources is crucial for launching and sustaining service centers. For this, even if the service center is operated by gathering initial financial resources in any of the models mentioned in section 7.1.1 at the initial stage, after looking at its work progress and contribution to service delivery, priority should be given to drinking water for the effective management of local level maintenance fund (O&M Fund) in the future. The establishment of strong and sustainable service centers can only be expected if the subsidies given by the federal government and the provincial government for the local levels in the water supply sector can be prioritized and organized in such a way as to address the local needs. In the role of the service center, it will be directly involved in coordination with the federal, provincial and local level. After the establishment of the service center in a province, there is a strong possibility that it will be addressed in the future after the establishment of a service center in a province. The following approaches address both the establishment and financial management of service centers:

1. If it is certain that the development partners will provide financial and technical support, based on this guidance, start the service center with the written consent of the governments and development partners at the same level for the operation and management of the service center.
2. By incorporating the concept of service center in the drinking water act and water policy of the provinces, manage the budget necessary for the operation of the service center and arrange grants for the maintenance fund for the local levels.
3. In the case of operation through the model of section 7.1.1 'd' and 'e.', the discussion between the relevant stakeholders will make a plan for financial resources.
4. As mentioned in section 6.5, for the financial support required for major repairs and restoration, to initiate discussion regarding the appropriate method for cost sharing between the governments of the same level under the coordination of the federal or provincial government.
5. Part of the water charges collected by the concerned consumer committees should be set aside for the service center and contributed to the cost sharing of the local government, provincial government and the federal government.

In order to operate the service center as an autonomous organization, the provision of providing 5 percent of the operation and maintenance funds available to the rural/municipality from the federal and other external sources to this center also seems to help in the cost management of the service center.

CHAPTER 8

8.1 Feasibility of Service Centers

The successful operation and management of service centers hinge on coordinated efforts. Ongoing discussions among relevant agencies and a formal agreement outlining future strategies are crucial for ensuring their long-term viability. The following points are crucial for ensuring the potential and long-term viability of service centers:

a) All participating agencies should sign a Memorandum of Understanding (MoU) outlining their commitment to the service center's policies, conditions, and responsibilities

b) The data will be used as basic information for the regular and continuous collection and provision of services. These data are the most valuable thing for the water supply system and it will also become the means of budget flow between the related agencies. Therefore, all stakeholders will be active in the flow of necessary data and information as specified in this guidance.

8.2 Miscellaneous

To ensure the long-term success of this decentralized water supply project, a key element is the establishment of an autonomous, financially self-sustaining, and politically neutral service support center. This structure fosters flexibility and aligns with the project's decentralized nature. Successful implementation hinges on comprehensive stakeholder engagement. Through discussions, relevant stakeholders will define roles, distribute operational responsibilities, agree on cost participation, and establish clear policies and expected outcomes. Unanimous agreement on these aspects is crucial. The decentralized approach offers two significant advantages. Firstly, it reduces operational costs by integrating the service center's operations with existing capacities of relevant agencies at each level, minimizing the need for additional resources. Secondly, the model ensures scalability, as minimal additional workload is placed on the service center with each new rural/municipality joining the network.

Finally, it's important to note that this guidance adheres to existing federal, provincial, and local government laws and regulations. In case of any conflict, the provisions of approved laws and regulations will take precedence.

Annex No.	Subject	Reference
Annex 1	Roles and Responsibilities of Federal, Province, Local Government and WUSCs on Operation and Maintenance	Classification of water supply project and major stakeholdres role (related to section 3.5)
Annex 2	ToR of SSC Staffs	9SSC establishment, operation and financial model (related to section 7.1)
Annex 3	Memoradum of Understanding (MoU)	Written agreement for success mesurement (related to section 5.3)
Annex 4.1	WUSC member contact list	Roles and Responsibilities of stakeholders in process setup (related to section 5.1.2)
Annex 4.2	SSC check list for process setup	Roles and Responsibilities of stakeholders in process setup (related to section 5.1.2)
Annex 4.3	WUSC level water point inventory	Mesurement of functionality (related to section 2.5.2) and Monthly procedural framework (related to section 6.2)
Annex 4.4	LG Level water point inventory	Mesurement of functionality (related to section 2.5.2) and Monthly procedural framework (related to section 6.2)
Annex 5.1	Data reporting calendar for key dates	Monthly procedural framework (related to section 6.2)
Annex 5.2	Monthly O&M engagement schedule	Monthly procedural framework (related to section 6.2)
Annex 6.1	WUSC Functionality Performance Tracker	Roles and responsibilitities of stakeholders during process setup (related to section 5.1.2)
Annex 6.2	Municipality Level Functionality tracker	Related to section 5.2 and 6.2
Annex 7	WUSC and LG level functionality status update	Functionality measurement at different stages in WUSC and LG Level

Annex 1

(Related to Classification of Water supply and Sanitation Schemes and details of roles in Section 3.5)

Roles and responsibilities of federal, provincial and local governments and WUSC's (O&M)

Types, sizes type of Water Supply and sanitation Scheme			Minimum Required Major Human Resources	Regulation and Supervision	Financial Management and Construction	Ownership on system	Service Delivery	
							Provision	Production
Single Tap	Water	Spring, Kuwa, traditional water point, single tap, and hand pump	Village maintenance worker	Federal/Provincial Government	Local government +/ Consumers (Users)	Local Government (except private system)	Local government +/ Consumers (Users)	Consumers (Users)
	Sanitation	On site Sanitation			Consumers (Users)	Consumers (Users)	Consumers (Users)	Consumers (Users)
Small	Water	Less than 50 taps/households	Village maintenance worker	Federal/Provincial Government	Local government +/ Province +/ Consumers +/Others	Local government +/ Province	Local government	Users Committee/Service Provider
	Sanitation	On site sanitation and waste management			Consumers/Community	Consumers/Community	Consumers/Community	Consumers/Community
Medium	Water	50-1000 taps/househols	Sub-engineer	Federal/Provincial Government	Local government +/ Province +/ Consumers +/Others	Local government+/Province government	Local government	Users Committee/Service provider
	Sanitation	Septage (waste or sewage in a septic tank) and			Province government+/ Local government+/Community+/private sector	Province government+/ Local government+/Co	Local government	Users Committee/Service provider

Types, sizes type of Water Supply and sanitation Scheme			Minimum Required Major Human Resources	Regulation and Supervision	Financial Management and Construction	Ownership on system	Service Delivery	
							Provision	Production
		Solid waste management				mmunity+/private sector		
Big	Water	Water system of municipality Area	Civil Engineer + Finance+ administrative personnel	Federal/Provincial Government	Province government+/ Local government+/Community+/private sector	Federal/Province government+/ Local government+/Community+/private sector	Local government	Users Committee/ Concerned municipal system, Service provider
	Sanitation	Septage or wastewater or sewerage management	WASH Engineer + Finance+ administrative personnel		Province government+/ Local government+/Community+/private sector	Federal/Province government+/ Local government+/Community+/private sector	Local government	Users Committee/ Concerned municipal system, Service provider
		Solid waste management	Civil Sub-Engineer + Finance+ administrative personnel		Province government+/ Local government+/Community+/private sector	Federal/Province government+/ Local government+/Community+/private sector	Local government	Users Committee/ Concerned municipal system, Service provider

Types, sizes type of Water Supply and sanitation Scheme			Minimum Required Major Human Resources	Regulation and Supervision	Financial Management and Construction	Ownership on system	Service Delivery	
							Provision	Production
Large	Water	Water system of sub-metropolitan/ metropolitan municipality Area; A system with service expansion in more than two provinces; Wholesale distribution system; Impounding reservoir water supply system;	WASH Engineer + Finance+ administrative personnel	Federal/Provincial Government	Province government+/ Local government+/Community+/private sector	Federal/Province government+/ Local government+/Community+/private sector	Local government	Users Committee/ Concerned municipal system, Service provider
	Sanitation	Septage or wastewater or sewerage management	WASH Engineer + Finance+ administrative personnel		Province government+/ Local government+/Community+/private sector	Federal/Province government+/ Local government+/Community+/private sector	Local government	Concerned municipal system, Service provider

Types, sizes type of Water Supply and sanitation Scheme			Minimum Required Major Human Resources	Regulation and Supervision	Financial Management and Construction	Ownership on system	Service Delivery	
							Provision	Production
	Sewerage Management	Solid waste managenment	Civil Engineer + Finance+ administrative personnel		Province government+/ Local government+/Community+/private sector	Federal/Province government+/ Local government+/Community+/private sector	Local government	Concerned municipal system, Service provider

Annex 2

Related to Establishment of SSC, Administrative and Financial Management model of section 7.1

SSC Job specification

Position: WASH Support officer

Summary of position

- WASH Support officer should be responsible for carrying out the major roles as below:
- Responsible for providing technical and facilitation support to all Municipality WASH teams, WUSC's and Caretakers within their designated area of responsibility.
- Responsible for acting as a funding facilitator for Municipalities and WUSC's in the event of Small or Major repairs or when rehabilitation of water supply infrastructure is required.
- Responsible for supervising and supporting the collection and reporting of monthly functionality data for all taps in their jurisdiction, and for the maintenance of up-to-date water infrastructure inventories and key contact lists for all Municipalities and WUSC's under their responsibility.

Reports: Provincial Focal Person for the SSC in the Ministry of Water Resource and Energy Development (MoWRED), Karnali Province

Specific Job Responsibilities/ Major Activities

- Responsible for creating and maintaining strong professional working relationships with all levels of government (Federal, Provincial, Municipal), as well as with WUSC and community organization.
- Maintain knowledge and compliance of new updated policies and procedures related to the Nepal water sector
- Providing continuous technical support and assistance to all Municipal WASH teams, to ensure adherence to the SSC MoU on sustainable O&M of water supply infrastructure.
- Assist in the maintenance of a full inventory of Municipal level water supply infrastructure for each Municipalities under the SSC's jurisdiction.
- Supervise the monthly collection, reporting, collation and distribution of up-to-date functionality data for all taps at WUSC, Municipal and Provincial level.
- Ensure the regular reporting of monthly functionality data to NWASH for the updating of the national inventory.
- Work with Municipality WASH teams each month to analyze functionality data to identify all necessary repairs and allocate the correct actor to facilitate the repair.
- In the case of Major repairs and Rehabilitations act as facilitator between actors to ensure the smooth transition of the requisite funds and technical support required to action the work.
- Carry out at least one field visit to each Municipal WASH office each year to help resolve issues, provide technical assistance, and maintain good working relationships between all actors in the network.
- Assist the Municipal WASH teams in tracking and reporting the performance of all WUSC's against the pre-agreed performance benchmarks.
- Tracking and reporting on the performance of all Municipalities against the pre-agreed performance benchmarks and maintaining a performance record to track project progress and impact.

Required Education, Experience, Skills, and Competencies

1. Education

- Batchelor degree in Civil Engineering or Diploma in Civil Engineering with minimum 3 years of experience of rural water supply system and sanitation sector

2. Experience

- Experience in the maintenance of water supply infrastructure and/or in monitoring and implementation of water supply and sanitation activities in rural areas of Nepal.
- Knowledge of Nepal water sector policy and rural water supply management approaches in Nepal.
- Experience in data management and data analysis

3. Skills and Social Competences

- Energetic and having passion for all kinds of water supply schemes and sanitation.
- Understanding and experience of local mechanism and experience of water and sanitation community infrastructure.
- Commitment towards gender equality and social inclusion.
- Result oriented personality/maintaining deadlines.
- Good interpersonal, intercultural competencies.
- Fluency in Nepali and English, both written and spoken.
- High level of computer skills in Microsoft Excel, Word, PowerPoint.
- Competent in basic data analysis and report writing

4. Duty Station and field visits

Based in the MoWRED, Province office with some field work as required

5. Salary and Benefits: To be decided based on level of experience

Annex 3

Related to Section 5.3 Memorandum of understanding as written commitment for measurement of success

Memorandum of understanding (MoU)

Government of Nepal, Ministry of Water Supply,
Department of Water Supply and Sewerage Management (DWSSM),
…… Province Government, Ministry of……,
…….. Rural/Municipality,
And
Development Partner ……

This Memorandum of Understanding (MOU) sets for the terms and understanding between the above listed partners to agree to the operating agreements outlined in the Service Support Centre Policy Landscape and Operating Manual for Karnali Province, as outlined and consensually agreed at the SSC workshop held at DWSSM on Friday 13th May 2023.

Background

With the level of improved water supply services and basic functionality levels on the decline in rural Nepal, there is an urgent need to focus on more effective Operations and Maintenance (O&M) of water supply infrastructure to extend the lifespan of infrastructure and improve service levels.

The listed partners in this MoU have agreed to partner in the implementation of a Service Support Centre (SSC) in Karnali Province. The creation of the SSC will bring with it a revised O&M approach focused on a clear policy framework, regular monitoring of infrastructure and improved response processes.

For this approach to work the listed partners need to commit to a co-operative working agreement where all parties acknowledge their roles in the process and commit to fulfilling their responsibilities, in a collective effort to improve water service standards in Karnali province.

Purpose

The purpose of this MOU is to obtain a co-operative operating agreement between all listed partners, with the express purpose of improving the Operations and Maintenance (O&M) of water supply services in Karnali Province.

- The above goal will be accomplished by undertaking the following activities:
- The establishment of a Service Support Centre (SSC) to be based out of Surkhet, Karnali.
- The adoption of the proposed approach to O&M, as outlined in the SSC operating manual.
- This includes the commitment by all parties to adhere to all of the policy conditions, as outlined in the policy guidelines listed in the SSC operating manual, and as discussed and consensually agreed at the SSC workshop held at DWSSM on Friday 13th May 2023.
- By signing the MoU all partners will agree to adhere to all of their respective operational responsibilities in relation to the Operations and Maintenance of all water supply infrastructure within the jurisdiction of the project area, as outlined in the SSC operating manual.

Reporting

The SSC will track the progress of the project and evaluate the impact and effectiveness of the approach, and the adherence to the agreement by each listed partner. Progress data will be shared monthly with an

annual progress report being shared with all partners each year in a review session on a mutually agreed date.

Duration

This MOU is at-will and may be modified by mutual consent of authorized officials from (list partners). This MOU shall become effective upon signature by the authorized officials from the listed partners and will remain in effect until modified or terminated by any one of the partners by mutual consent.

Signatories

Department of Water Supply and Sewerage Management (DWSSM)	Karnali Province Government
_____	_____
Signature	Signature
Name:	Name:
Designation	Designation:
Date:	Date:
Stamp:	Stamp:
.... Rural/Municipality	Technical and Financial Assistance
_____	_____
Signature	Signature
Name:	Name:
Designation	Designation:
Date:	Date:
Stamp:	Stamp:

Annex 4.1

Roles and Responsibilities of Stakeholders during Process Setup Related to Section 5.1.2

WUSC members Contact List

Province Name:			District Name:			LG Name:		
Scheme Code	Ward No.	Cluster Name	Scheme Name	Scheme type	No of RVTs	Contact Person	Role/ Designation	Contact No.

Annex 4.2

Roles and Responsibilities of Stakeholders during Process Setup Related to Section 5.1.2

SSC Check List for Process Setup

Major Contact Person List – Federal/Provincial/Local Level/Development Partners/ Service Support Center

Offices	Name, Designation	Role	Contact No	Email
Federal Level				
Provincial Level				
District Level				
Local Level				
Development Partners				

Annex 4.3

Related to Functionality Measurement in Section 2.5.2 and Roles and Responsibilities of Stakeholders during Process Setup Related to Section 5.1.2

WUSC level tap/water infrastructures complete and updated list

SSC's monitoring plan of water system functionality and tap inventory									
Province Name:				District Name:			LG Name:		
Scheme Code	Updated Date	Ward No	Cluster Name	Scheme Name	Scheme Type	RVT No.	Contact Number	Functionality Status	Reason
								Functional	
								Not Functional	Flow
									Turbid

Annex 4.4

Related to Functionality Measurement in Section 2.5.2 and Roles and Responsibilities of Stakeholders during Process Setup Related to Section 5.1.2

Municipality level tap/water infrastructures complete and updated list

SSC's monitoring plan of water system functionality and tap inventory									
Province Name:			District Name:				LG Name:		
Scheme Code	Updated Date	Ward No	Cluster Name	Scheme Name	Scheme Type	RVT No	Contact No	Functionality Status	Reason
								Functional	
								Not Functional	Flow
									Turbid

Annex 4.4

Related to Monthly Procedural Framework in Section 6.2

Data reporting calendar for key dates

Date	Activities
1	Municipality calls remaining WUSC's for missing data submission
2	Municipality collates WUSC data
3	
4	Municipality shares Municipality inventory with SSC
5	SSC collates data by Municipality & Province and shares with NWASH
6	SSC reviews data with each Municipality to identify issues for repair
7	
8	
9	
10	SSC carries out basic functionality analysis to track performance and help identify issues
11	
12	
13	
14	
15	Municipality reminder SMS to WUSC
16	WUSC reviews and amends inventory ready for new update
17	
18	
19	
20	
21	
22	
23	
24	
25	Municipality reminder SMS to WUSC
26	WUSC contacts caretakers and commences the collection of data
27	WUSC data collection
28	
29	
30	- Municipality calls each WUSC to collect data and inputs it into the template - WUSC deadline for data submission to Municipality
31	
32	

Related to Monthly Procedural Framework in Section 6.2

Monthly O&M engagement schedule

Date	Activities
1	
2	
3	
4	
5	
6	SSC reviews data with each Municipality to identify issues for repair
7	
8	
9	
10	(Municipality works with related WUSC to categorize the repair (small, Major and rehabilitation)
11	
12	
13	
14	
15	If small repair -WUSC & caretaker address minor repairs If Major repair – Municipality works with SSC to initiate a funding and technical support response from the Provincial and Federal Government
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	

Annex 6.1

Roles and Responsibilities of Stakeholders during Process Setup Related to Section 5.1.2

WUSC Functionality performance tracker

Province:			District:			Municipality:						
Scheme Code	Updated Date	Ward No.	Cluster Name	Scheme Name	Scheme type	Total RVTs	Functional		Functional Need Repair		Not Functional	
							Number	%	Number	%	Number	%

Annex 6.2

(Related to Section 5.2 and 6.2)
Municipality Functionality performance tracker

Province:			District:		Municipality:							
Scheme Code	Updated Date	Ward No.	Cluster Name	Scheme Name	Scheme type	Total RVTs	Functional		Functional Need Repair		Not Functional	
							Number	%	Number	%	Number	%

Annex 7

Performance of WUSC and Municipality at different stages (Related to Section 6.6)

WUSC and Municipality performance tracker at different stages

Province:	District:	Municipality:		Phase1		Phase 2		Phase 3	
	Total no. of taps	Baseline (Functionality)		Target	Achieved	Target	Achieved	Target	Achieved
		Number	%						
Functional									
Functional Needs Repair									
Not Functional									